MAT 2

A DETAILED GUIDE FOR TEACHING PILATES

By Nora St. John

2019 Edition

Balanced Body Inc, Sacramento California

CREDITS AND GRATITUDE

This manual would not have been possible without the support of the following people and places:

- The Pilates elders, Eve Gentry, Kathy Grant, Carola Trier, Romana Kryzanowska, Ron Fletcher, Lolita San Miguel and Mary Bowen all of whom I have had the pleasure to know and work with.
- My teachers and mentors, Diana Herold, Michele Larsson, Elizabeth Larkam, Alan Herdman, Marie Jose Blom and all of my colleagues at St. Francis Hospital and Turning Point Studios.
- The teachers of all of the Balanced Body Faculty who so generously shared their knowledge and wisdom.
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IMPORTANT INFORMATION

This Manual is intended to be used as part of a Pilates teacher training program or for clients who are working under the supervision of a trained Pilates teacher. If you are using this manual to learn these Pilates exercises and you are not under the supervision of a trained Pilates teacher please keep in mind that the material presented is physically challenging and Balanced Body is not liable for any injuries caused by attempting these exercises without proper supervision. Balanced Body highly recommends that you get a thorough evaluation from a qualified health or fitness professional and work with a trained Pilates teacher in order to receive the maximum benefit from these exercises.

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TABLE OF CONTENTS

BALANCED BODY EDUCATION

Welcome to the Balanced Body Pilates Instructor Training Program!

Balanced Body is your partner in mind body fitness. We work with the best educators in Pilates and related disciplines to provide learning opportunities that are stimulating, personal and deeply rooted in the art and science of movement. We look forward to working with you to develop your Pilates career and to bringing the benefits of Pilates to clients at fitness centers, studios and rehabilitation clinics around the world.

Balanced Body offers a full range of Pilates instructor training programs for Mat, Reformer, Trapeze Table, Chair and Barrels as well as continuing education through Pilates on Tour, Balanced Body workshops, Balanced Body education partners and Passing the Torch. We are committed to supporting your personal and professional growth now and in the future.

The Balanced Body Pilates program combines the traditional repertoire with contemporary exercises based on the latest advances in movement science and related disciplines. Our curriculum meets national guidelines and is designed to prepare you for the Pilates Method Alliance, national Pilates certification exam which can be taken upon completion of the full program.

Our teacher training program is one of the best in the world. Our Master Instructors are experienced, caring and passionate teachers committed to providing you with the best possible Pilates training.

REQUIREMENTS OVERVIEW

Balanced Body recognizes four levels of achievement within the Balanced Body curriculum:

- Balanced Body Pilates Mat Instructor
- Balanced Body Mat and Reformer Instructor
- Balanced Body Reformer Instructor
- Balanced Body Comprehensive Pilates Instructor

Each individual module (Mat 1, Reformer 1, etc.) includes a written and practical test. Certificates of completion will be issued after each module. After completion of additional personal practice, observation and teaching hours you will be recognized as a fully qualified Balanced Body Pilates Mat, Mat and Reformer, Reformer or Comprehensive Instructor and a certificate of completion will be awarded.

Balanced Body Instructor Training

PROGRAM STRUCTURE

Classroom Hours

Every course includes lectures, workouts, exercise demonstrations and practice teaching. Students are expected to learn and practice the exercises, practice teaching the exercises and understand the principles and history of the Pilates method.

ADDITIONAL REQUIREMENTS

In addition to the classroom hours, students are required to do additional personal practice sessions, observation hours and student teaching hours. To receive a certificate of completion, students must complete all of the requirements for their chosen program and pass a final written and practical exam. For the Reformer and Comprehensive programs, completion of a basic anatomy course is also required.

Personal Sessions

Students can count any classes or Pilates personal training sessions they have already taken. Developing and committing to a personal Pilates practice is an essential part of becoming an effective and inspiring instructor.

Observation Hours

Observation hours include watching experienced instructors, live or on video, teach group classes or private sessions. Observation is a great way to understand verbal and manual cueing, program sequencing and to hone your teaching skills.

Student Teaching Hours

Teaching hours include any Pilates teaching: either as an employee at a fitness center or studio, or for family and friends.

Anatomy

A basic understanding of anatomy provides a strong foundation for an effective Pilates instructor. Anatomy is required for the Reformer and Comprehensive programs and is highly recommended for the Pilates Mat program. This requirement can be fulfilled through Balanced Body's Anatomy in Three Dimensions or other musculoskeletal anatomy courses. Contact the Balanced Body office for more information. Students who have already taken a college level anatomy course or are a licensed health professional (MD, PT, AT, OT, etc.) can waive this requirement.

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Balanced Body Pilates Mat Instructor

Prerequisites: 10 Pilates Mat Classes
Recommended: Anatomy and 6 months work experience in a related field.

REQUIREMENTS FOR COMPLETION

To become a fully qualified Balanced Body Pilates Mat Instructor, students must complete the following:

- Anatomy (strongly recommended)
- Balanced Body Movement Principles
  Course work, written & practical test (16 hours)
- Balanced Body Mat 1
  Course work, written & practical test (16 hours)
- Balanced Body Mat 2
  Course work, written & practical test (16 hours)
- Balanced Body Mat 3
  Course work, written & practical test (16 hours)
- Mat practical hours (70 hours total):
  - 20 Mat personal sessions
  - 15 observation hours
  - 35 student teaching hours
- Final written and practical exam

Total hours for completion of Pilates Mat program:
134 hours (not including anatomy)

Upon completion of all of the requirements, a certificate of completion as a Balanced Body Pilates Mat Instructor will be issued.

Balanced Body Pilates Mat and Reformer Instructor

Prerequisites: 10 Pilates Mat and 20 Pilates Reformer Classes
Recommended: 1 year work experience in related field

REQUIREMENTS FOR COMPLETION

To become a fully qualified Balanced Body Pilates Mat and Reformer Instructor, students must complete the following:

- Anatomy (must be completed prior to final test out)
- Balanced Body Movement Principles (if not included in their Pilates Mat course)
- Balanced Body Mat Instructor training or equivalent
- Balanced Body Reformer 1
  Course work, written & practical test (16 hours)
- Balanced Body Reformer 2
  Course work, written & practical test (16 hours)
- Balanced Body Reformer 3
  Course work, written & practical test (16 hours)
- Mat practical hours (70 hours total)
- Reformer practical hours (150 hours total):
  - 30 Reformer personal sessions
  - 30 observation hours
  - 90 student teaching hours
- Final written and practical exam

Total hours for completion of Mat and Reformer program:
332 hours (not including anatomy)

Upon completion of all of the requirements, a certificate of completion as a Balanced Body Pilates Mat and Reformer Instructor will be issued.

Balanced Body Pilates Reformer Instructor

Prerequisites: 20 Reformer Classes
Recommended: 1 year work experience in related field

REQUIREMENTS FOR COMPLETION

To become a fully qualified Balanced Body Pilates Reformer Instructor, students must complete the following:

- Anatomy (must be completed prior to final test out)
- Balanced Body Movement Principles (16 hours)
- Balanced Body Reformer 1
  Course work, written & practical test (16 hours)
- Balanced Body Reformer 2
  Course work, written & practical test (16 hours)
- Balanced Body Reformer 3
  Course work, written & practical test (16 hours)
- Reformer practical hours (150 hours total):
  - 30 Reformer personal sessions
  - 30 observation hours
  - 90 student teaching hours
- Final written and practical exam

Total hours for completion of Reformer program:
214 hours (not including anatomy)

Upon completion of all of the requirements, a certificate of completion as a Balanced Body Pilates Reformer Instructor will be issued.

Balanced Body Comprehensive Pilates Instructor

Prerequisites: 20 Pilates studio sessions
Recommended: 1 year work experience in related field

REQUIREMENTS FOR COMPLETION

To become a fully qualified Balanced Body Comprehensive Pilates Instructor, students must complete the following:

- Anatomy (must be completed prior to final test out)
- Balanced Body Mat Instructor training or equivalent
- Balanced Body Reformer Instructor training
- Balanced Body Trapeze Table/Cadillac or Tower (18 hours) or Apparatus 1 (14 hours) - Course work, written and practical test
- Balanced Body Chair (14 hours) or Apparatus 2 (12 hours) Course work, written and practical test
- Balanced Body Barrels (6 hours) or Apparatus 3 (12 hours) Course work, written and practical test
- Mat practical hours (70 hours total)
- Reformer practical hours (150 hours total):
- Apparatus practical hours (150 hours total)
  - 35 Apparatus personal sessions
  - 20 observation hours
  - 95 student teaching hours
- Final written and practical exam

Total hours for completion of Apparatus program:
188 hours (not including anatomy)

Total hours for completion of Comprehensive Pilates Instructor program:
520 hours (not including anatomy)

Upon completion of all of the requirements, a Certificate of Completion as a Balanced Body Comprehensive Pilates Instructor will be issued.

Balanced Body Bridge Program

Students who have completed a Pilates Instructor Training program through other organizations and are interested in obtaining a Balanced Body certificate of completion should contact the Balanced Body office to inquire about the Balanced Body Bridge program.

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Final Exam

Once a student has completed all required Mat, Reformer and/or Apparatus course work and hours, they must pass a written and practical exam demonstrating their teaching ability before receiving their final certificate of completion. Exams will be regularly scheduled at Balanced Body host sites and at trade shows and conferences in the US and abroad.

If instructors are not able to attend a practical exam because it is too far to travel, testing out by video may be arranged.

Students do not need to test out individually for Mat, Reformer, and Apparatus. Students only need to test out when they have reached the highest level they intend to complete. For example, students completing only the Mat will test out after Mat, students completing Mat and Reformer will test out after Reformer and students finishing the comprehensive program will test out after they have completed all of the requirements.

THE PRACTICAL EXAM

The final test consists of a written exam and the observation of a session with a client or class. Once a student has completed all of their hours and is ready to test out, they send in an application (available at www.pilates.com) to the Balanced Body office. Balanced Body verifies the coursework and hours and provides the student with test outs available in their area.

During the practical exam the student will be assessed on the following skills:

- Correct set up and execution of the exercises
- Client safety
- Appropriate sequencing
- Appropriateness of the exercises to the client or class
- Understanding and application of the principles
- Cueing and the ability to communicate with the client or class

If the student does not pass on the first try, they will be informed of what they need to focus on in order to pass and a time line will be set up for completion.

The cost for completing the final certification exam will vary depend on the location and specific circumstances. The cost ranges between $150 and $350.

ADDITIONAL COSTS OF THE PROGRAM

All published prices for Balanced Body courses include the course and materials fee only. The cost of personal sessions and any costs associated with completing observation and student teaching hours are not included in the cost of the training program and are the responsibility of the student. Successful completion of the program does not guarantee employment.

NEED MORE INFORMATION?

If you need information regarding additional training, certificates of completion, continuing education or anything else, please contact Balanced Body at:

Contact Information
Balanced Body Education

Toll free: (800) PILATES (745-2837)
International: +1 (916) 386-6234
Fax: (916) 388-0609
E-mail: education@pilates.com
www.pilates.com

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al.harrison@pilates.com

Nora St. John, Director of Educational Programming
nora.stjohn@pilates.com

Thanks for joining us!

PRACTICAL REQUIREMENTS

Pilates Mat Instructor Requirement Records

Mat Personal Sessions

20 hours required. Date and initial each session taken.

1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	
16		17		18		19		20	

Mat Observation Hours

15 hours required. Date and initial each session taken.

1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Mat Student Teaching Hours

35 hours required. Date and initial each session taken.

1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	
16		17		18		19		20	
21		22		23		24		25	
26		27		28		29		30	
31		32		33		34		35	

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Pilates Reformer Instructor Requirement Records

Reformer Personal Sessions

30 hours required. Date and initial each session taken.

1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	
16		17		18		19		20	
21		22		23		24		25	
26		27		28		29		30	

Reformer Observation Hours

30 hours required. Date and initial each session taken.

1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	
16		17		18		19		20	
21		22		23		24		25	
26		27		28		29		30	

Pilates Reformer Instructor Requirement Records (cont.)

Reformer Student Teaching Hours

90 hours required. Date and initial each session taken.

1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	
16		17		18		19		20	
21		22		23		24		25	
26		27		28		29		30	
31		32		33		34		35	
36		37		38		39		40	
41		42		43		44		45	
46		47		48		49		50	
51		52		53		54		55	
56		57		58		59		60	
61		62		63		64		65	
66		67		68		69		70	
71		72		73		74		75	
76		77		78		79		80	
81		82		83		84		85	
86		87		88		89		90	

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Pilates Apparatus Instructor Requirement Records

Apparatus Personal Sessions

35 hours required. Date and initial each session taken.

1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	
16		17		18		19		20	
21		22		23		24		25	
26		27		28		29		30	
31		32		33		34		35	

Apparatus Observation Hours

20 hours required. Date and initial each session taken.

1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	
16		17		18		19		20	

Pilates Apparatus Instructor Requirement Records, cont.

Apparatus Student Teaching Hours

95 hours required. Date and initial each session taken.

1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	
16		17		18		19		20	
21		22		23		24		25	
26		27		28		29		30	
31		32		33		34		35	
36		37		38		39		40	
41		42		43		44		45	
46		47		48		49		50	
51		52		53		54		55	
56		57		58		59		60	
61		62		63		64		65	
66		67		68		69		70	
71		72		73		74		75	
76		77		78		79		80	
81		82		83		84		85	
86		87		88		89		90	
91		92		93		94		95	

APPLYING TO TEST OUT

Upon completion of all of the coursework and hours, go to www.pilates.com to download the application to test out. Copy these hours records and send them in with your application. Once Balanced Body has verified the information in your application, you will receive a list of test outs at locations near you. Contact the office for further information.

BALANCED BODY EDUCATION CONTACTS

Phone: (800) PILATES, (800) 745-2837, **Fax:** (916) 388-0609, **E-mail:** education@pilates.com

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WHAT IS PILATES?

Pilates is an exercise system developed by Joseph Pilates to strengthen muscles, increase flexibility and improve overall health. Exercises are performed on a mat and on specially designed equipment. The Pilates system includes exercises for every part of the body and applications for every kind of activity. Created in the early part of the 20th century, Pilates was so far ahead of its time that it did not begin to achieve popular recognition until the first few years of the 21st century. Over 10 million people are now practicing Pilates in the United States and the numbers are growing every year.

WHY IS PILATES SO POPULAR?

Pilates focuses on engaging the mind with the body to create exercises that involve the whole body. Every exercise is performed with attention to the breath, proper form and efficient movement patterns. Pilates strengthens the core, improves balance, increases coordination and decreases stress. The exercises are relatively safe, low impact and appropriate for anyone from 10 to 100. Pilates focuses on learning to move better so the benefits are felt in everyday life.

Pilates is used in fitness centers, private studios, rehabilitation clinics and hospitals to improve the health and well being of clients from the recently injured to the super fit. As more and more people participate, Pilates continues to grow and evolve to meet the needs of anyone wanting to improve their ability to move with strength, ease and grace.

A BRIEF HISTORY OF JOSEPH H. PILATES AND THE DEVELOPMENT OF CONTROLOGY

Joseph Hubertus Pilates was born in Germany around 1883. He had rheumatic fever, asthma and rickets as a child and was plagued by a weak respiratory system. In order to improve his own health he began exploring ways to strengthen his body and his mind. Early on, Joe became intrigued by the classical notion of the ideal man who combined a well trained body with an equally well trained intellect. In pursuit of this goal he participated in boxing, fencing, wrestling and gymnastics with his father and brother. Germany was a fertile ground for these explorations at the turn of the 20th century with many ground breaking leaders in movement science, dance and psychology working there.

Joe was in England touring with a boxer when World War I broke out. He was held as a resident alien in an internment camp on the Isle of Man for the duration of the war. While in the camp he took it upon himself to lead his fellow detainees in a daily exercise program. According to Joe, when the influenza epidemic of 1918–1919 broke out, none of the inmates who followed his regimen got sick.

Joe's success with his group of inmates brought him to the attention of the camp leaders and he was given the job of an orderly at a hospital for wounded soldiers. He was put in charge of 30 patients and worked with them every day to exercise whatever they could move. This was in the days when western medicine was in its infancy and there were few treatments to offer patients other than surgery and morphine. Nursing during this time usually meant extended bed rest which lead to muscular atrophy, loss of aerobic capacity and a weakened immune system. Joe's exercises helped his patients to get better faster and helped them to fend off the secondary infections that killed so many people in similar circumstances.

Working as an orderly also led to the development of Joe's first piece of exercise equipment. Manually working out 30 patients every day was exhausting so Joe came up with the idea of attaching springs to the patient's bed frames and thus the first Cadillac was born! Now the patients could exercise themselves under Joe's supervision.

After Joe was released from the camps and returned to Germany, he was approached by the "brown shirts" (who were to become the Nazi party) to train their police force. Joe didn't want to have anything to do with them, so he left Germany on a boat for America and met his soon-to-be-wife Clara on the passage over. Clara was a nurse who became a true partner for Joe, working beside him in the studio everyday and taking care of any clients Joe didn't want to work with.

When Joe and Clara arrived in New York in 1926, they rented a small studio in the same building as the New York City Ballet on 8th Ave. and started teaching what Joe named "Contrology." Joe worked with clients from all walks of life but he made an especially strong impression on the dance community working with Ted Shawn, Ruth St. Denis, George Balanchine and many others who sent their injured dancers to Joe's for rehabilitation following injuries.

Joe was an inventor who was always working on developing new exercise equipment. He designed the Universal Reformer, the Wunda Chair, the Cadillac, the Ladder Barrel, the Spine Corrector and many other wonderful inventions during his lifetime. He made many of the machines himself and often designed them to fit a particular client. Many of Joe's original machines are still working today.

Joe had a dream of introducing his vision of mind-body fitness into every aspect of life, from elementary schools to military training, and, had he not been so far ahead of his time, it might have happened. Instead, he taught a small group of devoted teachers and students, a few of whom went on to continue the work and keep it alive until the rest of the world caught up with his revolutionary thinking. Joe spent many years talking to anyone who would listen about his work, but did not receive much recognition during his lifetime.

Joe's studio was destroyed by fire in 1967 and he died soon after that from complications of smoke inhalation. His wife Clara carried on the work until her death in 1977.

Amongst the primary teachers who carried on Joe's work after his death was **Romana Kryzanowska**, a ballet dancer who worked very closely with Joe and taught at his studio for many years. She started one of the first teacher training programs in the country and has trained hundreds of instructors to teach the work as Joe taught it to her. She was associated with the Pilates Guild for many years and currently teaches through Romana's Pilates.

Eve Gentry was a well known modern dancer who worked with Joe and Clara as a student and teacher for over 20 years before moving to Santa Fe, New Mexico and opening a studio there. Joe helped to rehabilitate Eve after a radical mastectomy and helped her to regain the full use of her arm and torso. Eve died in the late 1990s. Her work is carried on by Michele Larsson through Core Dynamics.

Ron Fletcher was a Martha Graham dancer who worked with Joe and Clara very late in their lives. Ron credits Clara with inspiring him to develop his unique work on the Step Barrel/Spine Corrector and to open a studio in Los Angeles on Rodeo Drive. Ron was the first teacher to bring Pilates to the West Coast and to introduce it to many famous actors and actresses. His work incorporated a more "dancerly" style and more complicated choreography into the original exercises. His work is carried on by the Ron Fletcher Program of Study and is known as Ron Fletcher Work.

Carola Trier trained with Joe and opened her own studio in New York where she taught until her death in the late 1990s. Her work is carried on by several senior students including Jillian Hessel in Los Angeles and Deborah Lessen in New York.

Kathleen Stanford Grant originally came to Joe with a knee injury she sustained as a dancer. She was one of only two students to be certified by Joe to teach Pilates. After dancing and choreographing for many years she started teaching at New York University where she taught a Mat class to the students and ran a small studio until her death in 2010.

Lolita San Miguel is a well known dancer and choreographer who was certified by Joe while she was dancing in New York. She moved to Puerto Rico and founded the Ballet Concierto de Puerto Rico, one of the island's premier dance companies where she incorporated Pilates into the training program for her dancers. Ms. San Miguel teaches Pilates workshops nationally and internationally and has produced several DVDs.

Mary Bowen was a comedian performing in New York when she first started working with Joe. She now combines Psyche and Pilates in her current life as a Jungian psychoanalyst and Pilates instructor at her studio in Northampton, MA and her office in Killingworth, CT. She has taken at least one Pilates session a week for over 50 years and continues to deepen her own understanding of the balance between mind and body.

Pilates has now become a household word thanks to the work of all of these first generation teachers and many others who kept the method alive after the death of Mr. Pilates. Without them, we would not have the wonderful exercise system we have today. We are grateful to all of them.

THE DEVELOPMENT OF BALANCED BODY EDUCATION

The Balanced Body Pilates instructor training was developed by Nora St. John, MS. who has been practicing Pilates since 1981 and teaching since 1989. She originally trained at St. Francis Memorial Hospital with Patrice Whiteside and Elizabeth Larkam and has studied the work with Alan Herdman, Eve Gentry, Michele Larsson, Romana Kryzanowska, Carola Trier, Kathy Grant, Lolita San Miguel and Karen Clippinger.. Nora has degrees in Biology, Dance and Traditional Chinese Medicine as well as certifications in Pilates, Oriental Bodywork and the Franklin Method.

The Balanced Body program combines the full bodied, athletic aspects of the original work with the refinement and anatomical understanding of the more contemporary schools of Pilates. Nora's background in movement science provides a strong foundation for the ongoing development of the Balanced Body Pilates instructor training program.

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PILATES PRINCIPLES

Joseph Pilates thought of his method as a way to connect and develop the mind, body and spirit. in order to lead a happy, healthy and productive life. He saw his method as a way of teaching and practicing these principles so the body, mind and spirit could embody these principles in every moment.

These are the key principles of the Pilates method.

1) BREATHING

The breath is the essential link between the mind and the body. It draws our wandering mind back into our bodies and back to the task at hand. It is the foundation of our existence and the rhythm that accompanies us from birth to death. In Pilates the breath is integrated into every movement in order to focus our awareness on what we are doing, to improve the flow of oxygen through our bodies and to improve the capacity of our lungs.

2) CONCENTRATION

To concentrate is to pay attention to what you are doing. To be present with and in control of the task at hand. Without concentration the exercises lose their form and their purpose. When teaching it is important to have a client do only as many repetitions as they can without losing their concentration. As Joe often said, "It is better to do five repetitions perfectly than 20 without paying attention."

3) CONTROL

To be in control is to understand and maintain the proper form, alignment and effort during an entire exercise. Pilates exercises are never done without engaging the mind to control the movements and the efforts that the body is making.

4) CENTERING

In Pilates all movement radiates outward from the center. Developing a strong, stable and flexible center is one of the defining features of this form of exercise.

5) PRECISION

Precision is the ability to perform exercises with optimum alignment, unconscious control and just the right amount of effort. Precision is the end product of concentration, control, centering and practice.

6) BALANCED MUSCLE DEVELOPMENT

Understanding, developing and maintaining correct alignment and form is essential to Pilates. With practice these principles become second nature and lead to improved posture, increased comfort and enhanced physical abilities.

7) RHYTHM/FLOW

All movements in Pilates are done with a sense of rhythm and flow. Flow creates smooth, graceful and functional movements. It decreases the amount of stress placed on our joints and develops movement patterns that integrate our body into a smoothly flowing whole.

8) WHOLE BODY MOVEMENT

Pilates is fundamentally about integration: integrating movement into a flowing whole body experience, integrating the mind and body to create clarity and purpose, integrating mind, body and spirit to create a life of balance.

9) RELAXATION

To be healthy in body and mind it is important to understand the balance between effort and relaxation. In Pilates we learn to use just the amount of effort needed to complete the exercise correctly, no more, no less. Learning to release unnecessary tension in our bodies helps us to find ease and flow in movement and in the rest of our lives.

PILATES INSTRUCTOR RESOURCE LIST

PILATES

Pilates' Return to Life Through Contrology
Joseph H. Pilates &
William John Miller
Originally published in 1945, republished in 1998 by Presentation Dynamics

The Pilates Body
Brooke Siler
Broadway Books, 2000

Pilates' Body Conditioning: A Program Based on the Techniques of Joseph Pilates
Anna Selby and Alan Herdman
Barron's Educational Series, Inc., 2000

Pilates
Rael Isacowitz
Human Kinetics, 2006

Movement Analysis Workbooks
Rael Isacowitz
BASI Books

Ellie Herman's Pilates Manuals
Ellie Herman
Ellie Herman Books, 2005

NATIONAL PILATES ORGANIZATION

Pilates Method Alliance,
pilatesmethodalliance.org

EQUIPMENT AND VIDEOS

Balanced Body
800-PILATES (745-2837)
pilates.com

MOVEMENT, ANATOMY AND IMAGERY

Anatomy of Movement
Blandine Calais-Germain
Eastland Press, 1985

Dance Anatomy and Kinesiology
Karen Sue Clippinger
Human Kinetics, 2006

Trail Guide to the Body, 4th edition
Andrew R. Biel
Books of Discovery, 2010

Manual of Structural Kinesiology, 15th edition
R. T. Floyd, Ed. D, A.T.C., C.S.C.S., and Clem W. Thompson Ph.D., F.A.C.S.M.
WCB, McGraw-Hill, 1998

Dance Kinesiology
Sally Sevey Fitt,
Schirmer Books, 1988

Anatomy Coloring Book
Wynn Kapit and Lawrence W. Elson,
Harper and Row, 1977

Muscle Testing and Function
Florence Peterson Kendall, P.T., F.A.P.T.A, Elizabeth Kendall McCreary and Patricia Geise Provance, P.T.
Williams and Wilkins, 1993

Atlas of Human Anatomy, 3rd Edition
Frank H. Netter, M.D.
Saunders, 2002

Anatomy Trains
Thomas W. Myers
Churchill Livingstone, 2001

Thieme Atlas of Anatomy: General Anatomy and Musculoskeletal System
Various
Thieme Medical Publishers, 2005

The Thinking Body
Mabel E. Todd,
Dance Horizons/Princeton Book Co., 1937

Human Movement Potential: Its Ideokinetic Facilitation
Lulu E. Sweigard, Ph. D.
Harper and Row Publishers, 1974

The Breathing Book
Donna Farhi,
Owl Books, 1996

Stretching
Bob Anderson
Shelter Publications, Inc., 1980

Dynamic Alignment Through Imagery
Eric Franklin
Princeton Book Co. 2000

Pelvic Power for Men and Women
Eric Franklin
Princeton Book Co., 2002

Relax your Neck, Liberate your Shoulders
Eric Franklin
Princeton Book Co., 2003

SPORTS INJURIES AND REHABILITATION

Sports Injuries: Diagnosis and Management
James G. Garrick, David R. Webb
W. B. Saunders Co., 1999

Instructions for Sports Medicine Patients
Marc Safran, David A. Stone
W. B. Saunders, 2003

Dance Medicine: A Comprehensive Guide
Edited by Allan J. Ryan, M.D. and Robert E. Stephens, Ph.D.,
Pluribus Press and The Physician and Sportsmedicine, 1987

Therapeutic Exercise for Spinal Segmental Stabilization in Low Back Pain
Carolyn Richardson, Gwendolen Jull, Paul Hodges and Julie Hides
Churchill Livingstone, 1999

Diagnosis and Treatment of Movement Impairment Syndromes
Shirley Sahrmann
Mosby, 2001

The Pelvic Girdle
Diane Lee and Andre Vleeming
Churchill Livingstone, 1999

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SPINE TWIST

INTERMEDIATE 4-8 SETS

STARTING POSITION

Sit up with the legs straight and the inner thighs zipped together. Reach the arms out to the sides of the body no higher than the shoulders. Sit up on the center of the sit bones. If the hamstrings are too tight to sit up straight, roll the mat up and sit on it or bend the knees.

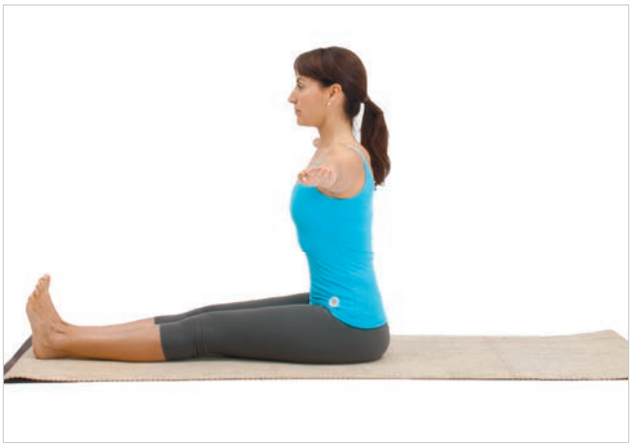
MOVEMENT SEQUENCE

Inhale: Zip the inner thighs together and root both sit bones into the ground. Rotate the torso to the left keeping the arms directly out to the sides. Pulse twice in the rotation with a sniffing breath.

Exhale: Return to the starting position with the weight centered on the sit bones and the arms out to the sides.

Inhale: Rotate the torso to the right and pulse 2 times with a sniffing breath keeping the lower body perfectly still.

Exhale: Return to the starting position.



1. Starting position. Seated, legs straight and together, feet flexed, arms out to the sides.

2. Rotate the torso to one side keeping the legs together.

3. Rotate to the other side maintaining an upright torso and keeping the legs together.

MODIFICATIONS

Tight hamstrings

Bend the knees slightly or sit on a rolled up mat, towel or small pad.

For crowded classes

Begin with both elbows bent and the hands on top of the shoulders. Extend the arm toward the front as you twist.

Breathing

Experiment with changing the breathing pattern to increase the rotation of the spine.

OPTIMUM FORM

The feet stay perfectly even with the inner thighs glued together as the spine rotates.

TRANSITION

Intermediate: Roll down onto the back and then roll onto the side for the Side Leg Series.

Advanced: Roll down onto the back and place the hands at your sides for Jackknife.

CUEING AND IMAGERY

- Keep the lower body completely still as the torso rotates.
  - Imagine your lower body is encased in cement.
  - Imagine your feet are glued to the wall in front of you and they can't move as you rotate.
  - Keep the heels even and the inner thighs together.
- Rotate smoothly from the center of the torso.

PURPOSE

- Increase spinal rotation.
- Strengthen the core.

PRECAUTIONS

Lower back injuries: Bend the knees slightly as for tight hamstrings and limit the rotation to a comfortable range of motion.

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TEASER PREPARATION

INTERMEDIATE 3-6 REPS

Bent Knee

STARTING POSITION

Lie supine with the knees bent, the feet off the floor in table top position and the arms overhead.

MOVEMENT SEQUENCE

Exhale: Reach the arms toward the legs and roll the back off the mat until you are sitting up in a V sit position with your knees bent, your hands reaching toward your feet and the weight balanced between the sit bones and the tailbone.

Inhale: Roll back to the starting position to start again.

1. Starting position Bent Knee. Lie supine with knees tabletop, arms overhead.

2. Reach the arms toward the legs and roll the back off the mat to come into a V sit position with the knees bent.

Single Leg

STARTING POSITION

Lie supine with both knees bent and both feet flat on the floor. Straighten one leg keeping the thighs parallel to each other.

MOVEMENT SEQUENCE

Exhale: Reach the arms toward the legs and roll the back off the mat until you are sitting up in a V sit position with one knee bent and the foot on the floor and your hands reaching toward the straight leg.

Inhale: Roll back to the starting position to start again.

Exhale: Switch legs and repeat to the other side.

1. Starting position Single Leg. Lie supine with one foot on the floor with the knee bent, straighten the other leg. Keep thighs together.

2. Roll up to a V sit position by reaching the arms toward the legs. Keep the legs in the starting position.

Instructor Assist (no photos)

STARTING POSITION

Lie supine with your feet on top of your assistant's thighs. Your assistant will anchor your feet by holding them with their hands.

MOVEMENT SEQUENCE

Exhale: Reach the arms toward the legs and roll the back off the mat until you are sitting up in a Teaser position.

Inhale: Roll down to the starting position with control.

CUEING AND IMAGERY

- Keep the low back in neutral or slightly flexed when you are at the top of the Teaser.
  - Feel equal effort between the abdominals and the back muscles.
- Find the perfect balance point between the sit bones and the tailbone.
  - Imagine your hips are rooted to the floor while your head and feet are suspended from the ceiling.
- Sink the femurs into the hips to stabilize the legs.
- Move smoothly from one position to the next.
  - Momentum makes it easy; slow flow makes it much harder.
- Keep the shoulders down.
  - Slide your shoulder blades down your back and open your chest.

OPTIMUM FORM

At the top of the Teaser, the legs and torso form a balanced V. The low back is in neutral, or slightly flexed (not extended) and the arms are reaching toward the feet with the shoulders down and the eyes straight ahead.

TRANSITION

Intermediate: Continue on to Teaser 1, 2, or 3 or roll over into the prone position for Swimming.

PURPOSE

- Strengthen the inner unit and the abdominals.
- Strengthen the hip flexors including the iliopsoas, rectus femoris, sartorius, tensor fascia lata and adductors.
- Strengthen the knee extensors including the vasti of the quadriceps.
- Develop coordination and balance.
- Challenge the control of the torso and legs.

PRECAUTIONS

Low back, hip flexor and sacroiliac joint injuries: Avoid.

Avoid with osteoporosis.

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TEASER 1 - TORSO ROLL DOWN

ADVANCED 3-6 REPS

STARTING POSITION

Lie supine with the legs in table top position and the arms overhead. For a more advanced starting position, begin with the legs straight toward the ceiling.

MOVEMENT SEQUENCE

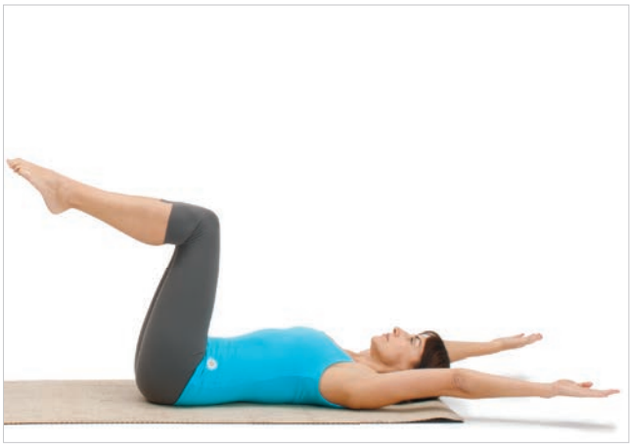
Exhale: Reach the arms toward the legs and roll the back off the mat as the legs straighten until you are sitting up in a V sit position with the legs straight and the hands reaching toward the feet. Keep the core engaged with both sides of the torso balanced.

Inhale: Keeping the legs in position, roll the torso down and reach the arms overhead.

Exhale: Roll the torso back up, keeping the legs straight.

Repeat 3 to 6 times.

Inhale: To return to the starting position, roll the torso down onto the mat and bend the knees.



1. Starting position. Lie supine, legs tabletop and arms overhead.

2. Reach the arms toward the feet and roll up into a Teaser position with the legs straight.

3. Roll the torso down, bring the arms overhead and the legs over the hips to roll back up to the Teaser with control.

MODIFICATIONS

Tight hamstrings
Bend the knees just enough to balance in the V sit position.

Arm variation
Circle the arms out to the side before reaching them forward to roll up.

CHALLENGES

Advanced starting position
Begin with the knees straight and the legs pointing at the ceiling.

Slow it down
The slower and more precisely you move the harder this is. Reach the arms slowly toward the legs as the torso rolls up. Roll up and down with control, focusing on the powerhouse.

OPTIMUM FORM

In the Teaser position, the legs and torso form a balanced V with the low back in neutral or slightly flexed (not extended). The arms reach toward the feet with the shoulders down.

TRANSITION

Intermediate: Continue on to Teaser 2 and/or 3 or roll over into the prone position for Swimming.

Advanced: Continue on to Teaser 2 and/or 3 or from the Teaser position circle the arms around to the back to support the torso for Hip Circles.

CUEING AND IMAGERY

- Keep the low back in neutral or slightly flexed when you are at the top of the Teaser.
  - Instructor cue the low back manually.
- Roll down with the torso keeping the legs in the same position.
  - Imagine there is an elastic band between your hands and your feet. Slowly stretch it as you roll down.
- Sink the femurs into the hips to stabilize the legs.
- Keep the shoulders down.
  - Slide your shoulder blades down your back and open your chest.

PURPOSE

- Strengthen the inner unit and the abdominals.
- Strengthen the hip flexors including the iliopsoas, rectus femoris, sartorius, tensor fascia lata and adductors.
- Strengthen the knee extensors including the vasti of the quadriceps.
- Develop coordination and balance.
- Challenge the control of the torso and legs.

PRECAUTIONS

Low back, hip flexor and sacroiliac joint injuries: Avoid.

Avoid with osteoporosis.

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TEASER 2 - LEG LOWERS

ADVANCED 3-6 REPS

STARTING POSITION

Lie supine with the legs straight toward the ceiling and the arms overhead.

MOVEMENT SEQUENCE

Exhale: Reach the arms toward the legs and roll the back off the mat as the legs straighten until you are sitting up in a Teaser position. Keep the core engaged with both sides of the torso balanced.

Inhale: Keeping the torso still, lower the legs toward the mat without arching the low back.

Exhale: Raise the legs back to the Teaser position.

Repeat 3 to 6 times.

Inhale: To return to the starting position, roll the torso down onto the mat and bend the knees.

MODIFICATIONS

Tight hamstrings

Bend the knees just enough to balance in the Teaser position.

CHALLENGES

Advanced starting position

Use the advanced starting position.

Slower is harder

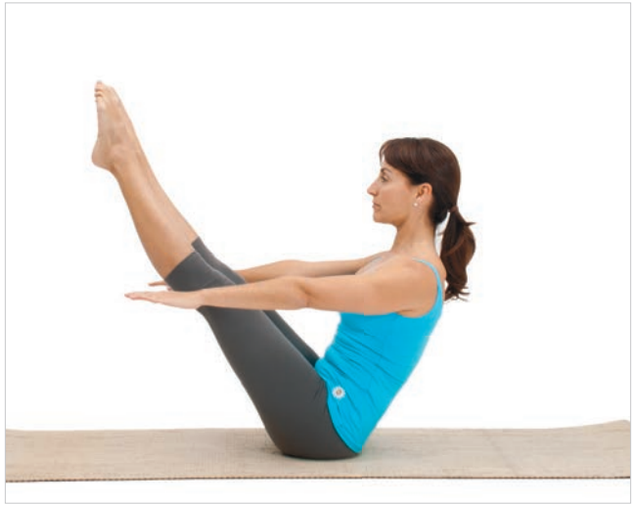
OPTIMUM FORM

Raise and lower the legs without changing the position of the back.

TRANSITION

Advanced: Continue on to Teaser 3 or, from the Teaser position, circle the arms around to the back to support the torso for Hip Circles.

1. Starting position. Supine, legs straight and over hips, arms overhead.



2. Reach the arms toward the feet and roll up into the Teaser.

CUEING AND IMAGERY

- Don't arch the low back forward as the legs lower.
  - Imagine the back is against a wall and don't let it move as the legs lower.
- Sink the femurs into the hips to stabilize the legs.
- Move smoothly from one position to the next.
  - Momentum makes it easy, slow flow makes it much harder.
- Keep the shoulders down.
  - Slide your shoulder blades down your back and open your chest.

PURPOSE

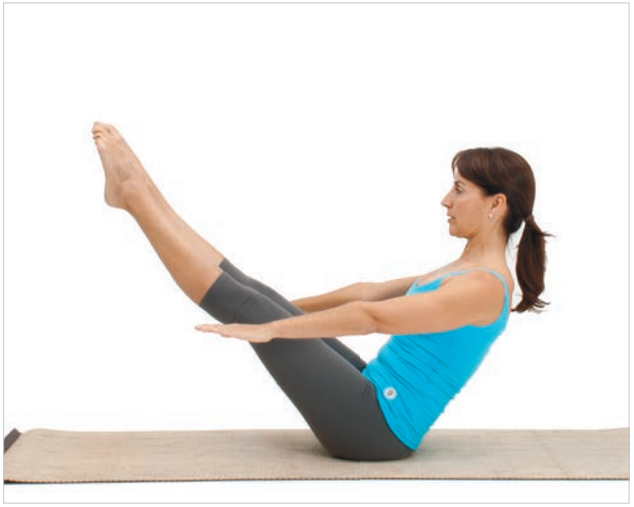
Same as Teaser 1.

PRECAUTIONS

Low back, hip flexor and sacroiliac joint injuries: Avoid.

Avoid with osteoporosis.

3. Lower the legs while maintaining torso position.



4. Lift the legs back up into the Teaser position.

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TEASER 3 - ARMS AND LEGS TOGETHER

ADVANCED 2-4 REPS

STARTING POSITION

Begin in the Teaser position.

MOVEMENT SEQUENCE

Inhale: Lower the torso and the legs toward the mat at the same time until you are hovering just above the floor.

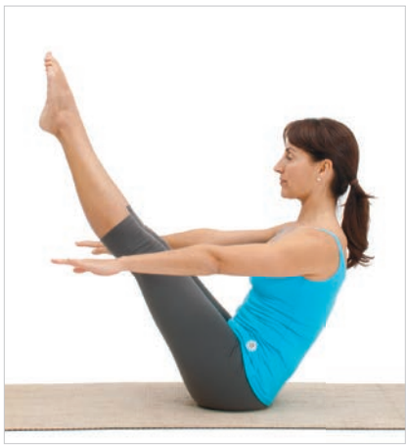
Exhale: Raise the legs and the torso back to the Teaser position.

Repeat 2 to 4 times before lowering the arms and legs back down to the mat.

MODIFICATIONS

Tight hamstring

Bend the knees just enough to balance in the Teaser position.



1. Roll up into Teaser.

2. Lower the torso and the legs toward the mat.

CHALLENGES

Figure 8's (no photos)
From the Teaser position, circle the legs to one side and the arms to the other side as you lower the legs and the torso. Come back up to the center and circle to the other side.

OPTIMUM FORM

Lower the torso and the legs at the same time and go as low to the ground as possible without touching it. Move smoothly throughout the exercise.

3. Lift the torso and legs back to the starting position.

TRANSITION

Advanced: From the Teaser position circle the arms around to the back to support the torso for Hip Circles.

CUEING AND IMAGERY

- Move smoothly and evenly as you lower and raise the torso.
  - Imagine the torso and the legs are floating up and down.
- Don't let the abdominals "pop" or the low back arch as the torso and legs lower.
- Control the exercise from the center.
- Keep the shoulders down.
  - Slide your shoulder blades down your back and open your chest.

PURPOSE

Same as Teaser 1.

PRECAUTIONS

Low back, hip flexor and sacroiliac joint injuries: Avoid.

Avoid with osteoporosis.

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HIP CIRCLES

ADVANCED 3-6 REPS

STARTING POSITION

Sit on the mat in the Teaser position with the hands on the mat behind the hips and the arms straight to support the torso.

MOVEMENT SEQUENCE

Inhale: Keeping the upper body steady, make a circle by swinging the legs to the right and down toward the mat. The hips can swing off the mat but the shoulders and upper torso stay still. Keep the low back neutral throughout the exercise.

Exhale: Continue to circle the legs around to the left and back to the starting position.

Repeat in the other direction.

MODIFICATIONS

Upper body position

Bend the elbows and support the torso with the weight on the forearms rather than on the hands.

Tight hamstrings

Bend the knees slightly.

1. Starting position. Seated V position with the hands behind the hips and the arms straight.

2. Circle the legs to the right and down.

1. Modified starting position. Elbows bent with the torso supported on the forearms.

3. Circle the legs to the left and up to return to the starting position.

OPTIMUM FORM

Shoulders are steady, Hip Circles are large and even.

CUEING AND IMAGERY

- Keep the shoulders still as the pelvis and legs move.
  - Imagine your hands are anchored into the ground and you are balancing a book on your head.
- Make the circles smooth and symmetrical to each side.
  - Imagine you have paint brushes on your feet and draw a smooth and symmetrical circle.
- Keep the shoulders down.
  - Press the hands into the mat and reach the head up and out of the shoulders.
  - Don't be a turtle!
- Keep the legs together.
  - Imagine the legs are glued together as of you have a mermaid tail.

PURPOSE

- Strengthen the inner unit and the abdominals.
- Strengthen the hip flexors including the iliopsoas, rectus femoris, sartorius, tensor fascia lata and adductors.
- Strengthen the knee extensors including the vasti of the quadriceps.
- Increase torso rotation.
- Improve scapular stability.
- Develop coordination and balance.
- Challenge the control of the torso and legs.

PRECAUTIONS

Low back, hip flexor and sacroiliac joint injuries: Avoid.

Avoid with osteoporosis.

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ROLL OVER

ADVANCED 3 EACH WAY

STARTING POSITION

Lie on your back with your hands at your sides, your legs together and your feet pointed.

MOVEMENT SEQUENCE: FORWARD

Exhale: Engage the core and lift the legs up toward the ceiling to prepare.

Inhale: Roll the lower back off the mat reaching the legs overhead until they are parallel to the ground. Press the upper arms into the mat and roll up until you are balanced no higher than the top of your shoulder blades. Do not roll up onto your neck!

Continue the Inhale: Open the legs shoulder width apart and flex the feet.

Exhale: Roll down, keeping the legs shoulder width apart, engaging the core and pressing the upper arms into the mat to make the roll smooth and steady. Keep the chest open and the back of the shoulders on the mat. Lower the legs as far as possible without letting the back arch off the mat.

Continue the Exhale: Bring the legs back together and point the feet to start again.

Repeat 3 times forward then 3 times reverse.

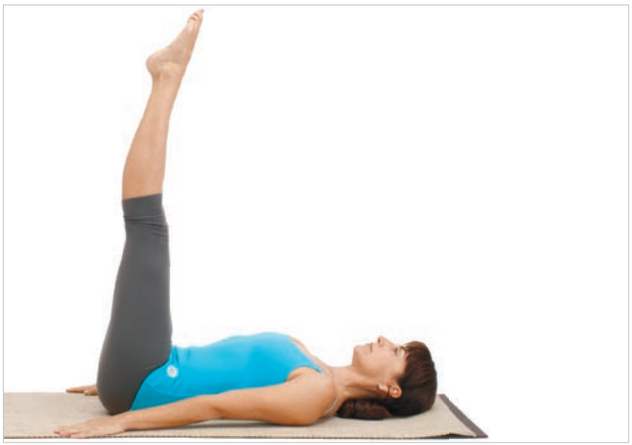
MOVEMENT SEQUENCE: REVERSE

Inhale: From the end of the forward version, with the legs shoulder width apart and the feet flexed, roll the lower back off the mat reaching the legs overhead until they are parallel to the ground. Press the upper arms into the mat and roll up until you are balanced no higher than the top of your shoulder blades. Do not roll up onto your neck!

Continue the Inhale: Bring the inner thighs together and point the feet.

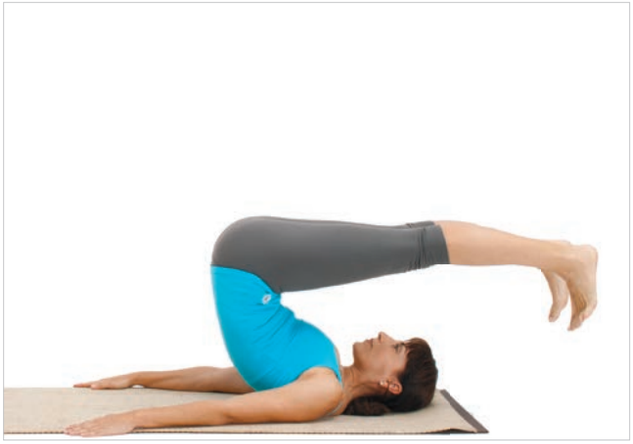
Exhale: Roll down, keeping the legs shoulder width apart, engaging the core and pressing the upper arms into the mat to make the roll smooth and steady. Keep the chest open and the back of the shoulders on the mat. Lower the legs as far as possible without letting the back arch off the mat.

Continue the Exhale: Open the legs hip width apart and flex the feet to start again.



1. Starting position: Lie supine with the legs straight toward the ceiling.

2. Roll the lower back off the mat going no higher than the top of the shoulder blades. The legs should be parallel to the floor.



3. Open the legs shoulder width apart, flex the feet and roll back down to the starting position.

MODIFICATIONS

Tight hamstrings

Soften the knees when the legs are parallel at the top of the movement if the hamstrings and lower back are tight.

Beginning version

Support the low back with the hands as if doing a shoulder stand.

CHALLENGES

Leg lowers

To increase the challenge of the Roll Over, lower the legs to the mat with control at the top of the move and flex the feet to increase the stretch. Lift the legs until they are parallel to the floor before rolling down.

Stretch

Hold onto the feet at the top of the move to increase the stretch.

OPTIMUM FORM

The Roll Over is an excellent exercise for developing overall core control, spinal flexibility and coordination. In the ideal Roll Over, the movements are smooth and even in tempo in both directions, the torso is perpendicular to the mat at the top of the move with the legs parallel and the torso control allows the legs to lower to within a few inches of the mat without the back arching.

TRANSITION

Lower one leg to the floor to start the Single Leg Circles.

CUEING AND IMAGERY

- Keep the core engaged and supported throughout the exercise.
- Do not roll up past the top of the shoulder blades.
  - Root the back of the upper arms into the mat as you roll up and maintain the contact as you roll down.
- Lift the torso up and out of the shoulders at the top of the rollover.
- Keep the legs parallel to the ground at the top of the exercise.

PURPOSE

- To develop core strength and control.
- To increase the flexibility and articulation of the spine.
- To learn to stabilize the shoulders.

PRECAUTIONS

For low back injuries: Avoid.

For neck and shoulder injuries: Avoid.

Avoid with osteoporosis.

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MODIFIED CORKSCREW

INTERMEDIATE 3-6 REPS

STARTING POSITION

Lie supine with your arms at your sides, your hips flexed with the legs straight and the feet pointing to the ceiling.

MOVEMENT SEQUENCE

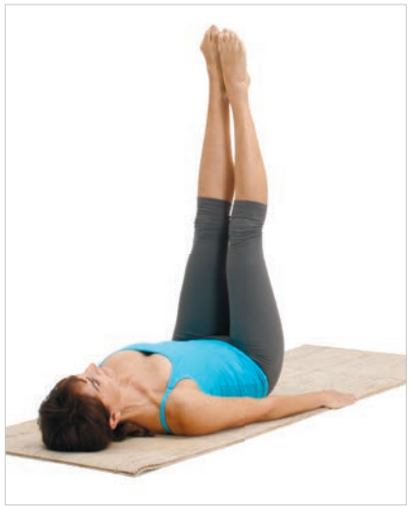
Inhale: Tilt the legs to the right letting the back of the left hip come off the mat. Swing the legs down toward the floor without arching the back.

Exhale: Swing the legs to the left and back up to the starting position.

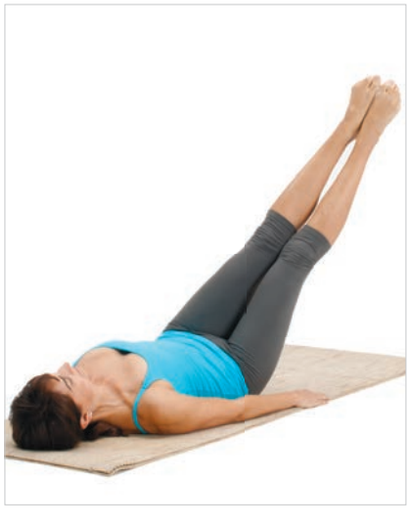
Inhale: Tilt the legs to the left, letting the back of the right hip come off the mat. Swing the legs down toward the floor without arching the back.

Exhale: Swing the legs to the right and back up to the starting position.

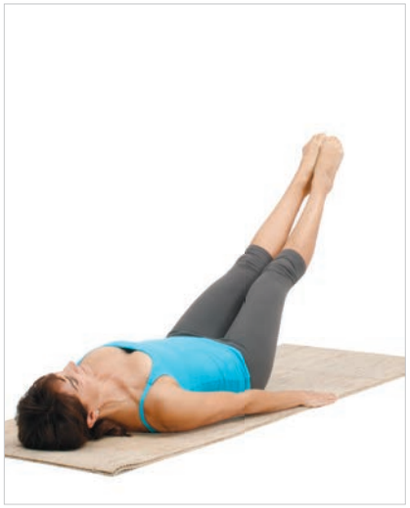
Repeat 3 to 6 times in each direction.



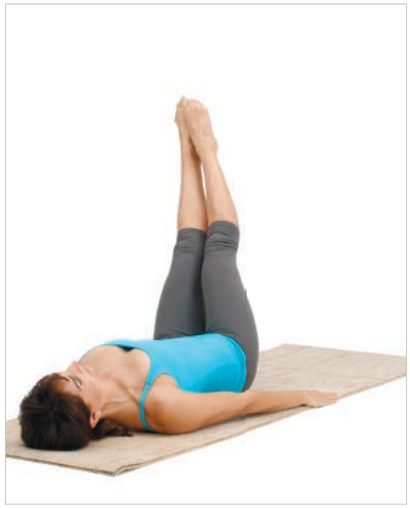
1. Starting position. Supine with hips flexed and the legs pointing to the ceiling.



2. Lower the legs to the right and lift the left hip off the mat.



3. Lower the legs toward the mat without changing the back position. Stay centered.



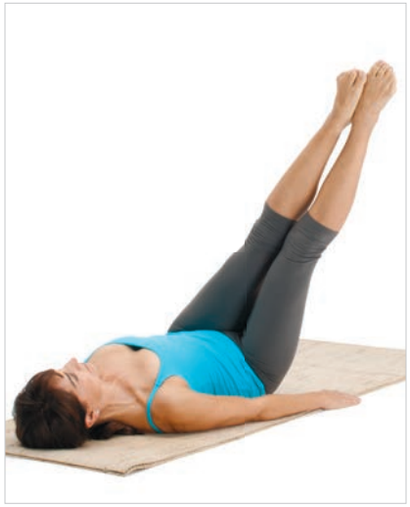
4. Circle the legs to the left and lift the right hip off the mat.

MODIFICATION

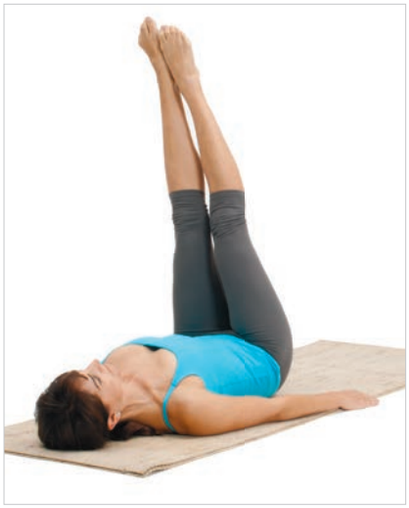
Windshield Wiper (beginner)

Slide both legs to one side keeping the back of the hips on the mat. The legs will slide over each other.

1. Windshield Wiper starting position.



2. Keep the hips anchored, move the legs to one side allowing the legs to slide.



3. Slide the legs to the other side.

TRANSITION

Bend the knees into the chest and roll up to a sitting position with the legs straight and hip width apart for Saw or lower the legs and roll over for Swan.

CUEING AND IMAGERY

- Keep your legs together as if they have grown together.
- Imagine the back of your hips have a clock face on them and make sure to touch every point on the clock face as you go around the circle.
- Keep both shoulders and arms anchored throughout the exercise.
  - Imagine your upper shoulders and upper arms are glued to the mat.
- Make smooth, even circles in both directions.

PURPOSE

- To increase spinal rotation.
- To increase core support and control.
- To mobilize the hips.
- To increase scapular stability.

PRECAUTIONS

For low back injuries: Limit range of motion, do Windshield Wiper version only or avoid.

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CORKSCREW

ADVANCED 3-4 REPS

STARTING POSITION

Lie supine with your arms at your sides, your hips flexed with the legs straight and the feet pointing to the ceiling.

MOVEMENT SEQUENCE

Inhale: Roll up off the mat with the legs overhead and parallel to the floor as in the Roll Over. Do not roll onto your neck.

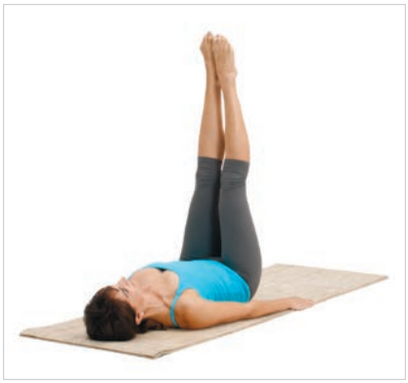
Exhale: Shift the weight slightly toward one side of the spine allowing the hips and legs to rotate. Roll down on that side of the spine.

Inhale: Circle the legs across to the other side making sure the spine is centered when you are on the midline.

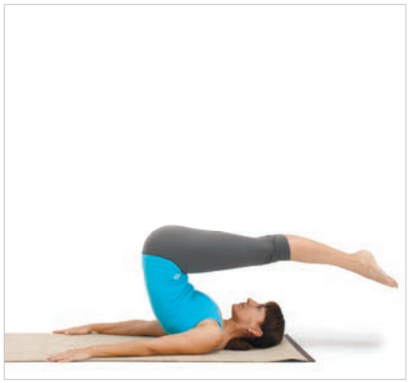
Exhale: Shift the weight slightly to the other side of the spine and roll up on that side.

Inhale: Come to the midline with the legs overhead as in Roll Over.

Change directions. Repeat 3 to 6 times in each direction before finishing in the Roll Over position and rolling back down onto the mat



1. Starting position. Lie supine with the legs straight toward the ceiling.



2. Roll up off the mat into the Roll Over position with the legs parallel to the mat.

3. Shift the weight to the right side of the back and roll down.

OPTIMUM FORM

Find the mid line at the top and the bottom of the exercise. It requires tremendous physical awareness to feel where the body is in this position and to land in the middle each time.

TRANSITION

Bend the knees into the chest and roll up to a sitting position with the legs straight and hip width apart for Saw.

Or lower the legs and roll over for Swan.

CUEING AND IMAGERY

- Keep your legs together as if they have grown together.
  - Imagine the back of your hips have a clock face on them and make sure to touch every point on the clock face as you go around the circle.
- Keep both shoulders and arms anchored throughout the exercise.
  - Imagine your upper shoulders and upper arms are glued to the mat.
- Make smooth, even circles in both directions.

PURPOSE

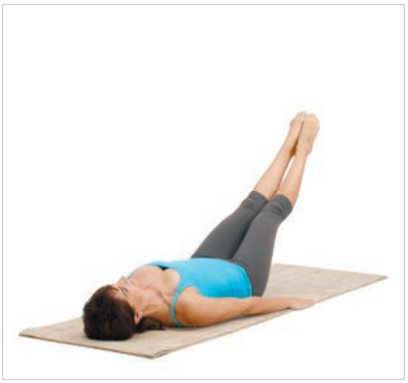
- To increase spinal rotation.
- To increase core support and control.
- To increase back flexibility.
- To increase scapular stability.

PRECAUTIONS

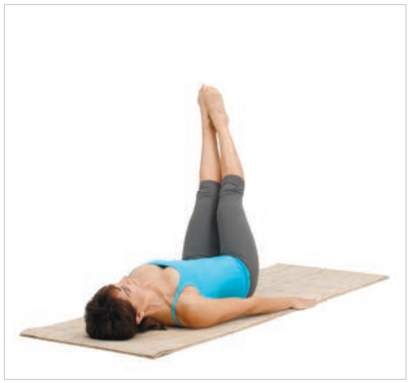
For low back injuries: Avoid.

For neck and shoulder injuries: Avoid.

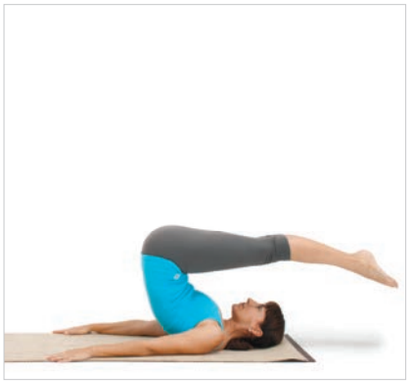
Avoid with osteoporosis.



4. Circle the legs through the center.



5. Shift the weight to the left side of the torso. The legs will follow the torso.



6. Roll up on the left side of the back. Center the body at the top to reverse sides.

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NECK PULL

ADVANCED 3-6 REPS

STARTING POSITION

Lie supine on the mat with the hands behind the head, the elbows wide and the legs hip width apart with the feet flexed. Imagine your legs are glued to the mat. Keep your elbows wide by bringing the shoulder blades together in the back and making sure your elbows are just at the edge of your peripheral vision.

MOVEMENT SEQUENCE

Inhale: Engage the abdominals, slide the ribs down toward the hips and round the upper body off the mat. Keep the elbows wide and don't pull the head forward.

Exhale: Continue to roll up peeling one vertebra off the mat at a time and keeping the legs glued to the mat. Roll as far forward as you can until the torso is over the legs and the back is rounded.

Inhale: Roll back up to a sitting position as if you are stacking yourself up against a wall.

Exhale: Lift through the top of the head, engage the abdominals and lean back keeping the spine in neutral as long as you can. When you start to lose your abdominal control, tuck the tail under to roll down placing one vertebra on the mat at a time. Keep the legs pressed into the mat.

MODIFICATIONS

Roll Down only

Begin leaning forward over the legs. Roll up to a sitting position with the hands behind the head. Engage the abdominals and tuck the tail under to roll down, vertebra by vertebra. When you have rolled all the way down, bring the knees into the chest and place the hands behind the knees to roll up to the sitting position, ending with the legs straight and hip width apart. Place the hands behind the head and lean forward rounding the back to stretch the back and hamstrings.

CHALLENGES

Kathy Grant's version

Stop at the most difficult part and take several breaths, deepening the abdominal scoop and increasing the flexibility of the back.

OPTIMUM FORM

If you can roll up and down smoothly, keeping the legs glued to the mat and articulating each vertebra, you have mastered several key concepts in Pilates!

CUEING AND IMAGERY

- Root the back of the legs into the mat as you roll up.
  - Imagine your lower body is strapped down to the floor.
  - Imagine your legs are encased in concrete.
- Engage the abdominals more deeply and press the lower back into the mat if the legs start lifting up.
- Keep the shoulders away from the ears.
  - Anchor the shoulders into the back pockets throughout the exercise.
  - Don't wear your shoulders as earrings.
- Lift the head from the rib cage not from the neck.
  - To lift the head, press the lower ribs into the mat and let them lift the head up.
- Keep the head tucked into the chest but not too far.
  - Imagine you are holding an orange between your chin and your chest as you roll up.
- Move smoothly throughout the exercise.

TRANSITION

Intermediate: Roll over to one side for the Side Kick Series.

Advanced: Reach the legs up to the ceiling with the hands at your sides to prepare for the Scissors.

PURPOSE

- To increase abdominal strength.
- To increase the flexibility and articulation of the spine.

PRECAUTION

For low back injuries: Do the Roll Down only or avoid if lumbar flexion is not tolerated.

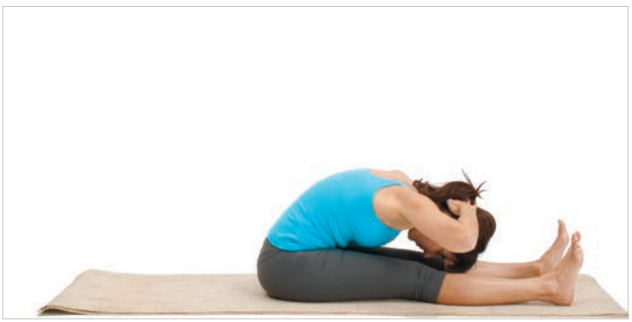
For neck and shoulder injuries: Avoid if symptoms increase.

Avoid with osteoporosis.

1. Starting position. Lie supine, feet apart, hands behind head.

2. Slide the ribs to the hips to roll the torso off the mat.

3. Continue to roll up.



4. Roll all the way forward over the legs.

5. Lift the torso by extending the spine.

6. Sit up tall, head over ribs, ribs over pelvis.

7. Lean back with a flat back.

8. Round the low back and continue to roll down to the starting position.

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LEG PULL DOWN

INTERMEDIATE 4-6 SETS

STARTING POSITION

Plank position with the shoulders over the wrists, the inner thighs together and the body in one line from head to feet.

MOVEMENT SEQUENCE

Inhale: Lift one leg up toward the ceiling with the foot pointed and pulse it two times. Dorsiflex the standing foot and move the torso back toward the feet as the leg pulses. Keep the torso in line and the hips level throughout the exercise.

Exhale: Lower the leg back to the mat.

Repeat to the other side.

Do a total of 4 to 6 sets on each leg alternating sides.

MODIFICATIONS

Beginning version

Begin in an all fours position and lift the leg from there.

Wrist discomfort

In order to accommodate clients with wrist injuries or discomfort, use push up handles or hexagonal metal hand weights for them to grip, or place the forearms on a sitting box or yoga blocks so no weight is on the wrists.

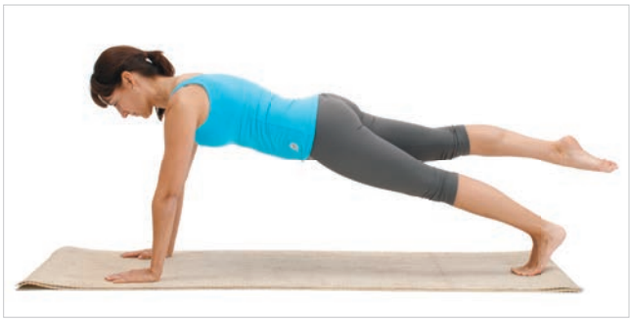
OPTIMUM FORM

The body is in one line from the head to the feet throughout the exercise. The legs reach high up toward the ceiling without disturbing the hips. The shoulders are wide and the neck is long.

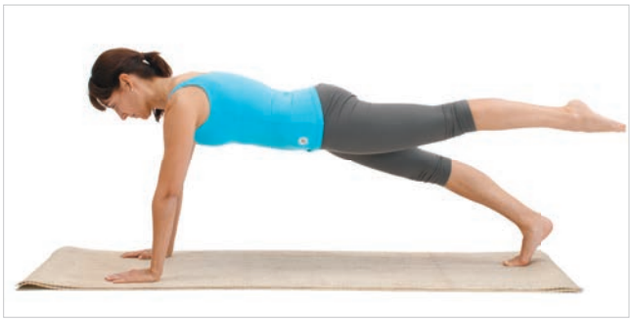
CUEING AND IMAGERY

- Keep the torso in one line from head to feet.
  - Imagine you have a bar on the back of your body and it is touching your head, upper back, hips and heels.
- Don't stick your butt out.
- Don't drop the hips as the leg lifts.
  - Imagine you are balancing a board across your hips and you have two cups of tea on the ends of the board. Don't spill them as the leg lifts.
- Keep your shoulders over your wrists.
- Keep your head looking directly in front of the hands.

1. Starting position. Plank position with shoulders over wrists, legs straight and strong.



2. Lift the right leg and dorsiflex the left ankle. Pulse the leg to the ceiling 2 times.



3. Lift the left leg while dorsiflexing the right ankle. Pulse the leg to the ceiling 2 times.

PURPOSE

- Strengthen the entire body including the core, scapular stabilizers and lumbopelvic stabilizers.
- Strengthen the hip extensors including the hamstrings (biceps femoris, semitendinosus, semimembranosus) and gluteus maximus.

PRECAUTIONS

Wrist injuries: Use the modifications above or avoid.

LEG PULL UP

SUPER ADVANCED 4: 6 SETS

STARTING POSITION

Reverse plank with the wrists under the shoulders and the hips lifted as high as possible. The shoulder and hand position can vary from medial shoulder rotation with the fingers facing the hips (as shown) to lateral rotation with the fingers pointing away. Tuck the chin in slightly so the head is in line with the arms.

1. Starting position. Seated with the legs together and straight, the hands under the shoulders and behind the hips.

2. Press the hips up and tuck in the chin.

3. Lift one leg and pulse 2 times.

MOVEMENT SEQUENCE

Inhale: Kick one leg up toward the ceiling and pulse it two times with a sniffing breath.

Exhale: Bring the leg back to the mat.

Repeat to the other side.

Do a total of 4 to 6 sets on each leg alternating sides.

MODIFICATIONS

Knee discomfort
Place the ankles on a 6" foam roller or a rolled up mat.

Ankle discomfort
Externally rotate the legs so the weight is on the side of the feet or use the roller modification listed above for knee discomfort.

OPTIMUM FORM

Keep the hips as high and steady as possible throughout the exercise.

CUEING AND IMAGERY

- Keep the hips up and steady as the leg lifts.
  - Imagine the hips are supported by a strap from the ceiling.
- Keep the shoulders over the wrists.
- Keep the head up at a comfortable angle.

PURPOSE

- Strengthen the entire body including the core, scapular stabilizers and lumbopelvic stabilizers.
- Strengthen the hip extensors including the hamstrings (biceps femoris, semitendinosus, semimembranosus) and gluteus maximus.
- Increase shoulder range of motion.

PRECAUTIONS

Shoulder and wrist injuries: Modify the starting position or avoid.

Neck injuries: Avoid.

Knee discomfort: If the knees don't tolerate hyperextension, use the foam roller modification.

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JACKKNIFE

ADVANCED 3-4 REPS

STARTING POSITION

Lie on your back with your hands at your sides, your legs straight up to the ceiling with your feet pointed.

MOVEMENT SEQUENCE

Inhale: Roll the back off the mat reaching the legs overhead until parallel to the ground. Press the upper arms into the mat until you are balanced on the top of your shoulder blades. Do not roll up on to your neck!

Exhale: Lower the legs toward the mat above your head keeping the sit bones reaching toward the ceiling.

Inhale: Straighten the legs as high up toward the ceiling as possible without rolling past the top of the shoulder blades.

Exhale: Roll down, engaging the core and pressing the upper arms into the mat to make the roll smooth and steady. Keep the legs reaching straight up to the ceiling. Keep the shoulders and upper arms on the mat and the chest open.

Repeat 3 times.

MODIFICATIONS

Tight hamstrings

Soften the knees when the legs are parallel at the top of the move if the hamstrings and low back are tight.

OPTIMUM FORM

The Jackknife is an excellent exercise for developing overall core control, spinal flexibility and coordination. In the ideal Jackknife, the legs stay pointed to the ceiling as you roll down in order to increase the work of the core.

TRANSITION

Roll all the way down and lower the legs to the floor before rolling up with the legs together for Spine Twist.

1. Starting position. Lie supine with the legs straight and pointed to the ceiling.

CUEING AND IMAGERY

- Keep the core engaged and supported throughout the exercise.
- Do not roll up past the top of the shoulder blades.
- Root the back of the upper arms into the mat as you roll up and maintain the contact as you roll down.
- Keep the neck and shoulders as relaxed as possible and support the torso on the shoulder blades and upper back.
  - Lift the torso up and out of the shoulders at the top of the jackknife.
- Keep the legs straight up to the ceiling throughout the exercise.

PURPOSE

- To develop core strength and control.
- To increase the flexibility and articulation of the spine.
- To learn to stabilize the shoulders.

PRECAUTIONS

For low back injuries: Avoid.

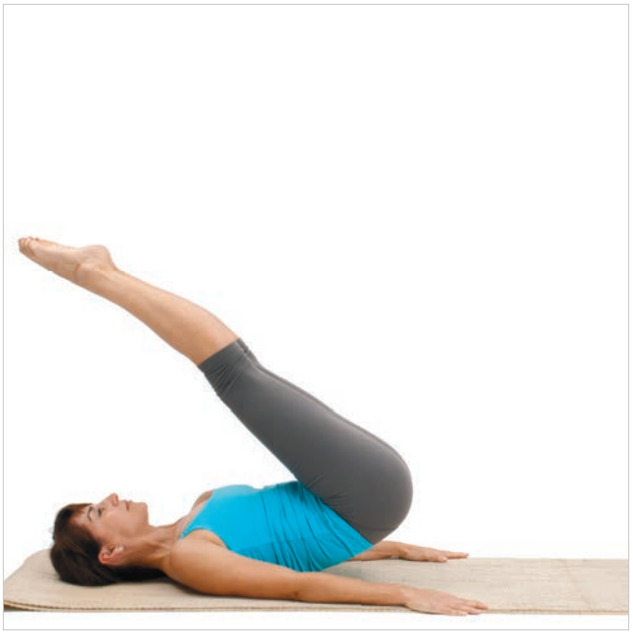
For neck and shoulder injuries: Avoid.

Avoid with osteoporosis.

2. Roll up and over until the legs are parallel to the mat.

3. Lower the feet toward the mat.

4. Lift the legs toward the ceiling.



5. Roll down while keeping the legs as high as possible.

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KNEELING SIDE KICKS

SUPER ADVANCED 6-8 SETS

STARTING POSITION

Kneel on the mat with the arms out to the sides and the legs sit bone width apart. Lean over to one side until the hand touches the mat. If the hand can't quite reach the mat, place a yoga block, small box or phone book under the hand. The opposite knee will be off the ground. Make sure the bottom hip is pressed forward so the torso is as straight as possible.

1. Starting position. Kneeling with the arms out to the sides.

MOVEMENT SEQUENCE

Inhale: Kick the top leg forward with a flexed foot and pulse it two times with a sniffing breath as in the Side Kicks. Keep the bottom hip pressing forward throughout the exercise. Don't let the hip fold and the bottom stick out.

Exhale: Reach the top leg to the back with a pointed foot.

Repeat 6 to 8 times to one side.

Inhale: Bend the top knee and lift the torso back to an upright position with the knees sit bone width apart and the arms reaching out to the sides.

Exhale: Lean over to the other side until the hand touches the mat.

Inhale: Kick the top leg forward with a flexed foot and pulse it two times with a sniffing breath as in the Side Kicks. Keep the bottom hip pressing forward throughout the exercise. Don't let the hip fold and the bottom stick out.

Exhale: Reach the top leg to the back with a pointed foot.

Repeat 6 to 8 times to the second side.

2. Lean to the right, put the right hand on the mat and left the left leg off the mat.

MODIFICATIONS

Limited lateral flexion

Use a box, yoga block or push up handle under the hand to get the torso in the correct position for the exercise. If the torso and hips are not flexible, you will not be able to press the bottom hip forward when the hand is on the ground.

3. Bend the left elbow and place the hand behind the head.

CHALLENGES

Leg variations

Add Leg Circles or Leg Lifts in the Kneeling Side Kick position to increase the work.

OPTIMUM FORM

Both hips are in the same plane and stay still as the leg kicks forward and back.

TRANSITION

Depending on the program, you can sit down on one hip with the knees bent and the feet pointing in the same direction for the Seated Twist and Side Bend Series or you can sit down on the mat with the legs straight and together and roll down to begin the Teaser series.

CUEING AND IMAGERY

- Keep the standing hip pressing forward.
  - Imagine your torso is pressed against a pane of glass and keep the shoulders and both hip bones pressed into the glass.
- Keep the hips still as the leg moves.

PURPOSE

- Strengthen the hips including the abductors (gluteus minimus and medius, tensor fascia lata) hip flexors (iliopsoas, rectus femoris, sartorius) and hip extensors (gluteus maximus, biceps femoris, semimembranosus and semitendinosus).
- Strengthen the shoulder including the latissimus dorsi, teres major, rotator cuff and deltoid.
- Increase pelvic stability.
- Increase the flexibility of the hamstrings and hip flexors.
- Improve balance.

PRECAUTIONS

Hip injuries: Avoid.

Shoulder, elbow and wrist injuries: Avoid.

4. Kick top leg forward with a flexed foot.

5. Reach the top leg back with a pointed foot.

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SEATED TWIST

SUPER ADVANCED 4 SETS

STARTING POSITION

Sit on the side of one hip with the knees bent and the top leg in front of the bottom leg. Place the supporting hand under the shoulder.

MOVEMENT SEQUENCE

Inhale: Pull your navel to your spine and send the hips up toward the ceiling as the legs straighten. As the hips rise, reach the arm up to the ceiling and then reach it under the torso toward the feet. The weight is on the front foot. The back leg is resting just behind the front ankle.

Exhale: Return to the starting position smoothly folding the legs and lowering the hips to the mat.

MODIFICATIONS

Wrist discomfort
Use handles or the knuckles of the fist rather than the palm for the weight bearing arm.

Two leg balance
Use the back leg for support if balance is difficult on the front leg alone.

CHALLENGES

Leg Variations
Lift the back leg up and pulse it toward the ceiling or draw small circles with the leg while maintaining the balance on the supporting arm.

OPTIMUM FORM

Press straight up into the final position keeping the shoulder down and the arm pressing into the mat.

1. Starting position. Sit on side of hip, knees bent, hand under shoulder.

1. Alternate starting position. Sit on side of hip, knees bent, top leg open with foot flat, arm extended.

TRANSITION

Press up into a side plank for Side Bend Twist and Side Bend or sit up straight with the legs together for Boomerang.

CUEING AND IMAGERY

- Suck the abdominals in to send the hips up to the ceiling.
  - As if you are being lifted up by the waistband of your pants.
- Press the standing arm into the mat, keeping the neck long and the space between the neck and the shoulder wide.
- Balance on the standing foot.
  - Imagine the final position before you get there.

PURPOSE

- Strengthen the entire body including the core, scapular stabilizers and lumbopelvic stabilizers.
- Strengthen the lateral torso including the oblique abdominals, latissimus dorsi and quadratus lumborum.
- Strengthen the shoulder girdle including the latissimus dorsi, serratus anterior and rotator cuff.
- Improve core control, balance and coordination.

PRECAUTIONS

Back injuries: Avoid.

Shoulder, elbow and wrist injuries: Use the hand support modification or avoid.

Osteoporosis.

2. Press the hand into the mat, lift the hips and rotate the torso to reach the hand to the back foot.

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SIDE BEND TWIST

SUPER ADVANCED 4 SETS

STARTING POSITION

Side plank with the wrist under the shoulder and the top foot in front of the bottom foot. The top hand is reaching toward the ceiling.

MOVEMENT SEQUENCE

Inhale: Reach the arm toward the ceiling and make the torso as long and strong as you can. Imagine you are between two panes of glass.

Exhale: Rotate the torso toward the floor without moving the hips. Thread the arm under the body and follow the hand with your eyes until you are looking at the mat or behind you.

Inhale: Rotate the torso toward the ceiling as the arm reaches back to open up the chest.

Repeat 3 times to the first side.

Change sides by placing the free hand on the floor in a plank position then rotating the torso to balance on the opposite arm.

Repeat 3 times to the second side.

1. Starting position. Side plank with the top leg in front of the bottom leg.

2. Reach the top arm up and open the chest to the ceiling.

3. Rotate the top arm under the torso.

MODIFICATIONS

Wrist discomfort

Use handles for the weight bearing arm.

CHALLENGE

Advanced starting position

Balance the top leg on top of the bottom leg rather than placing it in front of the leg on the floor.

OPTIMUM FORM

Keep the hips facing forward as the torso rotates. Maintain your balance and move smoothly and with control.

TRANSITION

Go on to Side Bend or lower the hips to the floor and sit up with the legs straight out in front for Boomerang.

CUEING AND IMAGERY

- Keep the head, hips and feet in one line.
  - Instructor note: Spot the client the first time by supporting the hips.
  - Imagine your hips are supported by a sling.
- Press into the floor with the supporting hand.
- Keep the neck long and the shoulders away from the ears.

PURPOSE

- Strengthen the lateral torso including the oblique abdominals, latissimus dorsi and quadratus lumborum.
- Strengthen the shoulder girdle including the latissimus dorsi, serratus anterior and rotator cuff.
- Improve core control, balance and coordination.

PRECAUTIONS

Back injuries: Avoid.

Shoulder, elbow and wrist injuries: Use the hand support modification or avoid.

Osteoporosis.

1. Advanced starting position. Stack the top foot on the bottom foot.

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SIDE BEND MERMAID

SUPER ADVANCED 4-6 SETS

STARTING POSITION

Side plank with the wrist under the shoulder and the top foot in front of the bottom foot. The top hand is reaching toward the ceiling.

MOVEMENT SEQUENCE

Inhale: Reach the arm toward the ceiling and make the torso as long and strong as you can. Imagine you are between two panes of glass.

Exhale: Lower the hips toward the mat and look toward the hand as the arm lowers toward the hips.

Inhale: Lift the hips up toward the ceiling and reach the arm up and overhead. Look toward the hand on the mat.

Repeat 3 times to the first side.

Change sides by placing the free hand on the floor in a plank position and rotating the torso to balance on the opposite arm.

Repeat 3 times to the second side.

1. Starting position. Side plank with the top leg in front of the bottom leg.

2. Reach the hips up toward the ceiling and the arm over the head.

3. Lower the hips toward the mat and the top arm toward the hips.

MODIFICATIONS

Wrist discomfort

Use handles for the weight bearing arm.

CHALLENGE

Advanced starting position

Balance the top leg on top of the bottom leg rather than placing it in front of the leg on the floor.

OPTIMUM FORM

Keep the hips facing forward as the torso rotates. Maintain your balance and move smoothly and with control.

TRANSITION

Lower the hips to the floor and sit up with the legs straight out in front for Boomerang or bend the knees to prepare for the Scissors/Bicycle/Shoulder Bridge series.

CUEING AND IMAGERY

- Keep the head, hips and feet in one line.
  - Instructor note: Spot the client the first time by supporting the hips.
  - Imagine the hips are supported by a sling.
- Press into the floor with the supporting hand.
- Keep the neck long and the shoulders away from the ears.

PURPOSE

- Strengthen the lateral torso including the oblique abdominals, latissimus dorsi and quadratus lumborum.
- Strengthen the shoulder girdle including the latissimus dorsi, serratus anterior and rotator cuff.
- Improve core control, balance and coordination.

PRECAUTIONS

Back injuries: Avoid.

Shoulder, elbow and wrist injuries: Use the hand support modification or avoid.

1. Advanced starting position. Stack the top foot on the bottom foot.

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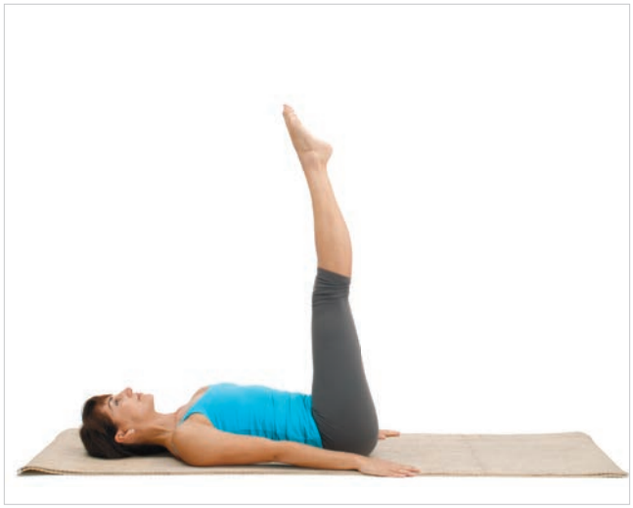
SCISSORS

SUPER ADVANCED 4-6 REPS

STARTING POSITION

Lie on your back with your hands at your sides, your legs together and your feet pointed.



1. Starting position. Lie supine with the hands at the sides and the legs straight up to the ceiling.

GETTING INTO THE SHOULDER STAND

Exhale: Roll the lower back off the mat, reaching the legs over the torso as in the Roll Over. Once you are comfortable on your shoulders, press your upper arms into the mat and reach the legs toward the ceiling until the torso is as straight as possible. Do not roll on to your neck!

Inhale: Place your hands on the back of each side of your pelvis to support the lower back. This is the shoulder stand position.

MOVEMENT SEQUENCE

Exhale: Scissor one leg forward over your head as the other leg reaches toward the mat. Keep the legs straight and the feet pointed. Open the legs as wide as possible without wobbling.

Inhale: Bring the legs back to center, reaching the feet toward the ceiling.

Exhale: Scissor the other leg forward.

2. Roll up and over until the legs are parallel to the mat.

3. Lift the legs toward the ceiling until the torso is as straight as possible. Place hands behind low back to come into a shoulder stand.

MODIFICATIONS

Hip support
Support the hips with a foam roller or baby arc and do the Scissors with the legs keeping the torso steady. This version is appropriate for all levels.

OPTIMUM FORM

Make as big a Scissor motion as you can while keeping the weight out of the hands.

TRANSITION

Stay in this position to begin Bicycle.

CUEING AND IMAGERY

- Keep the weight as light as possible on the hands.
- Keep the abdominals engaged and the torso reaching out of the shoulders throughout the exercise.
  - Imagine the torso is getting lighter as the legs Scissor.
- Don't roll onto the neck.
- Keep the legs straight and long.
  - Imagine the legs are drawing straight and even lines on the ceiling.

PURPOSE

- Increase core control including abdominal and back strength and pelvic stability.
- Stretch the hamstrings and hip flexors.

PRECAUTIONS

Shoulder, elbow and wrist injuries: Do the hip support modification only.

Low back injuries: Limit the range of motion in the legs or do the hip support modification.

Osteoporosis: Do the hip support modification only or avoid.

4. Split the legs in one direction.

5. Split the legs in the other direction.

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BICYCLE

SUPER ADVANCED 4: 6 SETS

STARTING POSITION

If you have just completed Scissors, you are already in the starting position for Bicycle, otherwise follow these directions.

GETTING INTO THE SHOULDER STAND

Lie on your back with your hands at your sides, your legs together and your feet pointed toward the ceiling with your legs straight.

Exhale: Roll the lower back off the mat, reaching the legs over the torso as in the Roll Over. Once you are comfortable on your shoulders, press your upper arms into the mat and reach the legs toward the ceiling until the torso is as straight as possible. Do not roll on to your neck!

Inhale: Place your hands on the back of each side of your pelvis to support the lower back.

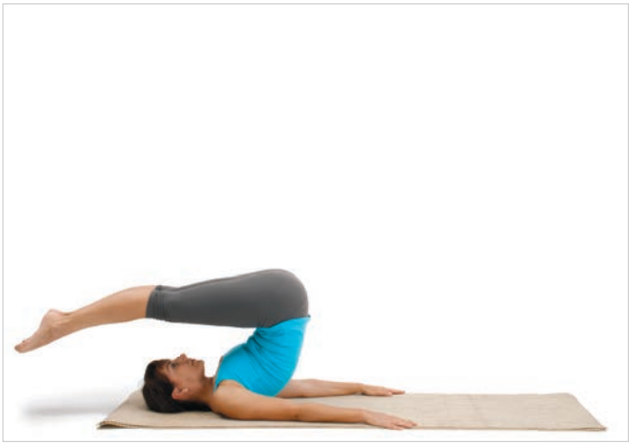
MOVEMENT SEQUENCE

Exhale: Scissor the left leg forward over your head as the right leg reaches toward the mat.

Inhale: Bend the right knee as if you are pedaling a bicycle and reach the foot towards the floor without losing the stability on the shoulders. Bend it in toward the torso and straighten it over your head as the left leg reaches toward the mat.

Exhale: Repeat the Bicycle movement with the left leg bending.

1. Starting position. Lie supine with the hands at the sides and the legs straight up to the ceiling.



2. Roll up and over until legs are parallel to the mat.

MODIFICATIONS

Hip support

Support the hips with a foam roller or baby arc and do the Bicycle with the legs keeping the torso steady. This version is appropriate for all levels.

CHALLENGES

Increase the range of motion

Reach the leg away from the body toward the floor without putting pressure on the wrists.

OPTIMUM FORM

Make as big a Bicycle motion as you can while keeping the weight out of the hands and the hips high.

TRANSITION

From the floor: Bring both legs into the chest and roll down. Place the hands at the sides and the feet flat on the floor to start Shoulder Bridge.

From the shoulder stand: Keeping the hips up, shift the hands to the outside of the pelvis and lower one leg down to the mat. Lower the second leg down to begin Shoulder Bridge.

CUEING AND IMAGERY

- Keep the weight as light as possible on the hands.
- Keep the abdominals engaged and the torso reaching out of the shoulders throughout the exercise.
  - Imagine the torso is getting lighter as the legs Bicycle.
- Don't roll onto the neck.
- Reach the legs away from the torso creating as long a line as possible with the straight leg.
- Reach the foot of the bending leg toward the floor to open up the front of the hip.

PURPOSE

- Increase core control including abdominal and back strength and pelvic stability.
- Stretch the hamstrings and hip flexors.

PRECAUTIONS

Shoulder, elbow and wrist injuries: Do the hip support modification only.

Low back injuries: Limit the range of motion in the legs or do the hip support modification.

Osteoporosis: Do the hip support modification only or avoid.

3. Lift the legs toward the ceiling until the torso is as straight as possible. Place hands behind low back to come into a shoulder stand.

4. Split the legs and bend the back knee.

5. Bring the bent knee towards the chest as the other leg scissors over the hips.

6. Extend both legs long.

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SHOULDER BRIDGE

INTERMEDIATE TO SUPER ADVANCED 3-4 SETS

STARTING POSITION

From the shoulder stand position in the Bicycle or Scissors:

Move the hands to the outside of the pelvis and lower one leg to the mat at a time. Keep the hips as high as possible without putting too much pressure on the hands.

From the supine position

Lying on the mat with the knees bent and the feet on the floor, press the hips up toward the ceiling and place the hands underneath the pelvis with the fingers pointing out and the elbows directly under the hands.

Low bridge

Lying on your back with the knees bent and the feet on the floor, press the hips up toward the ceiling as in a pelvic press or bridge, keeping the hands on the floor.

1. Lie supine, knees bent, feet flat and hands by hips.

2. Press the hips towards the ceiling and place the hands underneath the sides of the pelvis, fingers pointed outward.

MOVEMENT SEQUENCE

Inhale: Straighten one leg and reach it straight up toward the ceiling with a flexed foot.

Exhale: Lower the leg toward the floor keeping the hips up, the weight on the hands light and the leg reaching out of the hip.

Inhale: Reach the leg back up to the ceiling.

Repeat 3 times before changing sides.

Repeat the whole sequence 3 to 4 times.

MODIFICATION

Use the Low Bridge starting position without the hands under the hips

Reach one leg up to the ceiling and lower and lift it 3 times before changing legs.

OPTIMUM FORM

Keep the weight as light on the hands as possible. Lift the leg as high as possible without disturbing the torso.

TRANSITION

This series can appear in many places in a super advanced workout. Depending on how you want to put it together, you can lower the torso down to the mat for the Abdominal Series, lower the torso down to the mat and roll up into a sitting position to start Spine Twist or Boomerang or you can use your imagination to decide where to put this series.

3. Kick one leg up to the ceiling.

CUEING AND IMAGERY

- Keep the weight as light as possible on the hands.
- Keep pressing the hips up to the ceiling.
- Keep the abdominals engaged and the torso reaching out of the shoulders throughout the exercise.
  - Imagine the torso is suspended from the ceiling.
- Don't roll onto the neck.
- Keep the hips level and parallel to the ground.
  - Imagine you are balancing a bar across your hips as the leg moves.

PURPOSE

- Strengthen the back of the body including the hamstrings, gluteals and erector spinae
- Increase core control
- Increase flexibility in back extension

PRECAUTIONS

Shoulder, elbow and wrist injuries: Do intermediate version only.

Low back injuries: Do the intermediate version only or avoid.

Osteoporosis: Do the intermediate version only or avoid.

4. Reach the leg down toward the mat with a flexed foot.

5. Kick the leg back up to the ceiling.

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BOOMERANG

SUPER ADVANCED 4 REPS

STARTING POSITION

Sitting up with the legs straight in front of the body and one ankle crossed over the other.

MOVEMENT SEQUENCE

Inhale: Roll back until the legs are over the torso in the Roll Over position and the arms are on the mat along side the body. Uncross and recross the ankles switching which leg is on top.

Exhale: Roll up into the Teaser position with the legs crossed and the arms reaching toward the feet.

Inhale: Balancing in the Teaser position, circle the arms up overhead and around to the back and clasp the hands.

Exhale: Release the hands and lower the legs as the torso flexes forward over the legs.

Repeat 4 times.

MODIFICATION

For tight shoulders
Don't clasp the hands behind the back.

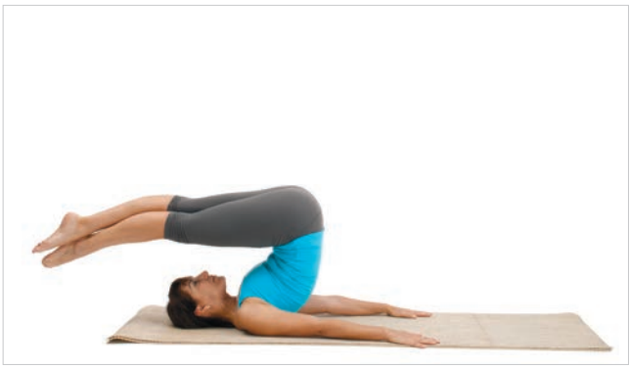
OPTIMUM FORM

Control each piece of the exercise perfectly.

TRANSITION

Finish sitting up and roll onto the stomach for Swan Rocking or Rocking.

1. Starting position. Sit straight with the right leg crossed over the left.



2. Roll over with the legs crossed.

5. Roll up to Teaser with the legs crossed.

6. Lift arms overhead, maintain Teaser position.

CUEING AND IMAGERY

- Move smoothly from one position to the next.
  - Momentum makes it easy, slow flow makes it much harder.
- Do not roll up past the top of the shoulder blades.
  - Root the back of the upper arms into the mat as you roll up and roll down.
- Lift the torso up and out of the shoulders at the top of the Roll Over.
- Keep legs parallel to the ground
- Find your balance point in the Teaser.
- Keep the core engaged and supported throughout the exercise.
- Keep the low back slightly flexed to neutral when you are at the top of the Teaser.
  - Feel equal effort on the front and the back of the torso.
  - If your torso is a sandwich with the spine being the filling, and the abdominals and back muscles being the bread, your sandwich is perfectly balanced.
- Sink the femurs into the hips to stabilize the legs.

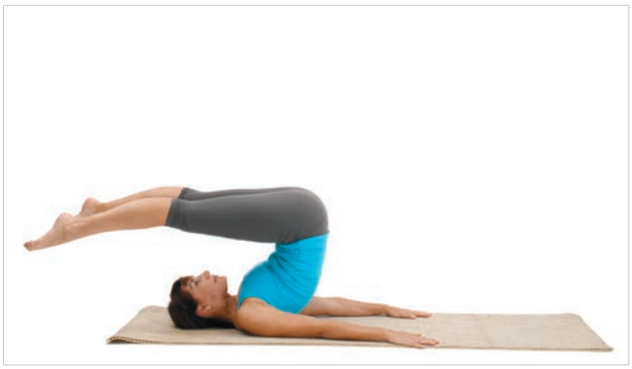
PURPOSE

- Strengthen the core including the abdominals and back extensors.
- Strengthen the hip flexors.
- Increase the flexibility of the back, hamstrings and shoulders.
- Improve control of the core.
- Improve balance.

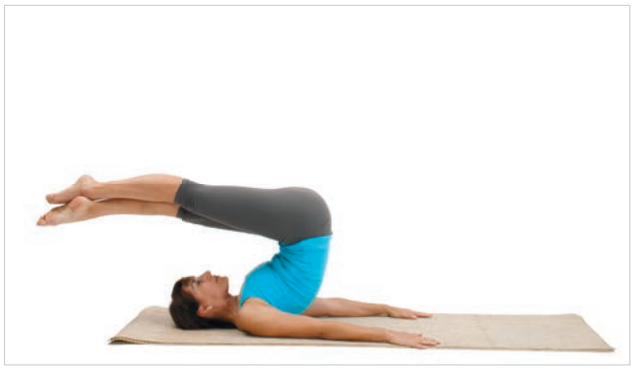
PRECAUTIONS

Low back injuries: Avoid.

Avoid with osteoporosis.



3. Open legs shoulder width apart.



4. Switch the leg cross.

7. Circle the arms and clasp them behind the back.

8. Lower the legs and reach the arms forward.

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SWAN DIVE & SWAN ROCKING

ADVANCED 3-6 REPS

STARTING POSITION

Lie prone with the palms on the mat, the hands level with the shoulders and the elbows bent. Legs are as close together as is comfortable for the lower back.

Swan Dive

MOVEMENT SEQUENCE

Inhale: Engage the abdominals, slide the shoulder blades down the back and lift the upper body into extension as you press the hands into the mat. Press the hips into the mat at the beginning of the exercise to take pressure off the low back if needed. Keep the shoulders away from the ears and rise up only as far as the low back is comfortable. Keep the head in line with the spine.

Exhale: Release the arms out on a high diagonal and rock the torso forward without changing the curve of the back. Keep the head in line with the spine. Don't initiate with the head.

Inhale: Bring the hands back underneath you and catch the body in the Swan position.

Repeat 3 to 6 times

To finish, roll back down onto the mat with control.

1. Starting position. Press the torso up into extension by straightening the arms.

2. Reach the arms forward and rock the chest toward the mat.

3. Rock back toward the hips.

Swan Rocking

MOVEMENT SEQUENCE

Inhale: Lift the torso up into the starting position as in the Swan Dive.

Exhale: Release the arms out on a high diagonal and rock the torso forward without changing the curve of the back. Keep the head in line with the spine. Don't initiate with the head.

Inhale: Rock back keeping the hands up on the diagonal. Do not catch yourself on the Swan Rocking.

Exhale: Rock forward.

Rock back and forth for 6 repetitions, maintaining the curve in the lower back and staying centered on the mat.

Inhale: Bring the arms back underneath the shoulders and lower the torso back to the mat with control.

OPTIMUM FORM

Maintain a smooth curve of the body throughout the exercise as if you are a rocking horse runner. Stay centered on the mat and keep the head in line with the spine.

TRANSITION

Press the hands into the mat and bring the hips down onto the feet rounding the back for Rest Position.

CUEING AND IMAGERY

- Keep the abdominals engaged throughout.
  - No sagging stomachs.
- Keep the spine as elongated as possible.
  - Imagine you are a baby pushing yourself up off the floor for the first time.
- Keep the shoulders down and wide and the neck long throughout.
  - Imagine you are a turtle reaching its head out from inside its shell.
- Engage the back, gluteals and hamstring while keeping the torso long and without compressing the lower back.
- Reach the legs and arms out from the center of the body before going up into back extension.
  - Imagine you are suspended in a cargo net with a rope on each limb.

PURPOSE

- Increase back extension.
- Strengthen the back extensors, hamstrings and gluteals.

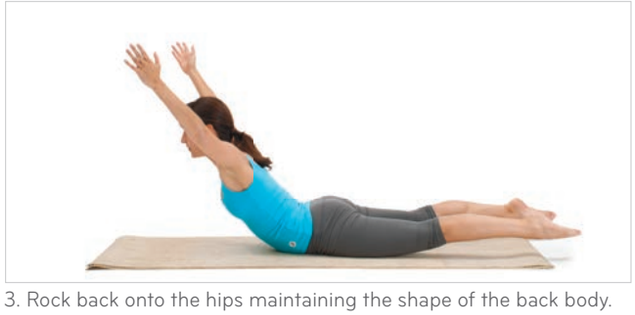
PRECAUTIONS

For low back injuries: Avoid.

For neck and shoulder injuries: Avoid.

1. Starting position. Press the torso into extension.

2. Release the arms forward and rock the body toward the chest.



3. Rock back onto the hips maintaining the shape of the back body.

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ROCKING

SUPER ADVANCED 4-6 REPS

STARTING POSITION

Lie on your stomach, bend your knees and hold your ankles with your hands.

MOVEMENT SEQUENCE

Inhale: Straighten the legs toward the ceiling until the arms are straight. Extend the back and keep the head in line with the spine.

Exhale: Maintaining the position of the torso, rock forward by pressing the legs up toward the ceiling. Don't throw the head forward.

Inhale: Rock back by reaching the arms toward the legs and shifting the weight backwards on the pelvis.

Rock forward and back 4-6 times.

Finish by releasing the legs and sitting back into Rest Position to stretch out the lower back.

1. Starting position. Lie prone, bend knees and hold the ankles with the hands.

2. Lift the legs and the torso up and rock the torso forward.

3. Rock the torso back.

MODIFICATION

No rocking
Move in and out of the position without rocking.

OPTIMUM FORM

Rock smoothly and steadily without bucking the head forward and back. Keep the torso centered on the mat as you rock.

CUEING AND IMAGERY

- Rock smoothly and evenly in both directions.
  - Initiate the Rocking with the legs and torso not the head.
  - Imagine you are the rockers on a rocking horse.
- Don't buck the head to move the torso.

PURPOSE

- Strengthen the back and hip extensors including the erector spinae, hamstrings and gluteals.
- Stretch the anterior torso and hips including the abdominals and hip flexors.

PRECAUTIONS

Avoid with low back injuries.

Avoid with shoulder injuries.

Avoid with osteoporosis.

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MAT SEQUENCES

Advanced Mat 1: Classical Order

The Advanced Classical Mat represents the traditional order with some of the Pre-Pilates exercises added for warm up. The classical advanced program focuses on increasing the flexibility of the back in flexion and on developing core strength. This is a great program to learn and practice regularly.

The advanced program includes inversions (Roll Over, Jackknife and Corkscrew) and is not recommended for clients who are older, obese, have osteoporosis, have low back or neck injuries or are not experienced with Pilates.

Standing

- Feel weight on feet
- Reinforce standing posture basics
- Knee bends, squats, rotations, side bends, roll downs
- Finish with roll down into All Fours position

All Fours

- All Fours Hollowing (pregnant cat): 8x
- Cat/Cow (fast or slow): 8x
- Hip Circles or Tail Wag: 4x

Supine

- Pelvic Clock: 6x each direction
- Breathing: choose a version
- Fingertip Abdominals with small ball: 10x
- 100: full set
- Roll Up: 6x modified as needed
- Roll Over: 3x each direction
- Hamstring Stretch- 45 seconds each side
- Small Leg Circles: 8x each direction each leg
- Large Leg Circles: 4x each direction each leg
- Rolling Like a Ball: 8x
- Single Leg Stretch: 10 sets
- Double Leg Stretch: 4x
- Neck Pull: 6x
- Single Straight Leg Stretch: 8 sets
- Double Straight Leg Stretch: 3x
- Crisscross: 8 sets
- Jackknife: 4x
- Roll up to Sitting

Sitting

- Spine Twist: 6 sets
- Spine Stretch Forward: 6x
- Spine stretch Side: 6x
- Saw: 6x
- Open Leg Rocker: 8x
- Corkscrew: 2 full sets

Prone

- Baby Swan: 6x
- Quadriceps Stretch: hold 45 seconds, 2x each leg
- Single Leg Kicks: 8x
- Double Leg Kicks: 6x
- Rest Position
- Swan Dive: 6x

Side Lying

- Side Leg Series: 8x each side Swimmer as transition
- Side Leg Lifts, Side Leg Circles, Side Leg Kicks, Bananas

Supine

- Teaser II: 4x
- Teaser III: 4x
- Hip Circles: 3x each way
- Seal: 8x
- Push Ups: 2 sets 4-10x each

Advanced Mat 2: Walk the Plank

Advanced: Walk the Plank is an advanced program with a focus on upper body strength and stability. The order is modified to decrease the amount of time in flexion and to vary the working position more frequently. This program will help develop the upper body strength needed to perform some of the advanced Reformer and Chair exercises. The emphasis on the upper body makes this a good one for men and athletic women.

The advanced program includes inversions (Roll Over, Jackknife and Corkscrew) and is not recommended for clients who are older, obese, have osteoporosis, have low back or neck injuries or are not experienced with Pilates.

Standing
- Feel weight on feet
- Reinforce standing posture basics
- Knee bends, squats, rotations, side bends, roll downs
- Finish with roll down into Plank

Plank and All Fours
- Plank: Hold for 4-8 breaths
- Downward Dog: 2x
- Lower knees to the mat for All Fours
- Cat/Cow (fast or slow): 8x
- Hip Circles or Tail Wag: 4x

Supine
- Pelvic Clock: 6x each direction
- Breathing: choose a version
- Fingertip Abdominals with small ball: 10x
- 100: full set
- Roll Up: 6x modified as needed
- Roll Over: 3x each direction
- Hamstring Stretch- 45 seconds each side
- Small Leg Circles: 8x each way each leg
- Large Leg Circles: 4x each way each leg
- Rolling Like a Ball: 8x
- Single Leg Stretch: 10 sets
- Double Leg Stretch: 4x
- Neck Pull: 6x

Sitting
- Spine Twist: 6 sets
- Spine Stretch Forward: 6x
- Spine Stretch Side: 6x
- Saw: 6x
- Open Leg Rocker: 8x
- Corkscrew: 2 full sets

Prone
- Baby Swan: 6x
- Quadriceps Stretch: hold 45 seconds, 2x each leg
- Single Leg Kicks: 8x
- Double Leg Kicks: 6x
- Rest Position
- Swan Dive: 6x

Supine
- Single Straight Leg Stretch: 8 sets
- Double Straight Leg Stretch: 3x
- Crisscross: 8 sets
- Jackknife: 4x

Plank and variations
- Leg Pull Down: 4 sets
- Side Bend Twist: 4x each side

Kneeling
- Kneeling Side Kicks: 4x each side
  - Front/Back
  - Circles

Supine
- Teaser II: 4x
- Teaser III: 4x
- Hip Circles: 3x each way

Plank and variations
- Leg Pull Up: 4 sets
- Side Bend
- Seal: 8x
- Push Ups: 2 sets 4-10x each

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Advanced Mat 3: Super Advanced Classical Order

Classical Super Advanced is the ultimate Pilates mat workout designed to challenge every part of the body. The goal with all of the advanced programs are to perform them with smooth transitions and perfect concentration and form. This one is something to aspire to!

The advanced program includes inversions (Roll Over, Jackknife and Corkscrew) and is not recommended for clients who are older, obese, have osteoporosis, have low back or neck injuries or are not experienced with Pilates.

Standing
- Feel weight on feet
- Reinforce standing posture basics
- Knee bends, squats, rotations, side bends, roll downs
- Finish with roll down into supine position

Supine
- 100: full set
- Roll Up: 6x modified as needed
- Roll Over: 3x each direction
- Hamstring Stretch- 45 seconds each side
- Small Leg Circles: 8x each way each leg
- Large Leg Circles: 4x each way each leg
- Rolling Like a Ball: 8x
- Single Leg Stretch: 10 sets
- Double Leg Stretch: 4x

Sitting
- Spine Stretch Forward: 6x
- Spine Stretch Side: 6x
- Open Leg Rocker: 8x

Supine
- Corkscrew: 2 full sets

Sitting
- Saw: 6x

Prone
- Swan Dive: 6x
- Single Leg Kicks: 8x
- Double Leg Kicks: 6x
- Rest Position

Supine
- Neck Pull: 6x
- Scissors: 6 sets
- Bicycle: 6 sets
- Shoulder Bridge: 2 sets
- Single Straight Leg Stretch: 8 sets
- Double Straight Leg Stretch: 3x
- Crisscross: 8 sets
- Jackknife: 4x
- Spine Twist: 6 sets

Side Lying
- Side Leg Series: 8x each side Swimmer as transition
  - Side Leg Lifts, Side Leg Circles, Side Leg Kicks, Bananas

Supine
- Teaser II: 4x
- Teaser III: 4x
- Hip Circles: 3x each way

Prone
- Swimming: 50 sets
- Rocking: 4x

Plank and variations
- Leg Pull Down: 4 sets
- Leg Pull Up: 4 sets

Kneeling
- Kneeling Side Kicks: 4 reps each side
  - Front/Back
  - Circles
- Side Bend: 4x each side
- Side Bend Twist: 4x each side
- Boomerang: 4x
- Seal: 6x
- Push Ups: 2 sets

Advanced Mat 4: The Twist

The Twist is an advanced program with a focus on torso rotation and challenging pelvic stability. It is great for athletes and for anyone who needs to focus while they workout. The challenges in this workout are more on stability than torso flexion and are thus safer for clients with low back issues.

This program does not includes inversions (Roll Over, Jackknife and Corkscrew) but it can be challenging for clients who are older, obese, have osteoporosis, low back or neck injuries or are not experienced with Pilates.

Standing
- Feel weight on feet
- Reinforce standing posture basics
- Knee bends, squats, rotations, side bends, roll downs
- Finish with roll down into All Fours position

All Fours
- All Fours Abdominals: 8x
- Cat/Cow: 6x
- Opposite Arm and Leg Reach
  - Arms only 4x
  - Legs only 4x
  - Arms and legs together 4x

Supine
- Bridging: 4x
- Bridging with Marching: 4x each leg
- Bridging with Typewriter and Hip Dips: 4x each
- 100: full set: add alternating leg lowers
- Roll Up: 6x: add rotation to each side at the midpoint on the roll down
- Hamstring Stretch- 45 seconds each side
- Cross the leg over the center line for 2nd set
- Small Leg Circles: 8x each way each leg
- Large Leg Circles: 4x each leg each way
- Rolling Like a Ball: 8x: Roll in a circle to each side
- Single Leg Stretch: 10 sets
- Double Leg Stretch: 4x

Sitting
- Spine Twist: 6 sets
- Spine Stretch Forward: 6x
- Spine Stretch Side: 6x
- Saw: 6x
- Open Leg Rocker: 8x: hold one leg with one hand
- Modified Corkscrew: 2 full sets: without inversion.

Prone
- Baby Swan: 6x
- Quadriceps Stretch: hold 45 seconds, 2x each leg
- Single Leg Kicks: 8x
- Double Leg Kicks: 6x
- Rest Position
- Swan Dive: 6x
- Swimming: vary the pace from slow to very fast

Supine
- Single Straight Leg Stretch: 8 sets
- Crisscross: 8 sets

Plank and variations
- Leg Pull Down: 4 sets
- Side Bend Twist: 4x each side

Kneeling
- Kneeling Side Kicks: 4 reps each side
  - Front/Back, Circles

Supine
- Teaser I: 4x
- Hip Circles: 3x each way

Plank and variations
- Leg Pull Up: 4 sets
- Side Bend
- Seal: 8x
- Push Ups: 2 sets 4-10x each

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Teaching Group Classes

Teaching great group classes takes more than just knowing the exercises. It takes inspirational leadership, personality, community and commitment, as well as the right environment. Students look to you to motivate and inspire them to do their best. You help them to achieve their goals, learn new skills and feel better about themselves.

Factors that contribute to your success include external factors such as class size and environment that you may or may not have much control over, as well as qualities specific to you such as skill level, personality, planning, communication style and follow through. As you review this list, identify the areas you feel very successful in and the areas you need work on and make a plan to address your weak spots and magnify your special talents. Teaching group classes is a skill that may take some time to develop. Be patient, keep practicing, take classes with teachers you admire and you will improve.

GENERAL GUIDELINES TEACHING YOUR FIRST GROUP CLASSES

Planning your class:
When you first start teaching, it is important that you understand your material and the sequence you will be teaching it in. Write out the program, practice it out loud to hear and refine your verbal cues and practice it on your friends and colleagues to see how long it takes. The first few times you may discover that you have enough material for 2 hours or for 20 minutes. Be well prepared and be prepared to change course if the level you have prepared is inappropriate or if you have misjudged how long it will take to teach the material.

Teaching to different levels:
Consider how you will address different levels in the class. If you are teaching a lower level class, demonstrate just the beginning level of the exercise. The class will follow whatever you are doing, so if it is not appropriate for them to be doing the advanced version, don't show it.

The first class:
Come early to your first class, or any new classes you are teaching, to get a feel for the students and to have the opportunity to ask them if they have any problems or physical limitations you should know about. If you are starting a new class, take the opportunity to create a connection by introducing yourself to each of the students. If you are taking over an existing class, observe it a few times to get a sense of what the previous teacher did and what the level of the class is.

Introduce yourself:
Unless you have a class that has the same students each time, introduce yourself and the name of the class at the beginning so that everyone knows your name and a little bit about what to expect.

"Hi my name is Elizabeth and this is Pilates for Everyone. This class is an introductory level course so we will be going over the principles of Pilates and the beginning level exercises. If any of the exercises are uncomfortable or cause discomfort please stop immediately and let me know and if you have any questions, please feel free to ask me either during or after the class."

Ask if anyone has any physical issues:
You may also want to take this opportunity to ask if anyone has back, neck, elbow or wrist issues and to identify who you might need to give modifications to.

Take and observe as many classes as possible:
New teachers should spend as much time as possible taking classes from experienced instructors or watching videos of master teachers. Do not be afraid to copy someone you admire. There are only so many ways to say things and do exercises and if you hear great cues or take a class you love, try to replicate it. Pay attention to the voice quality, sequencing, energy level and group feeling in the room and see if you can create a similar experience.

Practice on your friends:
A great way to practice your teaching is to get a small group of friends together and make them commit to 8 or 10 classes. Use the classes to refine your verbal cueing and to get a good feeling for the amount of time each exercise takes and how to create smooth transitions. Another approach is to start out teaching introduction to Pilates classes at a local gym or community center where the students commit to a 4 or 6 week class. This allows you to grow with the class and gives you the chance to see the progress your students make.

SPECIFIC ELEMENTS OF GROUP CLASS SUCCESS

External Factors – things you can't always control

Class size:
Class size can play a big part in how successful you are as a teacher. If a class is too small, it can feel intimate and personal or low energy and unsuccessful for the instructor. If a class is big, it can feel exhilarating and full of energy or it can feel impersonal and unsafe. How you set the mood and the feel of the class can make any size class feel just right but you need to know how to moderate your energy to give what's needed.

As a new teacher, try to keep your class size at the level you can manage safely. This is virtually impossible in many settings where the classes are taught on a drop in basis, but if you have any say, limit your class size to no more than 12 to start. If you are teaching at a facility where large classes are the norm, see if you can recruit local student teachers to assist either as demonstrators or as people who walk around and keep students from getting into trouble. It can be a great learning opportunity for everyone.

Class level:
If you are teaching beginning level classes, keep them beginning. Resist the temptation to teach advanced level exercises because you want to challenge your students, or because you are bored. Don't teach any inversions, such as Roll Over or Jackknife, limit the number of straight leg lowers, such as the full Hundred and Double Straight Leg Stretch and don't do single arm or single leg plank exercises. And regardless of the advertised level of the class, do not teach exercises that are clearly beyond the level of the group to perform safely.

Classroom environment:
The room you teach Pilates in should have an appropriate floor, (wood, laminate or carpet, no concrete under linoleum), appropriate mats for padding the spine, be a comfortable temperature and be separated from the rest of the studio or fitness center. Classes taught in the middle of the weight floor while other things are going on will not be successful. It is ideal to be able to control the lighting and sound to maintain a pleasant atmosphere. If your classroom is sandwiched between a group exercise studio and a spinning studio with loud music going that your students can hear, they will be distracted and you will be distracted. This is not always something you can control, but asking for a classroom space that is conducive to concentration and awareness will support you and your students.

Class time:
This is often the most important element of class success. Prime class hours vary depending on the city and the general demographics but the best morning hours are usually 7:00AM to 10:00AM and the best evening hours are from 4:00PM to 7:00PM. Classes scheduled during the middle of the day are rarely successful. It is also important to have a variety of classes offered in each time slot two or three times a week so clients can commit to a regular workout.

Student expectations:
If you are starting a new class, you can set the expectations of the class in your introduction and as you teach. If you are taking over a class from a teacher with a very different style than you, you may want to let them know that you like to move a little faster or slower or whatever. If you are teaching in a gym environment, be prepared to give them a safe but challenging workout. If you are working in a studio, you may be able to start more slowly and thoughtfully.

Personal Factors – what you bring to the class

Skill and understanding:
As was discussed earlier in the Becoming a Teacher section, the first requirement of success is a thorough understanding of the exercises and the ability to demonstrate and verbally cue them. This takes time and when you first start you will do a lot of learning on the job. If you are like most beginning group instructors, you will make plenty of mistakes and as long as you learn from them, you will keep getting better. If you are unclear on an exercise or want to add one in that you haven't done for a while, review the notes in the manual and practice demonstrating and teaching the exercise out loud until you feel comfortable with it. Taking sessions yourself can be a big help while you are starting the learning process. Use your personal sessions to ask questions and clarify anything you don't understand.

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Leadership:

As the instructor of the class, it is your responsibility to create an inspiring, comfortable and safe environment for all of your students. Depending on your style, you may also create a demanding, humorous, entertaining, thoughtful or playful environment. Different classes have different qualities and your job is to uncover and develop your unique characteristics as a teacher. As the leader you are in charge of the flow of the class from the beginning until the last exercise. Plan the class well, guide your students successfully from one exercise to the next, start and end on time and keep everyone focused on the task at hand. As the leader, it is also your responsibility to keep your students progressing and improving in their skills and their physical awareness. You create the goals for the class and you help your students to achieve theirs. Setting specific goals for the class or for a series of classes can reinvigorate a group of regulars and motivate your new comers. You can even create a series of classes which focus on a specific area, for example: Pilates Mat for the Core, Pilates for Great Legs, etc. Through simple changes in sequence and cueing you can focus on any one of the many principles in Pilates.

Inspiration:

A key part of leadership is being an inspiration and a motivator for your students. You are a role model and how you hold yourself, how you teach and how you communicate with your students are all opportunities for expressing what you want them to learn. A great group teacher draws students in because they know they will have a great experience in the class. You can be inspirational by pushing your students to do more than they thought they were capable of, by teaching them something about their bodies that helps them or by providing the opportunity for them to explore new experiences. The body is often an avenue for profound personal change and creating an atmosphere that encourages your students to discover new abilities can lead to growth and transformation.

When you take on the role of an inspirational leader to your students, you also take on a commitment to your own continued growth and development. In order to be inspirational, you need to be inspired and whether your inspiration comes from running marathons, gardening or teaching, you need to keep yourself fed. It is easy as a teacher to forget that you are an important part of the equation and if you get burned out, nobody benefits. Find the passions in your own life and nurture them.

Personality:

Teaching a great group class is like giving a performance and many of the same skills apply. A good teacher knows how to use their voice, body language and appearance to create a certain mood and feeling in the room. A really good teacher learns to read the energy of the room and provide just the right word, exercise or experience to keep the energy moving in a specific direction. As a teacher, your students take an interest in you and your personal life and without making the class all about you, letting them see some of your struggles and triumphs can make you human and help them to see that if you can do it, so can they.

Many of the best class teachers create a lively, entertaining and open feeling where the students are drawn in because the instructor is having so much fun. The more present and comfortable the teacher is, the more likely it is the students will enjoy the class and come back for more. As a new teacher it is often very hard to be present and comfortable in front of a large group of strangers. If you find yourself very uncomfortable when you are teaching, breathe and let your students breathe and see if the atmosphere doesn't lighten up a little. With time and practice you will relax and enjoy your new role.

Creativity:

Creativity is an essential element in teaching. Being able to create new cues, new sequences and new experiences is extremely important to keeping your class dynamic and the learning process fresh.

Many things you will teach in class are repetitive and the more ways you can find to say "engage your core" and "lower your shoulders" the better. Creativity is also important to keep the nervous system alert and responsive. If you've heard the same cue for 3 years, you no longer respond to it. Your brain checks it off and moves on without necessarily checking to see if the body has responded.

As important as creativity is, effective teaching is a balance between creativity and repetition. Learning new physical skills requires repetition but too much repetition decreases the body's ability to respond and can lead to boredom. When putting together programs it's important to balance both elements. One way to accomplish this is to have a set beginning and ending to the class so the students can see and feel their progress over time. Keeping the first 10 to 20 minutes of the class consistent creates a smooth transition from "ordinary life" with all of its dramas to the internal focus and attention of a Pilates class. It also makes it easy to accommodate the chronic latecomer who can join in without disrupting the flow. Creating a standard ending for the class helps students to reflect on what they've accomplished and reinforces the satisfaction of completing another great class.

Community:

One of the unspoken benefits of being in a class is being part of a community. How you welcome new students into the group will often determine whether or not they come back. As the leader it is your job to make them feel at home. Make an effort to go up to each new student and introduce yourself and anyone else who is around. At the beginning of each class, ask if anyone is new and introduce them to the group. If you know two students have something in common, mention that to them. People come to class for you but they also come to see their friends and to hear the latest about their lives. Classes can be a great support system when a member is ill or having other difficulties. One simple way to do this is to have the students introduce themselves to everyone around them at the beginning of each class. That way they get to know each other, and if there is a partner exercise or other challenges they'll be more comfortable.

Commitment:

An often overlooked element in creating successful classes is your commitment level. If you are dragging yourself there every time or cancel twice a month, your students will feel your lack of commitment and they will stop showing up. Students expect regularity and if you want your class to go, you need to be reliable. Very few classes will keep going if the instructor misses more than a few classes a year. When starting a new class, ask yourself if you are willing to commit to the class time for at least a year before signing on.

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Class Formats

To create a well balanced class for your clients, it needs to contain a variety of exercises. The key elements for any class include the following:

Warming up the whole body

Preparing the Core

Challenging the Core

Spinal Strength and Mobility

Upper Body Strength and Mobility

Lower Body Strength and Mobility

Using a Variety of Body Positions

WARMING UP THE BODY

Successful exercise needs to have the body awake, and the circulation flowing. This is why Joe started his mat classes with the Hundred. Warming up can be done in standing, on all fours or supine but it is important to get the blood flowing and the big muscles working in a safe way before going on to the rest of the exercises. This is also a great time to start the awareness of the breath and to integrating the breath with movement.

For example:

- Standing
  - Squats with arm movements
  - Plies with arm movements
- Supine
  - Hundred
- Cardio

PREPARING THE CORE

The core is the foundation of all of the exercises in Pilates. Establishing the engagement of the core, the position of the low back, the pelvic stabilizers, the mobility of the spine and the awareness of body position needs to be included early in class. The Pre-Pilates exercises are often the easiest way to teach these concepts.

For example:

- Supine
  - Pelvic Clock
  - Marching
  - Bridging
  - Hundred
  - Roll Up
  - Leg Circles
- All Fours
  - Cat/Camel
  - Opposite Arm and Leg Lift

CHALLENGING THE CORE

Once the placement and muscle engagement of the core are established, it is important to challenge the foundation with a variety of exercises. One of the hallmarks of Pilates is that it takes one functional movement concept and challenges it in a number of different ways so the body learns how to activate the support system regardless of what position it is in.

For example:

- Abdominal exercises
  - Hundred
  - Roll Up
  - Teaser (advanced)
  - Roll Over (advanced)
  - Jackknife (advanced)
  - Corkscrew (advanced
  - Hip Circles (advanced)
  - Boomerang (advanced)
- Pelvic stability exercises
  - Leg Circles - small
  - Bridging Marching
- Back strengthening
  - Mini Swan
  - Swan - full, Dive or Rocking
- Torso rotation
  - Leg Circles - large
  - Saw
  - Single Leg Stretch
  - Criss Cross
- Side strengthening
  - Side Leg Series
  - Side Bend Twist or Mermaid

INCREASING SPINAL MOBILITY

A mobile spine is a healthy spine and Pilates always focuses on spinal mobility at several points in the program.

For example:

- All Fours
  - Cat/Camel
- Supine
  - Bridging
  - Roll Up
  - Rolling like Ball
- Seated
  - Open Leg Rocker
  - Seal
  - Spine Stretch
  - Saw
- Supine
  - Roll Over (advanced)
  - Jackknife (advanced)
  - Corkscrew (advanced
  - Hip Circles (advanced)
- Seated
  - Spine Twist (advanced)
  - Twist (advanced)
- Side Plank
  - Side Bend Twist (advanced)
  - Side Bend (advanced)

STRENGTHENING SPINAL EXTENSION

Pilates programs focus on strengthening the abdominals in a wide variety of exercises. For good balance around the muscles of the torso it is also important to strengthen the spinal extensors as well.

For example:

- All Fours
  - Cat/Camel
- Supine
  - Bridging
- Prone
  - Swan
  - Swimming
  - Single Leg Kicks
  - Double Leg Kicks
  - Swan Dive and Swan Rocking (advanced)
  - Rocking (advanced)

DEVELOPING SCAPULAR MOBILITY AND STRENGTH

Developing a strong and flexible upper body is a key ingredient in balanced physical development and for progressing into the more advanced work. The Balanced Body Pre-Pilates exercises add an element of scapular mobility to balance out the scapular stability of many of the Mat exercises.

For example:

- Supine
  - Pinwheel/Telescope
  - Angels in the Snow
- All Fours
  - Sternum Drop
- Standing
  - Wall Push Ups
- Prone
  - Single Leg Kicks
  - Plank
  - Push Ups
  - Leg Pull Down (advanced)
- Back Plank
  - Leg Pull Up (advanced)
- Seated
  - Twist (advanced)
- Side Plank
  - Side Bend Twist (advanced)
  - Side Bend (advanced)

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LEG STRENGTHENING AND FLEXIBILITY

The Pilates mat work includes exercises for strengthening and stretching the hip extensors/hamstrings, hip flexors/quadriceps, adductors and abductors in a variety of positions. In addition to the traditional exercises, adding additional positions of the legs such as internal and external rotation and standing, can increase the variety of targeted muscle groups.

For example:

Strengthening quads and hip flexors:

- Supine
  - Hundred
  - Leg Circles
  - Abdominal Series of 5
  - Teaser (advanced)
- Seated
  - Open Leg Rocker

Stretching quads and hip flexors:

- Supine
  - Bridging
- Prone
  - Swan
  - Single Leg Kicks
  - Double Leg Kicks

Strengthening hip extensors

Supine

- Bridging

- Prone
  - Swan
  - Single Leg Kicks
  - Double Leg Kicks
  - Swimming

Stretching hip extensors:

- Supine
  - Roll Up
  - Leg Circles
  - Single Straight Leg Stretch
- Seated
  - Spine Stretch
  - Saw
  - Open Leg Rocker

Strengthening adductors: To increase the adductor challenge, add a ball or ring between the thighs or ankles.

- Supine
  - Bridging
  - Hundred
  - Roll Up
- Side Lying
  - Side Leg Lifts using the bottom leg

Stretching adductors: The only stretches for this area are the seated work with the legs wide.

- Seated
  - Spine Stretch (with the legs wide)
- Kneeling
  - Side Kicks (Advanced)

Strengthening abductors:

- Side Lying
  - Side Leg Series

Stretching abductors:

- Supine
  - Leg Circles

USING A VARIETY OF POSITIONS

One of the strengths of Pilates is the opportunity to train the core in a variety of functional positions including supine, prone, side lying, sitting, all fours and standing. When teaching a class it is important to incorporate each of these positions into the class.

For example:

- Supine
  - Hundred
  - Single Leg Stretch
- Prone
  - Swan
  - Swimming
  - Single Leg Kick
- Side Lying
  - Slide Leg series
  - Kneeling Side Kicks (advanced)
  - Side Bend Twist (advanced)
- Seated
  - Spine Stretch
  - Saw
  - Spine Twist (advanced)
- **All Fours:**
  - Cat/Camel
  - Sternum Drop
  - Opposite Arm and Leg Lift
- Standing Balance

As you look over this list notice how many of the exercises are in multiple categories. Most of how we move in life involves a variety of different movement principles and Pilates has that complexity built into it. When putting together a class, start with some of the sample programs we have included and then experiment with your own personal preferences. Strive to become a great class instructor and you will teach your students how to move better, feel better and look better.

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PILATES FOR SPORTS

Pilates can be a very useful training tool for athletes at all levels from the weekend warrior to the professional. Depending on what sport or activities the athlete participates in you can use Pilates to increase their power, speed, agility, coordination, balance and flexibility.

LEARNING ACTIVITIES

1) As a test of the knowledge you have gained in your Pilates instructor training course, see if you can name a Pilates exercise for each of the general principles listed below.

2) Get together in groups of 2 or 3 and create a Pilates program for a particular activity to share with the group. This can be done during class time or as homework.

GENERAL RECOMMENDATIONS

Athletes work best with instructors who understand their particular needs in both physical training and mind set. The more proficient the athlete you are working with, the more they will test your knowledge and understanding of their sport or activity.

If you want to work with athletes, do your homework. Do what it takes to understand not just the physical demands of their activity but the specific language used by coaches and trainers in the sport. If you are training tennis players you have to understand the difference between a forehand and a backhand and you have to understand what to train to improve them. If you have experience in their particular activity, use your understanding to develop an appropriate program.

If you don't have experience, take a few lessons yourself, watch the sport on TV to learn how to recognize optimum movement patterns and listen carefully to your client to see what they really need. Take a class in teaching Pilates or training clients in that activity if it is available or ask other instructors if they have experience that they can share.

Whether you are training weekend warriors and casual golfers or elite athletes, the problem solving involved in understanding complex movement patterns will improve your skills as a Pilates instructor and movement educator.

SPECIFIC SPORTS

Athletic activities fall roughly into 3 categories each of which has it's own particular training requirements. These categories include:

- Triathlete activities
- Ball and rotational sports
- Dance based activities

CATEGORY 1:

Triathlete Activities: Running, Biking, Swimming and Hiking.

The primary characteristics of these sports include:

- Movements that are primarily bilateral and occur primarily in the sagittal plane.
- Movements that are relatively simple and repetitive.
- Movements that involve repetitive stress on certain joints.

In training clients in these activities, the principles to emphasize include:

- Fine tuning alignment and biomechanics to minimize the stress from repetitive activities.
- Observing and correcting the alignment of the hip, knee, ankle and foot.
- Creating balanced movement patterns on each side of the body.
- Focusing on shoulder mobility for swimming.
- Focusing on scapular stability and balance for biking.
- Cross train with rotation, lateral torso flexion.

SPECIFIC TRAINING TIPS FOR EACH ACTIVITY:

Running:

- **Flexibility:** anterior hip, ITB, quadriceps, calves
- **Strength:** hip flexion and extension, hip abduction, knee flexion and extension, ankle plantar and dorsiflexion, core strength

Biking:

- **Flexibility:** anterior hip, ITB, quadriceps, calves, low back, chest, hamstrings
- **Strength:** hip flexion and extension, hip adduction, knee flexion and extension, ankle plantar and dorsiflexion, scapular stability, back extension

Swimming:

- **Flexibility:** shoulders, hips: flexion, extension, adduction depending on stroke, shoulders, chest, spine
- **Strength:** shoulders: all angles depending on stroke, hip flexion/extension, neck extension and rotation, core strength, back extension

CATEGORY 2:

Ball and Rotational Sports: Golf, Tennis and Racquet Sports, Baseball, Basketball, Football and Soccer

The primary characteristics of these sports include:

- Movements that are primarily unilateral and include rotation.
- Movements that are relatively complex and variable.
- Movements that are reactive (i.e. reaching to hit a forehand).
- Movements that involve extreme ranges of motion on certain joints (i.e. pitching or tennis serves).
- Movements that are not performed equally on both sides.

In training clients in these activities, the principles to emphasis include:

- Developing balanced flexibility and strength.
- Correcting misalignments.
- Choosing or creating exercises to improve specific skills.
- Teaching and practicing correct leg alignment in a variety of positions
- Creating flow and rhythm in the movement.
- Teaching follow through.
- Cross training to balance rotation, flexibility and strength on both sides of the body.
- Balancing joint mobility and stability in areas subjected to excessive stress as in the shoulder joint for pitchers.
- Improving coordination and timing in movements involving the whole body.

SPECIFIC TRAINING TIPS FOR EACH ACTIVITY:

Golfing:

- **Flexibility:** internal/external hip rotation, spinal rotation
- **Strength:** rotation through the whole body, core strength, shoulders, legs, back
- **General:** coordination and follow through, Rotation in torso, hips and legs
- Develop mind body awareness.

Tennis:

- **Flexibility:** calves, shoulder, hips
- **Strength:** core, legs, shoulders, aerobic capacity
- **General:** coordination and follow through, improve leg strength and alignment in parallel, turned out and turned in.
- Develop shoulder flexibility and strength for serving.
- Develop upper body strength for hitting.

Baseball and other throwing sports:

- **Flexibility:** shoulders, anterior hip, latissimus, back
- **Strength:** shoulders: especially rotator cuff, core, triceps
- **General:** Coordination and follow through,
- Develop upper body strength and flexibility.
- Rotation in torso, hips and legs.

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CATEGORY 3:

Dance based activities: Dance, Ice skating, Gymnastics, Circus Arts and Martial Arts

The primary characteristics of these activities include:

- Movements that are relatively complex and variable.
- Movements that are often aesthetic rather than functional.
- Movements that involve extreme ranges of motion on certain joints.
- Movements that are not performed equally on both sides.
- Movements that include a high degree of motor control, balance and coordination.

In training clients in these activities, the principles to emphasis include:

- Correcting misalignments and imbalances in posture.
- Developing strength and control at extreme ranges of motion.
- Creating exercises to improve specific skills.
- Identifying and correcting strength and flexibility imbalances.
- Developing balance and strength in the whole body.

SPECIFIC TRAINING TIPS FOR EACH ACTIVITY:

Dancing:

- **Flexibility:** everywhere
- **Strength:** everywhere
- **General:** Core strength and stability
  - Develop or balance flexibility in legs, hips and torso.
  - Develop external rotation.
  - Develop spinal mobility.
  - Correct alignment flaws.
  - Work on aesthetic elements.
  - Train specific skills.

Ice Skating:

- **Flexibility:** anterior hip and lumbar extension
- **Strength:** core, leg muscles for power, can work with a weight on the ankle to mimic a boot
- **General:** core strength and stability, develop leg power for strokes, jumping and lifting leg with skate, coordination
  - Develop or balance flexibility in legs, hips and torso.
  - Develop and balance rotation.
  - Coach aesthetic elements.
  - Train specific skills.

Gymnastics and Circus Arts:

- **Flexibility:** everywhere
- **Strength:** depends on sex, level and specific events
- **General:** core strength and stability, coordination and balance, upper body strength and flexibility, power in jumping, lifting, pushing, pulling, train specific skills

Working with athletes to improve specific skills or to overcome specific limitations can be very rewarding. It will teach you how to see movement and movement patterns with more accuracy and it will push you to deepen your understanding of the principles of Pilates.

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BALANCED BODY® MOVEMENT PRINCIPLES™

OVERVIEW

The Balanced Body® Movement Principles™ teach Pilates and fitness professionals how the body moves so they can help students, clients and patients move better. The Movement Principles provide practical tools for observing, analyzing and improving movement by gaining a deeper understanding of anatomy, kinesiology, biomechanics and optimum movement patterns.

Balanced Body® Movement Principles™

MODULE 1: WHOLE BODY MOVEMENT

Whole Body Movement

Learning to see, evaluate and influence whole body movement patterns is the ultimate goal of any trainer. This section includes information on observing the body from three different levels:

- Global movement - observing the whole body.
- Planar movement - looking at the body from the sagittal, frontal and transverse planes.
- Local movement - seeing local and regional movement patterns.

Posture and Alignment

Good posture and proper alignment of the joints allow the force of gravity to move through the body in an optimal way. This section includes:

- Postural observations..
- Common misalignments and dysfunctional patterns.

MODULE 2: TRUNK INTEGRATION

Trunk Integration includes the core and the muscle systems that integrate movement between the trunk and the limbs. Trunk Integration includes information on:

- Breathing.
- Inner unit and core activation.
- Outer unit and lumbopelvic stability.
- Spinal mobility and strength.

MODULE 3: LOWER BODY TRAINING

The lower body carries us everywhere we go and teaching good alignment, balanced strength and optimum range of motion are vital for training agility, endurance and power in movement. This section includes information on:

Lower Body Training Principles

- Alignment.
- Balanced muscle development and range of motion.
- Functional movement skills.

MODULE 4: UPPER BODY TRAINING

Training the upper body prepares us for everyday activities and creates power and speed for athletic pursuits. This section includes:

Upper Body Training Principles

- Movements of the upper body.
- Glenohumeral stability, scapular stability and mobility.
- Functional movement patterns.
- Integrating the upper body into whole body movement.

MODULE 5: MOBILITY AND RESTORATION

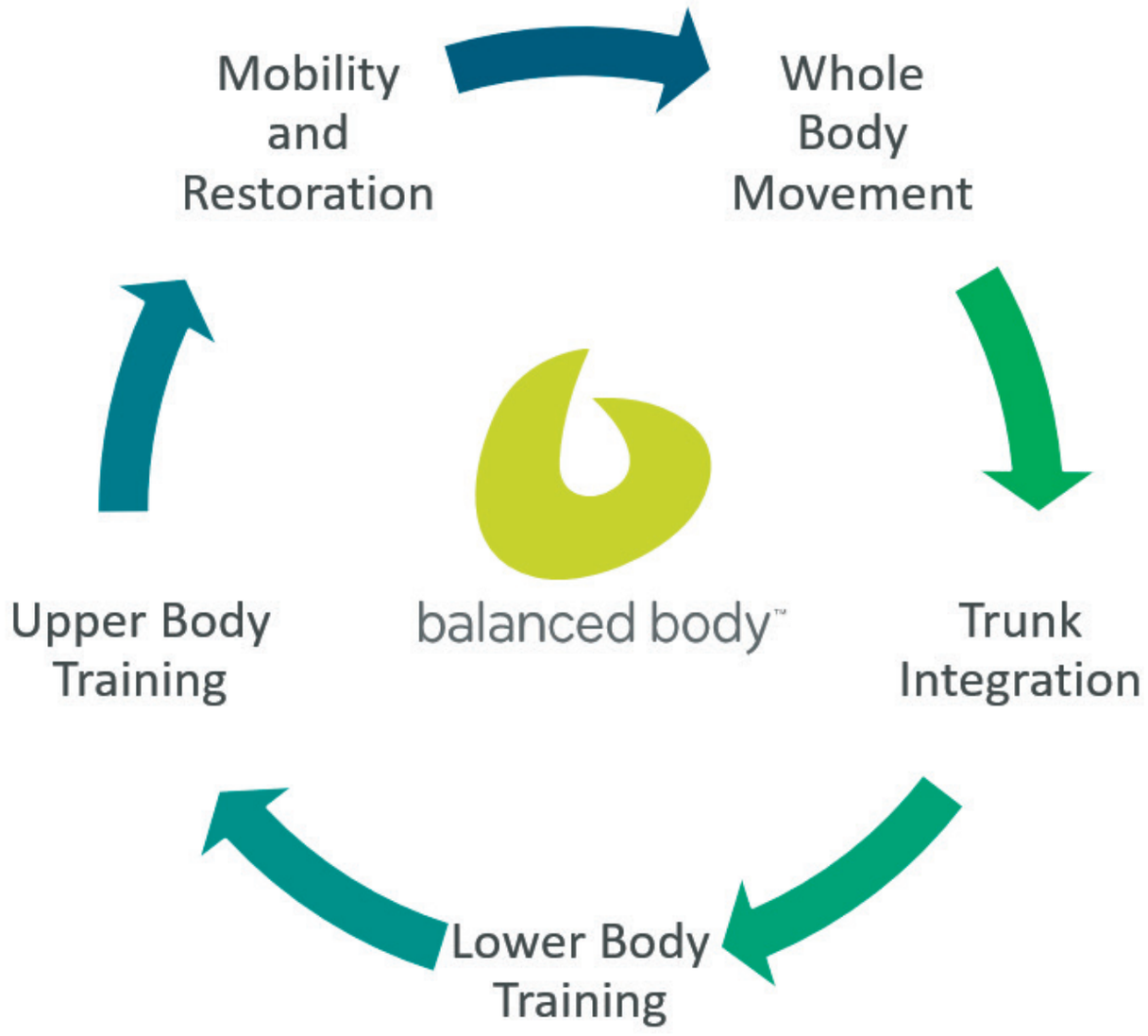
The body requires a balance of effort and relaxation to recharge and refresh. This section includes information on:

Mobility

- What it is, why mobility is useful and techniques for enhancing mobility.

Restoration, recovery and relaxation

- The importance of rest and relaxation to the recovery process.
- Self massage techniques to help the body recover.



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WHOLE BODY MOVEMENT

GLOBAL, PLANAR AND LOCAL

Training clients to move better means training their whole body to move better. The most effective trainers focus on understanding and training functional, whole body movement in order to create pain free, efficient and effective movement patterns. Whether training an athlete for higher levels of performance, a senior citizen to stay active and healthy or an injured client to recover a pain free life, understanding how the body works and developing strong movement foundations are the key to creating effective fitness programs.

Training Whole Body Movement

Whole Body Movement requires the integration and coordination of multiple body systems working together. Whole body movement includes walking, standing, lifting, throwing, pushing, pulling and many other daily and sports related activities we engage in on a regular basis.

In order for the body to move through each day with ease, each of the following systems must play their part:

- Skeletal system
- Muscular system
- Fascial system
- Cardiovascular system
- Nervous system

Harmonious movement patterns are evidence that all of these systems are working in perfect synergy. Dysfunctional or impaired movement patterns point to disharmony somewhere in the body. One of the great joys and challenges of being a movement teacher is the need to continually refine one's ability to recognize and understand harmonious and impaired movement patterns and to expand one's ability to improve them.

GLOBAL, PLANAR AND LOCAL

To simplify the process of understanding and improving movement patterns, Balanced Body has developed a systematic framework for observing the body in motion.

The system involves observing the body from three different levels:

- Global movement patterns
- Planar movement patterns
- Local or regional movement patterns

GLOBAL MOVEMENT

Global movement is the highest level view. It is stepping back to observe the proverbial forest before tackling the trees. This panoramic view provides information on:

- Postural patterns
- Movement strategies
- Strength imbalances and side dominance
- Coordination and balance

PLANAR MOVEMENT

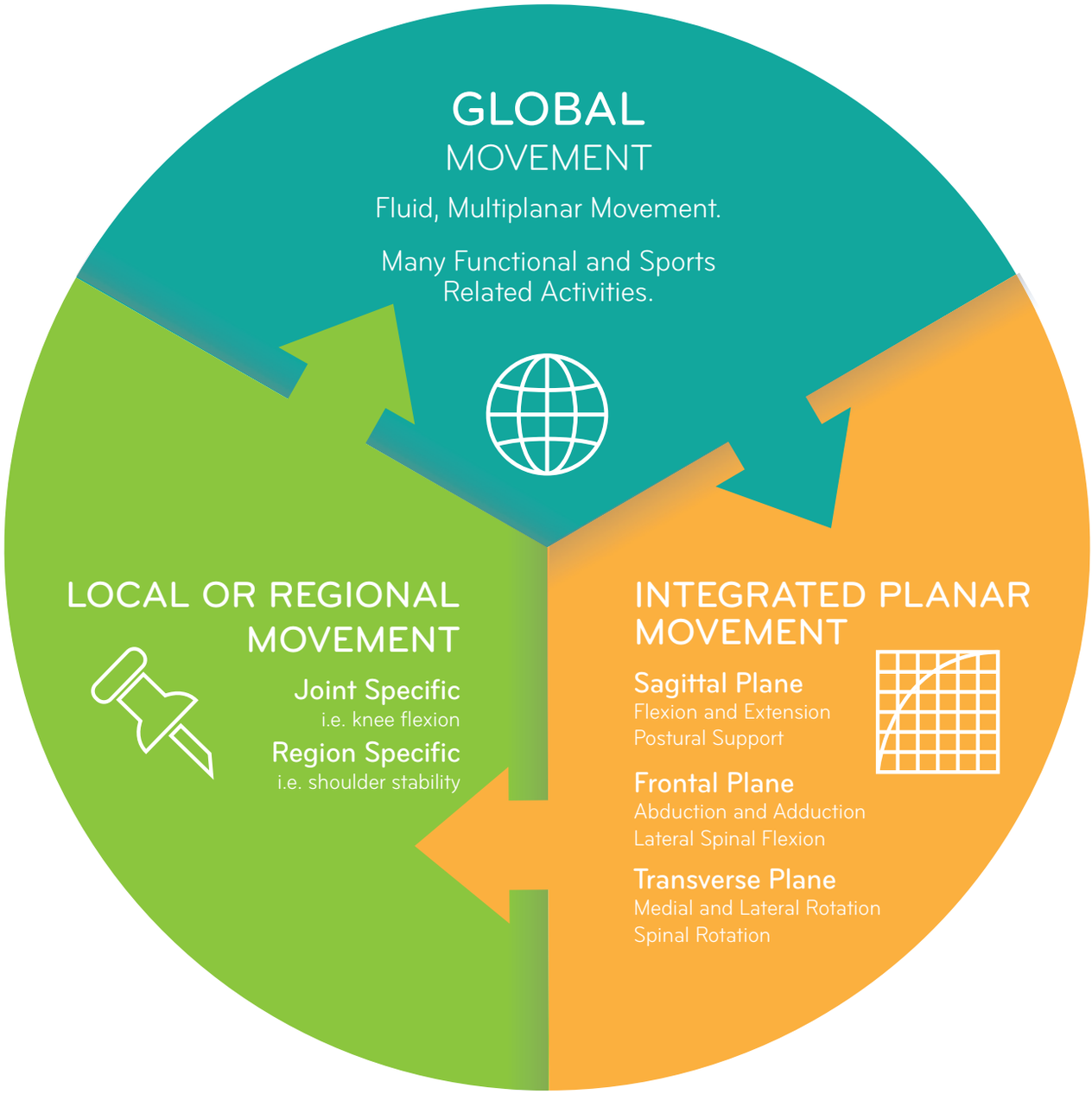
Understanding whole body or global movement can be very complex and difficult to analyze. Breaking down the observation of global movement into movement in the sagittal, frontal and transverse planes helps teachers more easily analyze what they are seeing.

As instructors, observing the body from the front, side and back is an excellent way to assess movement in each plane in order to more easily identify impaired movement patterns.

LOCAL MOVEMENT

Local movement includes regional and joint specific motions like the action of the shoulder in a push up or the alignment of the knee in a squat. Global and planar observations often lead to identifying one area or joint that is creating a disruption in the movement pattern. Once the movement pattern of the local area is improved, observation returns to the planar or global level to see if correcting the local issue improved the global movement pattern.

Learning to continuously move between the three levels of observation and learning the skills to improve a client's movement foundations at every level are at the heart of being an excellent movement teacher.



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Analyzing Posture

Postural analysis is the science of understanding the optimum relationship of the body to gravity. To analyze posture we begin by identifying key bony landmarks and how they line up in a standing position.

This simple two page form can be used to chart static posture. It is helpful to establish baseline posture prior to beginning an exercise program and to occasionally re-assess client progress. Use the images to identify deviations and the space below for relevant notes and observations.

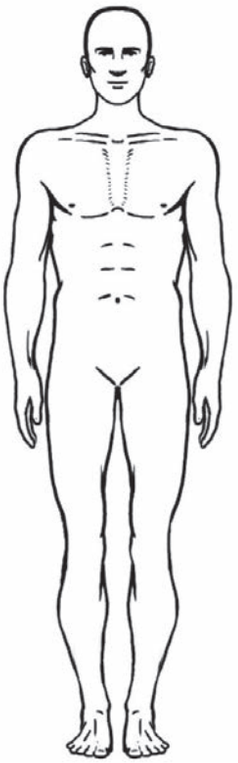
SIDE VIEW

VERTICAL OBSERVATION POINTS

- Tip of earlobe
- Top of shoulder
- Center of rib cage
- High point of iliac crest
- Mid point of the lateral side of the knee
- Slightly in front of the lateral malleolus of the ankle

FRONT VIEW

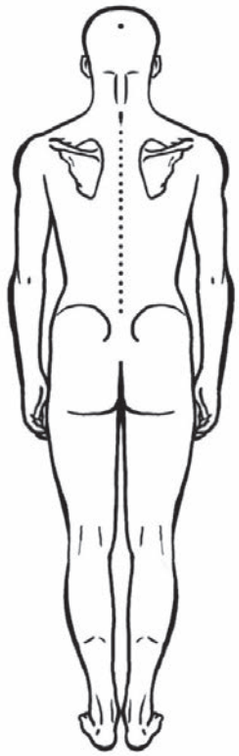
VERTICAL OBSERVATION POINTS



- Nose
- Center of Sternum
- Navel
- Center of pubic bone
- Inside ASIS
- Center of patella
- Center of the front of the ankle
- Space between 1st & 2nd toe

BACK VIEW

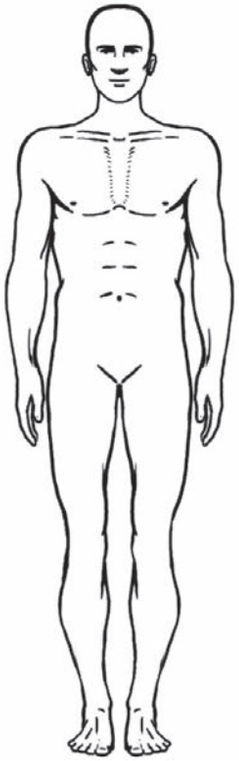
VERTICAL OBSERVATION POINTS



- Center of skull
- Spine straight
- Center of sacrum and tailbone
- Center of gluteal fold
- Center of back of knee
- Center of Achilles tendon

FRONT VIEW

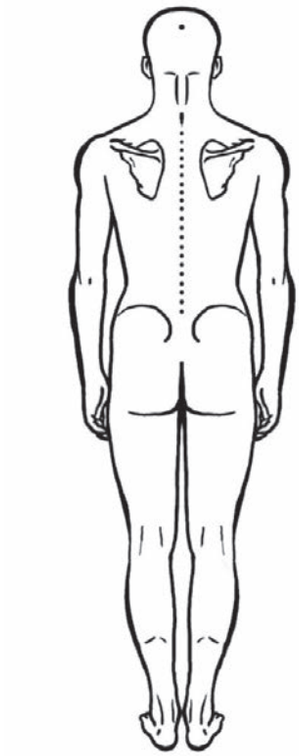
HORIZONTAL OBSERVATION POINTS



- Eyes level
- Shoulders level
- Equal distance between arms and torso
- ASIS level
- High point of iliac crests level
- Greater trochanters level
- Both knees even
- Equal turnout on both feet

BACK VIEW

HORIZONTAL OBSERVATION POINTS



- Ears level
- Level and balanced scapulae
- Equal distance between spine and sides of ribs
- PSIS level
- High point of iliac crests level
- Knees level

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Common Misalignments/Deviations

Each of the following patterns are caused by a combination of bone structure, joint mobility, habitual patterns, muscular tightness and muscular strength. In addressing them, change will come about most easily with patterns that are primarily muscular and will be hardest to change in patterns that are embedded in the bones and joint structure. The goal is to create as much balance as the client's structure will allow and to work gently and gradually toward improved movement patterns.

SPINE AND PELVIS

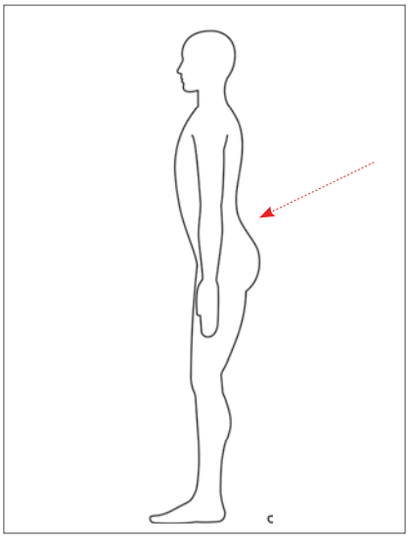
Scoliosis

- **Definition:** A lateral deviation of the spine usually accompanied by rotation. Scoliosis that occurs in one part of the spine such as the thorax is called a C curve scoliosis. If the scoliosis occurs in two parts of the spine, for example a right curve in the thorax and a left curve in the lumbar, it is called an S curve scoliosis.
- **General guidelines:**
  - Work to balance the client's posture by cueing them to maintain as much balance as possible.
  - Consider gently stretching the tighter sides of the curve and strengthening the open sides of the curve.
  - If this population is of interest, consider taking continuing education courses on scoliosis for more specific direction.

Scoliosis

Lordosis

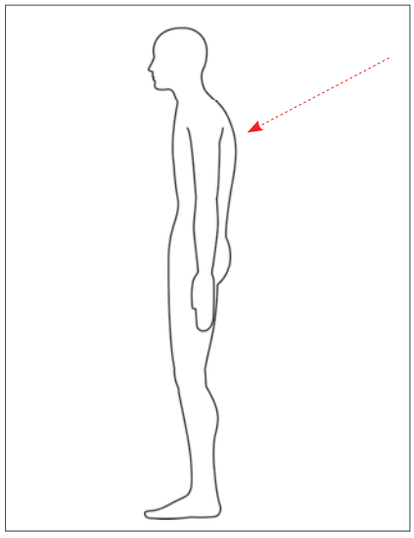
- **Definition:** A spinal curve toward the front of the body. There is supposed to be a small forward curve or lordosis in the lumbar and the cervical sections of the spine. An excessive curve can be called a lordosis or more accurately a hyperlordosis.
- **General guidelines:**
  - Lumbar lordosis is usually accompanied by tight low back extensors, an anteriorly tilted pelvis, tight hip flexors and weak abdominals in the neutral range.
  - Correct the pattern through increasing the flexibility of the lumbar and hip flexors and increasing the strength of the abdominals and hamstrings while actively stabilizing the pelvis in neutral.



Lordosis with an anteriorly tilted pelvis

Kyphosis

- **Definition:** A spinal curve toward the back of the body. There is supposed to be a small kyphotic curve in the thoracic spine. An excessive curve can be called a kyphosis or more accurately a hyperkyphosis.
- **General guidelines:**
  - Thoracic kyphosis is usually accompanied by weak thoracic extensors, tight anterior chest muscles and weak scapular stabilizers.
  - Correct the pattern by stretching the chest and strengthening the thoracic extensors and scapular stabilizers.



Kyphosis with a posteriorly tilted pelvis

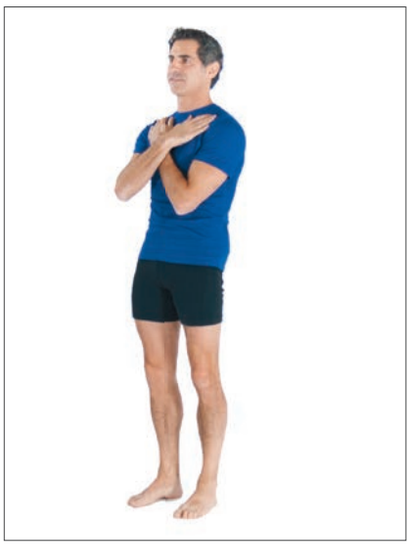
Anterior pelvic tilt

- **Definition:** When the ASIS is anterior of the pubic bone.
- **General guidelines:**
  - Lengthen the hip flexors and lumbar extensors and strengthen the hamstrings and abdominals.
  - Train to maintain posture in standing and functional movements.

Anterior Pelvic Tilt

Posterior pelvic tilt

- **Definition:** When the ASIS is posterior to the pubic bone.
- **General guidelines:**
  - Strengthen the hip flexors and lumbar extensors and lengthen the hamstrings and abdominals.



Posterior Pelvic Tilt

Pelvic up slip and down slip ("high hip or low hip")

- **Definition:** When the high point of the iliac crest is not level, the high hip side is called an up slip and the low hip side is called a down slip.
- **General guidelines:**
  - Balance the lateral system including hip abductors and adductors, quadratus lumborum and lateral torso muscles.

Pelvic inflare and outflare (Pelvic rotation)

- **Definition:** When one ASIS is anterior and closer to the midline while the other hip is posterior and farther from the midline, the anterior hip is in inflare while the posterior hip is in outflare. This is by definition accompanied by counter rotations of the femurs and the torso.
- **General guidelines:**
  - Balance the rotation of the torso and pelvis through the anterior and posterior oblique slings and the hip rotators.

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COMMON MISALIGNMENTS

LEGS

Femoral medial rotation

- **Definition:** When the femurs are rotated toward the midline around their long axis. This can often be seen by the patellas aiming toward the midline when the legs are straight as if they were "cross eyed." This may be a postural pattern which is easier to change or it may be caused by the structure of the hip joint in which case work to balance the alignment as much as the structure will allow.
- **General guidelines:**
  - Strengthen lateral femoral rotation and stretch the adductors and medial rotators.

Femoral lateral rotation

- **Definition:** When the femurs are rotated laterally around their long axis. In this case the patellas will aim away from the midline when the legs are in a relatively neutral position.
- **General guidelines:**
  - Strengthen the femoral medial rotators and stretch the lateral rotators.

Knee hyperextension

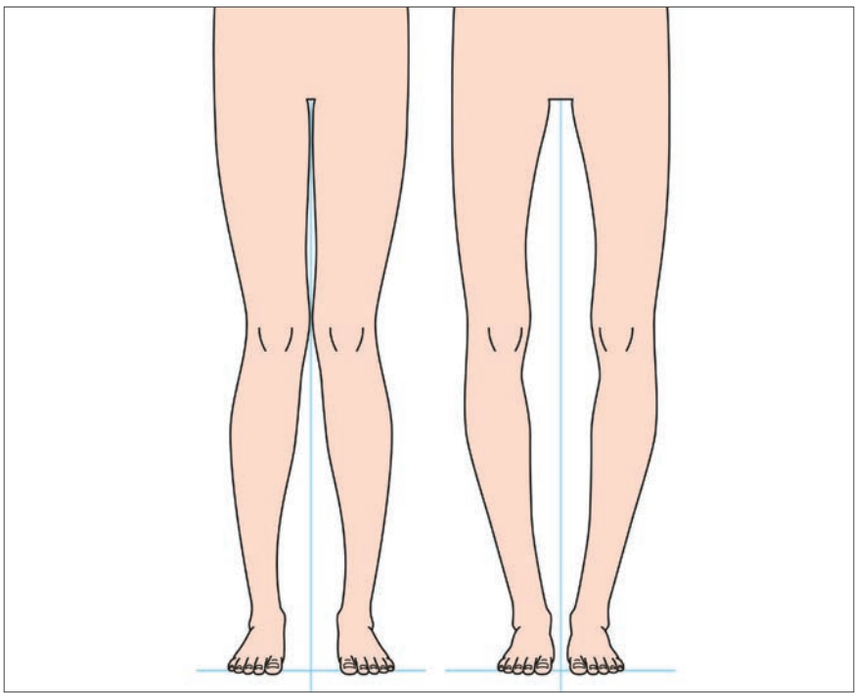
- **Definition:** In standing alignment viewed from the side, the knees are posterior to the plumb line. This is usually caused by hypermobility of the knee.
- **General guidelines:**
  - Make sure the knees do not hyperextend in any weight bearing exercises.
  - Focus on balance between hamstrings and quadriceps to stabilize the knee

Knock knees (genu valgum)

- **Definition:** When standing with the knees straight, the knees may touch but the medial border of the feet do not. This is called an increased Q angle. Knock knees are more common in women because of their wider hips. Knock knees and bow legs are caused by the structure of the hip and knee joint. The training focus is on creating the best alignment and muscle balance possible.
- **General guidelines:**
  - Cue the student to correct the alignment as much as possible while exercising.
  - To improve knock knees, assess hip rotation and the balance between hip abductors and adductors.

Bow legs (genu varum)

- **Definition:** A decreased Q angle shown in standing alignment with the legs straight when the knees don't touch but the medial borders of the feet do. Bow legs are often accompanied by knee hyperextension and sometimes correcting the hyperextension will correct the leg position.
- **General guidelines:**
  - Cue the student to correct the alignment as much as possible while exercising.
  - For Bow legs, look at hip rotation, knee hyperextension and the balance between hip abductors and adductors.



Genu Valgum (knock knees) and Genu Varum (bow legs)

Pronation

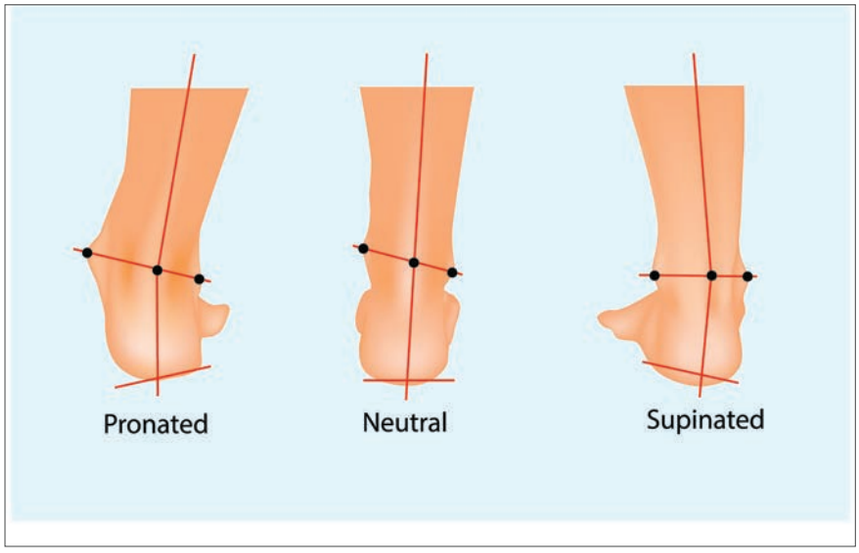
- **Definition:** In standing alignment, the arch flattens toward or contacts the ground and the Achilles tendon bows toward the medial side of the foot. In pronation the weight is carried on the medial side of the foot when standing. This generally indicates a lack of strength and stability on the medial side of the leg from the ankle through to the pelvis.
- **General guidelines:**
  - Strengthen the arch and the medial line of the legs. Observe and correct for habitual compensation.

Supination

- **Definition:** In standing the arch is lifted and the weight is carried on the outside of the foot. This pattern is usually one of stiffness in the joints and muscles of the foot which may limit the amount of change possible.
- **General guidelines:**
  - Stretch the arch and the medial side of the legs. Observe and correct for habitual compensation.

Bunions

- **Definition:** A bunion is a deviation of the toe towards the center of the foot. Bunions usually occur on the big toe.
- **General guidelines:**
  - Correct tendency to over turn out the legs and feet and correct tracking of the foot in gait.



Pronation, supination and neutral foot alignment (right foot shown)

Winging scapula

- **Definition:** When the medial border of the scapula lifts away from the rib cage. Can indicate a weak serratus anterior or a shallow rib cage.
- **General guidelines:**
  - Strengthen the scapular stabilizers and thoracic extensors.

Winging Scapulae

Elevated scapula

- **Definition:** When the scapulae are lifted up towards the ears. It usually indicates tightness in the upper trapezius, pectoralis minor and levator scapulae and a weakness in the inferior fibers of the serratus anterior and lower trapezius.
- **General guidelines:**
  - Strengthen the scapular depressors in their inner range.
  - Improve coordination of scapulohumeral rhythm in upward rotation.

Elevated Scapulae

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Neutral Lumbopelvic Position

According to current research in biomechanics, the core works best to stabilize and support the pelvis and lumbar spine when in a "neutral" position. When standing or sitting with a neutral pelvis, the action of gravity on the trunk musculature leads to balanced engagement of the muscles around the spine and abdomen. This decreases the stress on the spine and helps to prevent low back pain and injury.

IDENTIFYING NEUTRAL

There are different landmarks that can be used to identify a neutral lumbopelvic position. When teaching movement, the easiest landmarks to use are the ASIS and the pubic bone. When these two bony landmarks are on a plane perpendicular to the floor in standing or sitting, or parallel to the floor in supine, the pelvis is considered to be neutral.

Finding the right starting position for each exercise provides a solid foundation to move from and creates more comfortable and efficient movement patterns. Research on a neutral lumbopelvic position has primarily been studied when the pelvis and low back are in a standing or upright position. Some modifications may need to be made when lying supine.

NEUTRAL PELVIS AND EXERCISE

Many exercises will challenge and strengthen neutral posture in standing. Maintenance of the spinal curves and neutral pelvis through movement is key to training dynamic core strength and integrating the core with the limbs.

IMAGES AND EXERCISES FOR IDENTIFYING A NEUTRAL PELVIS

Using the bones

Place the heel of each hand on the ASIS and the second or third finger on the pubic bone to create a triangle with the point facing down. Notice which way the triangle is tipped.

Anterior pelvic tilt

If the ASIS is anterior to the pubic bone, then the pelvis is anteriorly tilted.

Posterior pelvic tilt

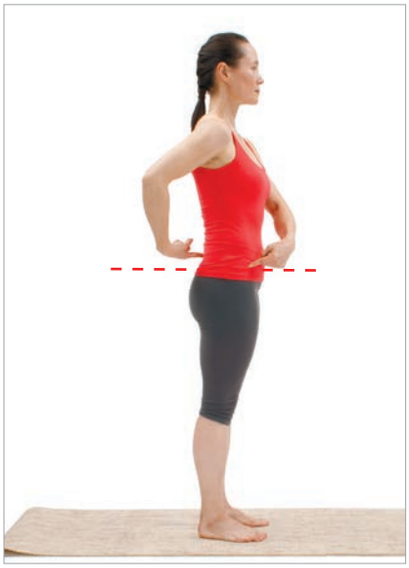
If the ASIS is posterior to the pubic bone, the pelvis is posteriorly tilted. Gently move the pelvis forward and back until the pelvis is relatively neutral.

Using imagery

Imagine the pelvis is a bowl full of water balanced over the legs. If the bowl is level, the water won't spill. If the pelvis is anteriorly tilted, the water will spill out the front. If the pelvis is posteriorly tilted, the water will spill out the back.

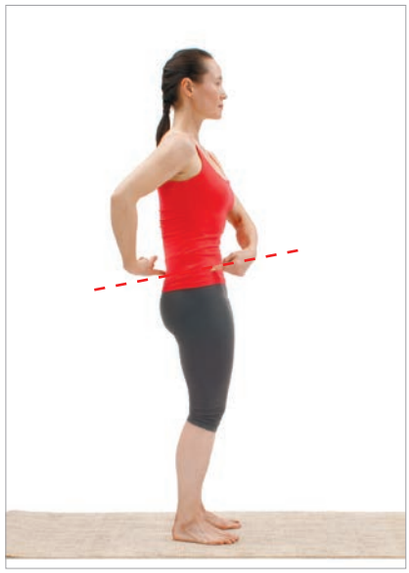
Neutral is dynamic, not fixed

Neutral pelvis is not a fixed position to create. It is a dynamic concept that shifts and changes slightly in relationship to the movement being performed.



Neutral Pelvis

Anteriorly Tilted Pelvis



Posteriorly Tilted Pelvis

NEUTRAL POSITION IN SUPINE

When standing, sitting or walking, a neutral lumbopelvic position is optimum for efficient movement. When supine, gravity is in a different relationship to the spine and adjustments to neutral lumbopelvic positioning may be necessary.

For example, in exercises where both legs are lowered toward the floor as in the Hundred, the core and abdominal muscles should be strong enough to keep the lower back stable as the legs lower. This keeps the psoas from pulling the lumbar spine forward and potentially causing pain or discomfort. If the core is not strong enough, the lower back position may be adjusted to provide support for these exercises.

Imprinted Spine

An imprinted spine provides support by placing the spine against the mat so it is externally stabilized. An imprinted spine can be created by increasing the flexion in the lumbar spine, posteriorly tilting the pelvis or placing a pad under the sacrum to passively tilt the pelvis and bring the spine closer to the floor.

Imprinted spine. In supine position, press the lower back towards the floor.

Supported Neutral

Supported neutral provides external support by placing a pad underneath the lumbar curve to fill in the space between the lower back and the floor. This position can be useful for teaching new students what a neutral spine is, stabilizing an unstable lower back or supporting a client with an increased lordosis.

Supported neutral. Place a lumbar support under the lower back.

EXCEPTIONS TO NEUTRAL

Neutral pelvis position may also not be appropriate for some clients with low back injuries. The following conditions may prefer an imprinted spine or a posteriorly tilted pelvis:

- Spondylolisthesis
- Spinal stenosis
- Spinal arthritis
- Some sacroiliac joint dysfunctions
- Some disc injuries

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TRUNK INTEGRATION

INTRODUCTION

Trunk Integration is an essential concept in movement training. The trunk transfers forces from the lower body to the upper body, from the upper body to the lower body, from one side of the body to the other and from one leg to the opposite arm. The systems that make up Trunk Integration must be trained to work harmoniously in order to create coordinated, effective, efficient and powerful movement patterns.

The Evolution of Core Training

The concept of core training began when physical therapists were looking for a new model to help them treat clients with lower back pain. The first model focused on the action of the "core" as a stabilizer of the lower back during activities of daily living and in athletic pursuits. The first resource was "Clinical Biomechanics of the Spine" by Panjabi and White (1978) This book looked in detail at the biomechanics of the spine and its muscular support system and proposed that the action of the transversus abdominis and multifidi worked as partners to stabilize the spine when the body was in a neutral position.

This original idea of the "core" was expanded, researched and worked with until another seminal work came out, "Therapeutic Exercises for Spinal Segmental Stabilization in Lower Back Pain: Scientific Bases and Clinical Approach" by Richardson et al.(1999). This book put the biomechanical insights of the first book into clinical practice and focused on ways to help clients consciously retrain the stabilization system of the lumbar spine. The concept of the core was expanded to include the action of the pelvic floor and the diaphragm in addition to the transversus abdominis and multifidi.

Through practice with many clients in many environments, the importance of the core became clear but for creating the dynamic stability needed for both managing lower back pain and for optimizing lower back function in healthy, active people, the idea of the core needed to be expanded. In "The Pelvic Girdle: An Integration of Clinical Expertise and Research" by Diane Lee et al, The concept of lumbopelvic stability was expanded to include not just the inner support cylinder or inner unit but also the outer unit where the thorax, spine and pelvis connect to the limbs to create full body movement.

Trunk Integration

Balanced Body has integrated these concepts and many more into the ideas presented in this manual. Our goal is to help movement teachers understand the interconnections that tie the body together so they can work more effectively to create harmonious, whole body movement.

THE FOUR ELEMENTS OF TRUNK INTEGRATION INCLUDE THE FOLLOWING:

Breathing

This repetitive, unconscious action can profoundly effect movement, mood and energy levels. And the diaphragm forms the "ceiling" of the core or inner unit.

The core or inner unit

Consists of the pelvic floor, transversus abdominis, multifidi and diaphragm and forms the inner cylinder tying our pelvis, spine and rib cage together.

The four outer units

These four systems maintain the relationship between the upper limbs, thorax, spine, pelvis and lower limbs in functional activities of all kinds. The four outer units consist of the anterior and posterior oblique slings, the deep longitudinal system and the lateral system.

Spinal mobility

The focus of many core and trunk integration exercises is on stability. To balance stability, spinal mobility must be balanced and harmonious.

All of these elements are discussed and examples are given of the principles in action in this section.

References

Clinical Biomechanics of the Spine by Manahar M. Panjabi and Augustus A. White III, 1st edition 1978, 2nd edition 1990, Lippincott, Williams and Wilkins

Therapeutic Exercises for Spinal Segmental Stabilization in Lower Back Pain: Scientific Bases and Clinical Approach

by Carolyn Richardson, PhD, BPhty (Hons), Gwendolen Jull, PhD, MPhty, Grad Dip Manip Ther, FACP, Paul Hodges, PhD, MedDr, DSc, BPhty (Hons) and Julie Hides, PhD, MPhtyST, BPhty, 1st edition 1999, 2nd edition 2004, Elsevier Limited

The Pelvic Girdle: An integration of Clinical Expertise and Research by Diane Lee, BSR, FCAMPT, CGIMS, Linda-Joy Lee, PhD, BSc(PT), FCAMPT, CGIMS, MCPA, Andry Vleeming, PhD, PT , 1st edition 1989, 4th edition 2011, Churchill Livingstone/Elsevier

Breathing

"Breathing is the first act of life and the last." - J. Pilates.

It is the foundation of our existence and creates the fundamental rhythm that underlies our life. It is essential for maintaining and creating optimum health and wellbeing. Breathing techniques can be used to decrease stress, lower or raise blood pressure, improve aerobic capacity and calm the mind and spirit. Breathing has been used by every culture to change mind and body states in meditation, exercise and daily living.

How Breathing Works

The diaphragm is the primary muscle of respiration. It forms a dome whose bottom edge attaches to the inside of the rib cage, the spine, the 12th rib, the lowest costal cartilages and the xiphoid process. The other end of the muscle fibers of the diaphragm attach to a tendinous ring that sits at about the level of the 5th rib when the diaphragm is at rest.

On the inhale, the diaphragm contracts, drawing the top of the dome down as much as four centimeters with a full inhale. This increases the volume of the lungs and draws the air in. As the diaphragm relaxes, the dome rises back up and the air is pushed out of the lungs.

On the Inhale

- The diaphragm contracts and the dome moves down
- The volume of the lungs increases and draws air in
- Abdominal pressure increases
- Pelvic floor responds

On the Exhale

- The diaphragm relaxes and the dome moves up
- The volume of the lungs decreases and air flows out
- Abdominal pressure decreases
- Transversus abdominis contracts
- Pelvic floor responds

Accessory breathing muscles

In addition to the diaphragm, the following muscles are also involved in breathing by helping to move the rib cage:

- The internal and external intercostals, serratus posterior superior and inferior, the scalenes and the upper trapezius

The Breath in Movement

Breathing techniques can be used to facilitate movement, improve strength and increase mobility as well as improve lung capacity and focus the mind. As a general rule:

- Inhaling facilitates spinal extension
- Exhaling facilitates spinal flexion
- Either inhaling or exhaling can facilitate lateral flexion
- Either inhaling or exhaling can facilitate spinal rotation

When teaching a beginner these are good rules to follow. In order to challenge a more advanced student, reverse the breathing pattern to bring awareness back to the exercise.

Bracing for Stability

Exhaling during a challenging exercise helps to activate the trunk stabilizers and "brace" the torso. Bracing is often used for safety with clients rehabilitating from lower back and other injuries. As the deep structural muscles of the core get stronger, less bracing is required to do the same task.

Diaphragm, inferior view

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The Inner Unit: Spine and Abdominal Support

The multifidi, transversus abdominis , pelvic floor and diaphragm work together to provide three dimensional support to the abdominal cavity.

Multifidi

- The multifidi are small muscles connecting the transverse processes of each vertebra to the spinous processes of the vertebra from three to four (or more) levels above. The multifidi run from C2 through the sacrum.
- They function to support the spine at the deepest level.

Transversus Abdominis

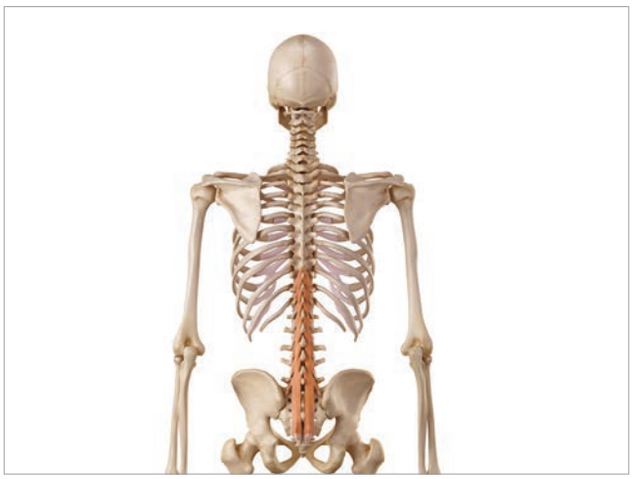
- The muscle fibers of the transversus abdominis wrap horizontally around the abdomen creating the deepest layer of the abdominals. The transversus abdominis acts like a corset to draw in the abdominal muscles and decrease the diameter of the waist.
- The transversus abdominis provides structure to the abdominal wall.

Diaphragm

- The diaphragm is the top or roof of the core and organizes the rib cage and spine in preparation for movement.
- As discussed in the Breathing section, an exhale can be used to activate the core, creating stability of the lumbar spine, pelvis and rib cage.
- In aerobic activities, the diaphragm works with the core to create stability while allowing full respiration to meet cardiovascular demands.

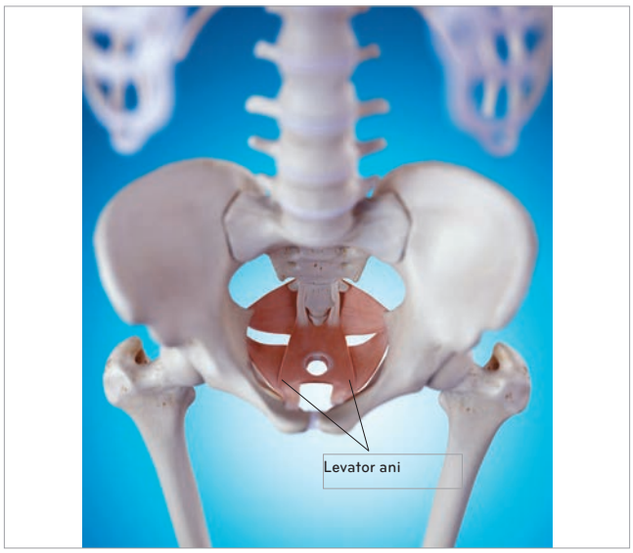
Pelvic Floor

- The pelvic floor is a group of muscles filling in the bottom of the pelvis and forming the "floor" of the core.
- The primary purpose of the pelvic floor is to hold the contents of the abdomen up against gravity.
- The pelvic floor includes muscles that control the flow of urine and feces, as well as muscles that hold the pelvis together and connect the pelvis to the femur.
- In women they are essential for childbirth and in both men and women, a healthy pelvic floor facilitates better sexual function.



Lumbar Multifidi

Transversus Abdominis



Pelvic Floor, internal view

Myofascial Connections

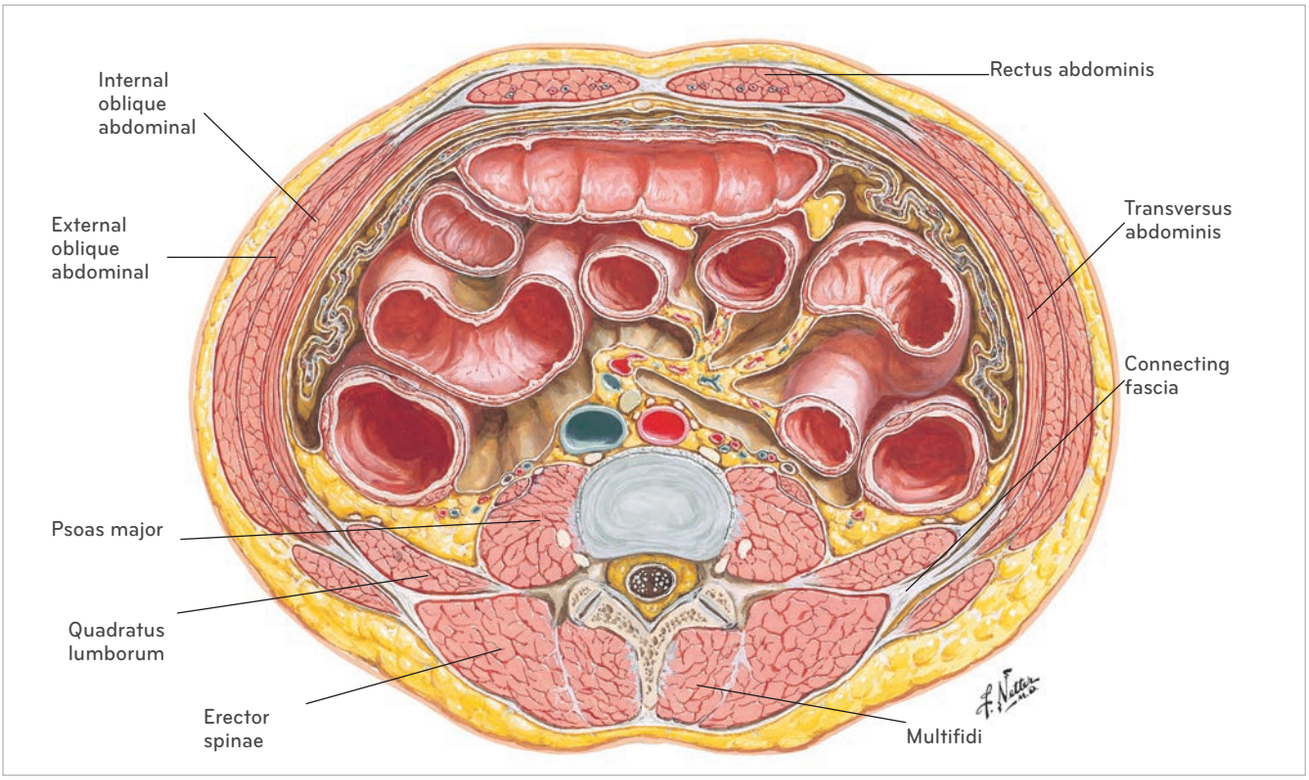
The inner unit stabilizes the lumbar spine through the myofascial connections between all of the elements of the inner unit. The myofascia consists of the muscles (myo) and their associated fascia. Fascia is the connective tissue that surrounds and interpenetrates all of the muscles and creates connections between them and their associated joints. The myofascial system ties the action of different muscles together to create the synergy necessary for integrated, whole body movement. In the lower back, the fascial system is called the thoracolumbar fascia.

This illustration is a cross section through the body at the level of the third lumbar vertebra. It shows the relationship between the muscles surrounding the lower spine and the transversus abdominis. By following the white fascia surrounding the transversus abdominis and connecting it to the fascia surrounding the erector spinae and quadratus lumborum, one might imagine that if the transversus abdominis contracts, it will increase the tension on the thoracolumbar fascia.

The thoracolumbar fascia acts much like a sausage casing around the filling of the multifidi. When the multifidi contract against the tension of the casing, they gently squeeze the spine creating a stabilizing force on the many joints between the vertebrae. The pressure of the casing against the multifidi also helps to create space between the vertebrae which is called decompression or axial elongation.

Based on electromyographic studies, in a normal healthy body, the multifidi, transversus abdominis, diaphragm and pelvic floor will fire in an appropriate sequence to stabilize the lower back in anticipation of spinal loading. With lower back pain, this sequence is often delayed or dysfunctional.

In a normal healthy body all of this happens automatically as part of a reflexive reaction to load being placed on the spine. When training clients to activate their inner unit, conscious cueing should be combined with movements designed to reactivate the reflexive sequences.



Cross section through L3. Lumbopelvic stability is generated by a light contraction of the transversus abdominis to tension the thoracolumbar fascia. The multifidi contracts into the tightened fascia, increasing its volume thus stabilizing the spine and creating axial elongation.

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The Outer Unit

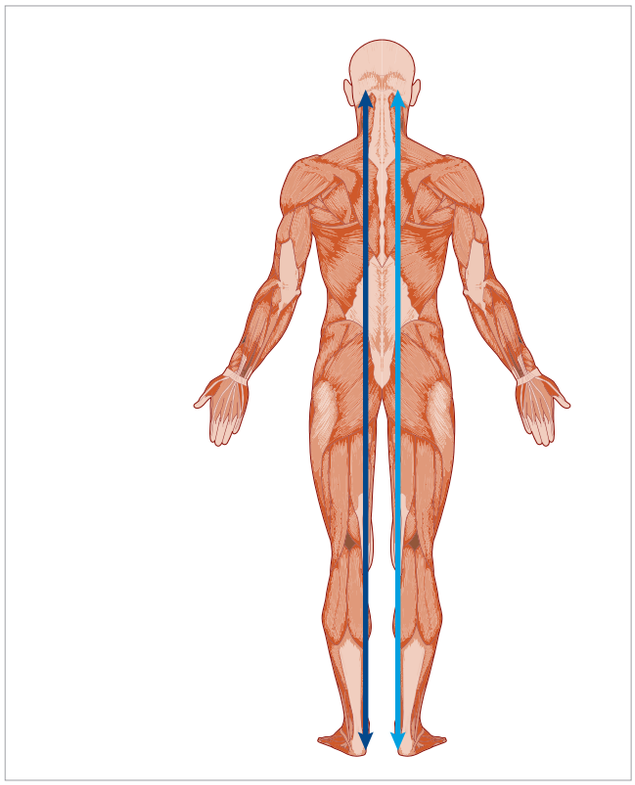
The Outer Unit consists of four subsystems, the Deep Longitudinal System, Lateral System and Anterior and Posterior Oblique Slings. These four systems work together to integrate and coordinate movement between the shoulder girdle, thorax, spine, pelvis and femurs. The Outer Unit creates movement and stability in the sagittal, frontal and transverse planes to produce fully balanced three dimensional movement.

THE DEEP LONGITUDINAL SYSTEM: SAGITTAL PLANE INTEGRATION

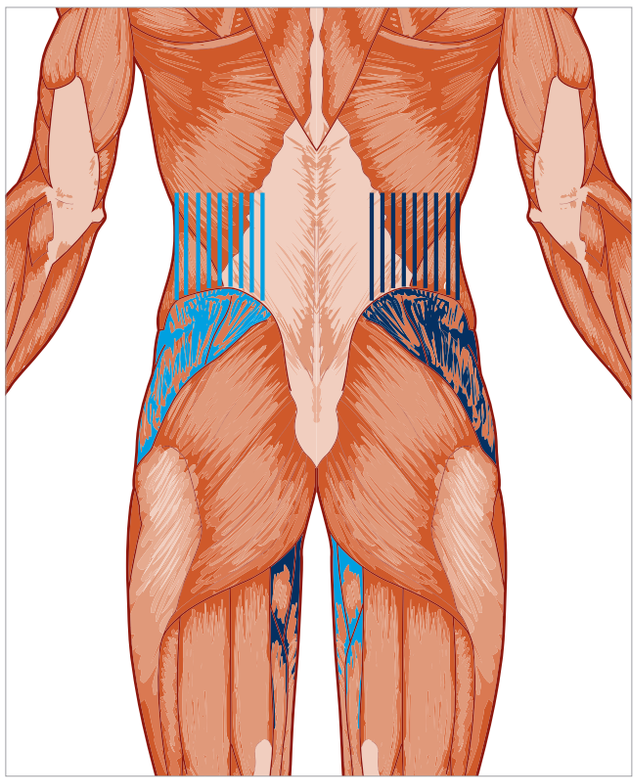
- The deep longitudinal system includes the erector spinae, sacrotuberous ligament, biceps femoris, gastrocnemius and plantar fascia.
- It supports the body upright against gravity.
- It is responsible for spinal extension when activated bilaterally and lateral flexion when activated unilaterally.
- It works with the posterior oblique sling to create extension and counterbalances the anterior oblique sling which initiates flexion.

THE LATERAL SYSTEM: FRONTAL PLANE INTEGRATION

- The lateral system includes the quadratus lumborum, abductors and adductors.
- These muscles are responsible for adduction and abduction of the hips and for up slip and down slip of the pelvis.
- The lateral system acts to balance the forces on the pelvis and to keep it level over the femurs in walking and standing.



Deep Longitudinal System



The Lateral System

The Oblique Slings: Transverse Plane Integration

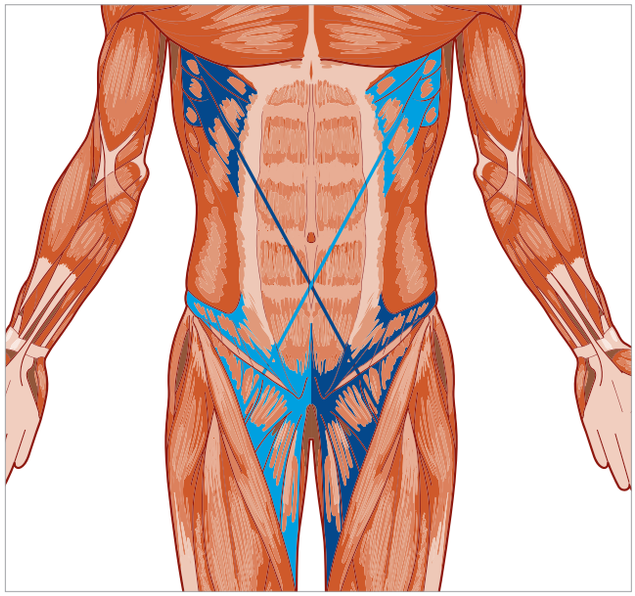
The anterior and posterior oblique slings (AOS and POS) are responsible for integrating the upper limbs, torso, spine, pelvis and lower limbs in whole body exercises such as running, throwing and swimming. The opposing slings (left to right AOS and right to left POS) create rotation while the parallel slings (right to left AOS and POS) create lateral flexion and rib translation.

THE ANTERIOR OBLIQUE SLING SYSTEM

- The anterior oblique sling includes serratus anterior, external oblique abdominals, contralateral internal oblique abdominals and contralateral adductors
- This system creates torso flexion when activated bilaterally and creates rotation between the rib cage and the pelvis when activated unilaterally.

Imagery

The anterior oblique system runs like a sash Miss America would wear over her shoulder or like crossed bandoliers and covers the line of the anterior serratus, external oblique abdominal, internal oblique abdominal and adductor muscles.



Anterior Oblique Sling

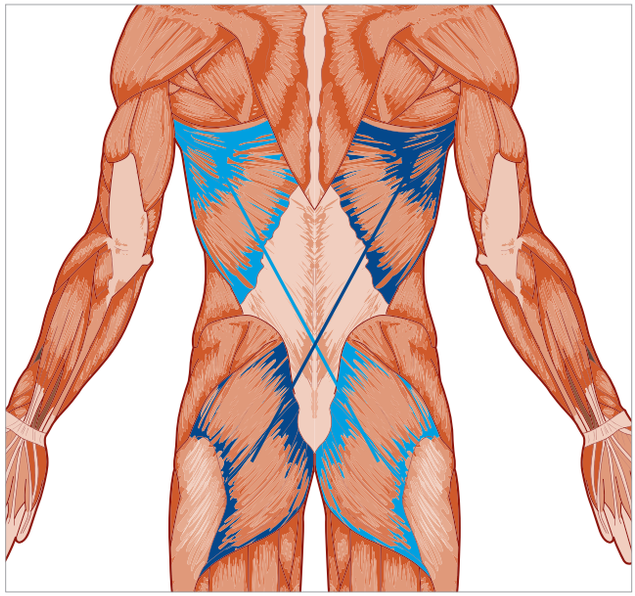
THE POSTERIOR OBLIQUE SLING SYSTEM

- The posterior oblique sling includes the latissimus dorsi and the contralateral gluteus maximus.
- The posterior oblique sling system creates torso extension when activated bilaterally and partners with the anterior oblique sling to create rotation and lateral flexion when activated unilaterally.

Imagery

The posterior oblique system runs like the back of the sash or bandolier covering the latissimus dorsi and the opposite gluteus maximus.

The anterior and posterior oblique slings keep the upper and lower body balanced for activities like walking and running. Both systems are activated in exercises such as an oblique abdominal curl or lateral spinal flexion.



Posterior Oblique Sling

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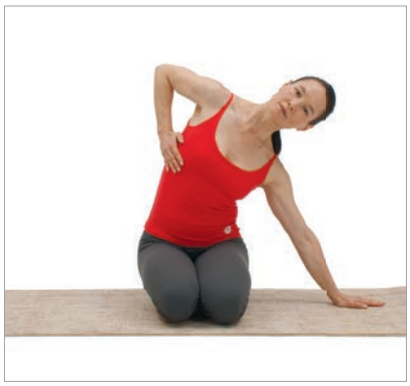
TRUNK INTEGRATION

EXERCISE PROGRESSIONS: BREATHING AND INNER UNIT ACTIVATION

Diaphragmatic Breathing

Posterolateral Breathing

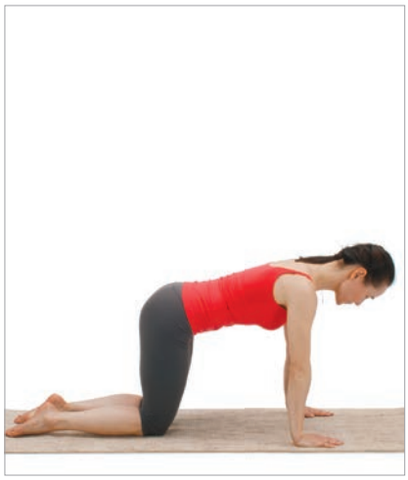


One Lung Breathing

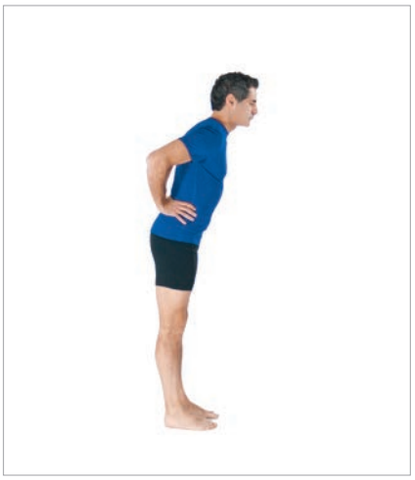
Pelvic Clock

Fingertip Abdominals

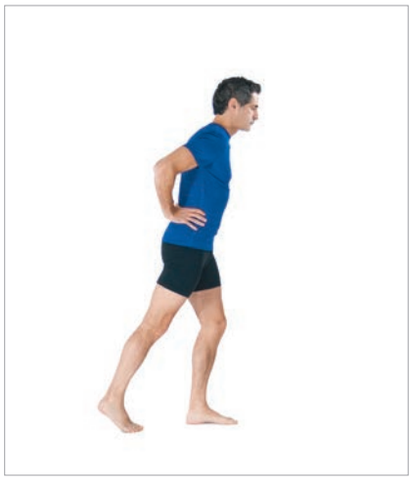
Pelvic Floor Activation



All Fours Abdominals



Standing Multifidi



Standing Multifidi
Single Leg

Marching

Abdominal Curl

Oblique Abdominal Curl

Opposite Arm and Leg Reach

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The Spine

The spine creates the central axis of the body. Its position, symmetry and pyramidal shape give it strength while its tapering curves support and balance the three weight centers of the body: the head, thorax and pelvis. The spine has the capacity to absorb shock, is designed to protect the delicate spinal cord and has the capacity to support the weight of the body through various ranges of motion. Optimizing spinal mobility and strengthening the muscles supporting the spine is key to minimizing joint stress and maximizing overall health, physical wellbeing and activity specific performance.

FUNCTIONS OF THE SPINE

Force transference

- The many joints of the spine act to transfer force moving from the lower body to the head or from the shoulders to the pelvis. Because the spine is made up of many units like beads on a string, some energy is lost as the force moves from one bone to the next allowing ground forces to dissipate.
- The spine also acts as the fluid connection between the legs, pelvis, rib cage, shoulders and head. It connects and integrates the actions of the entire body.

Protects the spinal cord and nerve roots

- The segmental nature of the spine allows it to protect and distribute the nerves to the rest of the body.
- The interlocking structure of the vertebrae provide a vertical central channel to protect the spinal cord while the many lateral channels distribute the nerve roots to the body.

Creates Movement

- The segmental structure of the spine allows for a small amount of movement in multiple planes at each joint. This allows the torso to rotate, flex, extend and laterally flex without putting too much pressure on any one joint.
- The bones also provide attachment points for the many muscles that hold the spine together and coordinate the movement of both adjacent and distant vertebrae.

MOVEMENTS OF THE SPINE

The primary integrated movements of the spine are:

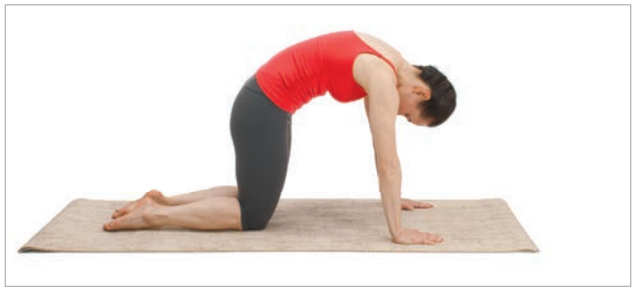
- Flexion
- Extension
- Lateral Flexion
- Rotation

Spinal Flexion

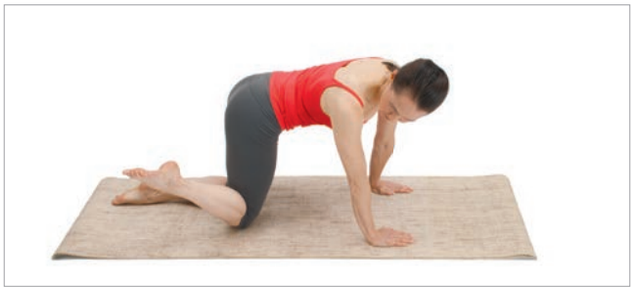
Spinal Extension

Spinal Lateral Flexion

Spinal Rotation



Cat/Cow



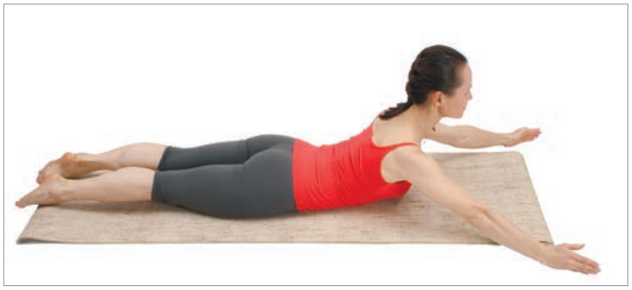
Tail Wag

Poodle Tail

Bridging

Bridging with Hip Dips, Typewriter and Figure Eights

Rockets



Mini Swan

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LOWER BODY TRAINING

INTRODUCTION

The Lower Body

The lower body forms the foundation of mobility, strength and endurance for daily and athletic activities. A well trained, aligned and balanced lower body provides a lifetime worth of pain free movement. This section focuses on key training principles for helping clients to move well and stay healthy.

Lower Body Training Principles

Train optimum leg alignment

- Organize hip, knee and ankle in optimal alignment.
- Work with client's structure to find and train optimum alignment of the hip, knee, ankle and foot.

Balance range of motion

- Assess ranges of motion of the hip, knee and ankle and work to create the best possible range of motion on all sides of the joints.

Balance muscular strength

- Assess strength on all sides of each joint and work to create balanced strength between the agonists and antagonists to optimize support and optimum mechanics of the lower body.

Create strength and endurance

- Endurance is necessary for the lower body to perform its functions of walking, standing, squatting, lifting and lunging.

Train agility, balance and coordination

- Agility, balance and coordination are essential skills for the lower body.

TRAIN OPTIMUM LEG ALIGNMENT

Training clients to optimally align the legs can decrease wear and tear on the joints and help the muscles to provide balanced support for all the movements of the hip, knee and ankle.

In ideal alignment, the hip joint, knee joint and ankle joint are lined up directly over each other in standing and in squatting or lunging. Ideal alignment is exactly that, ideal. When working with clients, the goal is usually to correct, balance and strengthen the best alignment possible for that individual.

When working with athletic clients, their sport or activity might include working in ranges well outside of ideal alignment. In this case, work to strengthen and balance the lower body to be able to tolerate the stresses put on it by their sport or activity.

Leg Alignment - Hip, knee and ankle in line

BALANCE RANGE OF MOTION

Creating muscular balance on all sides of each joint is an important principle in training the lower body. Muscular imbalances in either strength or flexibility can easily lead to stress on the joints.

Without good range of motion on both sides of a joint, the muscles can't work correctly. This is called reciprocal inhibition. For example, if the hip flexors are too tight, the hamstrings won't have enough range to work well and strength gains will be difficult. Hip mobility, dynamic flexibility and myofascial release exercises are used to balance mobility of the lower body.

Balanced muscle development is important in both joint specific movements like hip extension, flexion, adduction and abduction shown below and in functional lower body moves like squatting, lunging and walking.

BALANCE MUSCULAR STRENGTH

Promoting balanced muscular development optimizes joint function, enhances power and creates support and stability for the joints. Strengthen the muscles around each of the joints in three dimensions:

Hip flexion and extension, abduction and adduction, medial and lateral rotation and circumduction.


Hip flexion


Hip extension


Hip abduction


Hip adduction


Hip lateral or external rotation


Hip medial or internal rotation

Knee flexion and extension and tibial medial and lateral rotation.


Knee flexion


Knee extension

Ankle plantarflexion and dorsiflexion.


Ankle plantarflexion


Ankle dorsiflexion

Foot inversion, eversion and toe flexion and extension.

CREATE STRENGTH AND ENDURANCE

The lower body is often used to develop good cardiovascular health through repetitive, high output activities designed to challenge the heart and lungs. While walking, running, biking, swimming or climbing, the lower body needs a significant amount of both strength and endurance to stay healthy over time. With good leg alignment and muscle balance the client can work the lower body to develop the strength and endurance necessary to meet their goals.

Train good mechanics in functional movement patterns including:

- Locomotion: Walking, running, biking or swimming
- Squatting and lunging in a variety of ways.
- Foot and ankle work like heel raises and jumping to stabilize the ankle and improve balance.

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TRAIN AGILITY, BALANCE AND COORDINATION

In order to handle ordinary and unexpected situations, clients need to work on agility, balance and coordination at a level appropriate to their goals. These elements create the whole body movement skills necessary for a person to manage their daily and athletic activities successfully.

- Agility can be as simple as being able to respond quickly to a change in the environment like a slippery patch of ice or as complex as training a soccer or basketball player.
- Balance is a multisensory skill that begins to deteriorate after the age of 30. Having a good sense of balance is important for keeping clients safe, especially as they age. Incorporating balance challenges in each session can help keep this system tuned up and clients moving with confidence and grace.
- Coordination of complex movements is what we are designed to do. Training clients in functional movement patterns involving coordination of the lower body, trunk and upper body are essential for overall health and wellbeing whether clients are a 60 year old gardener or a 20 year old tennis player. Coordination is the key to moving efficiently, generating power, and accuracy and minimizing wear and tear on the joints.

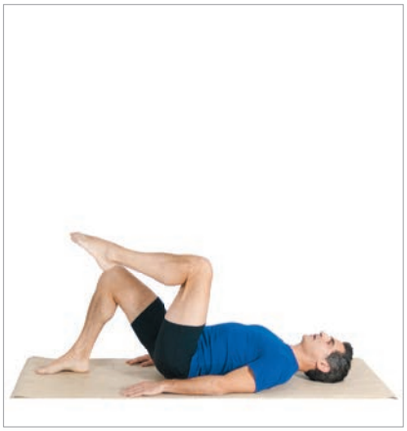
In designing an exercise program for the lower body, the goals and condition of the client will dictate which elements to focus on. If the client is strong but very tight, mobility may be the focus. If the client has had repeated knee injuries, alignment, balanced muscle development and mobility may all be included to balance the forces around the knee. For an older client who wants to remain fit and active, overall strength, endurance and balance may be the focus.

Agility

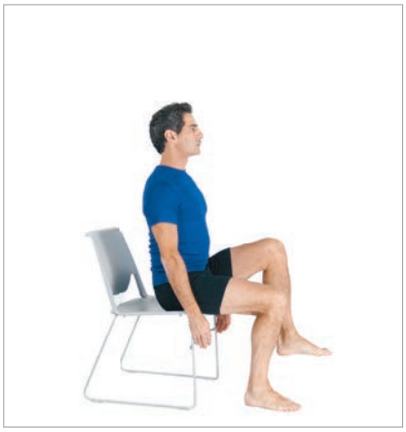
Balance

Coordination

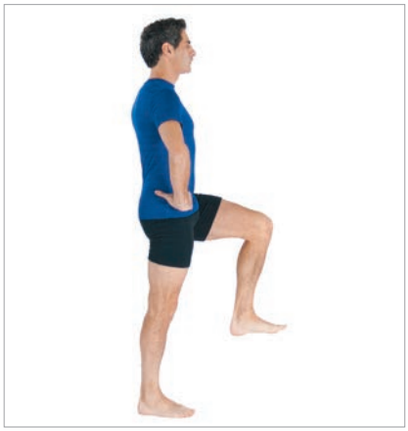
Hip Flexion above 90°



Marching Supine

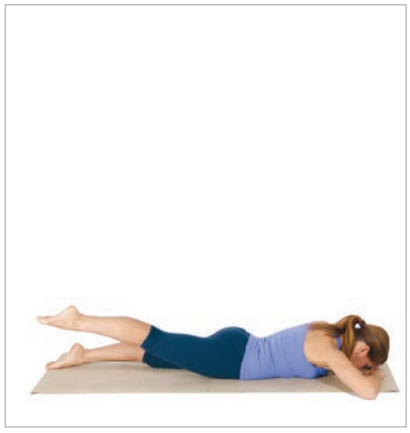


Marching Seated

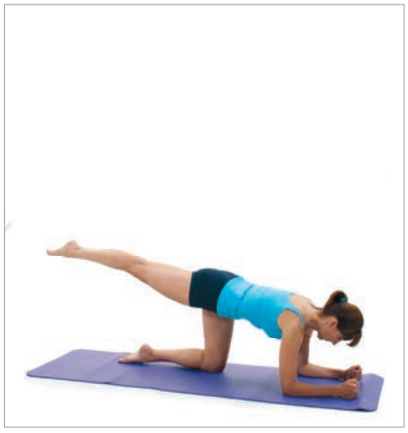


Marching Standing

Hip Extension



Hip Extension Prone



Hip Extension All Fours

Hip Extension Standing

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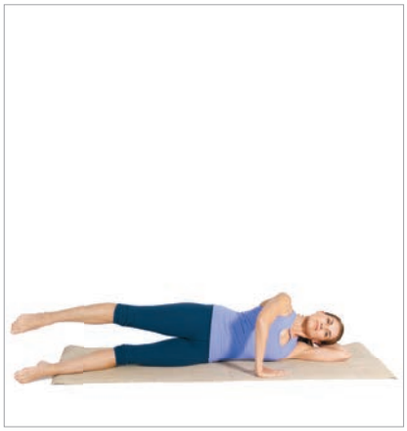
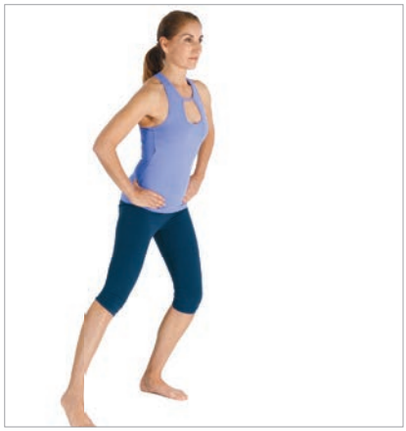
LOWER BODY TRAINING

EXERCISE PROGRESSIONS: HIP ABDUCTION AND ADDUCTION

Hip Abduction



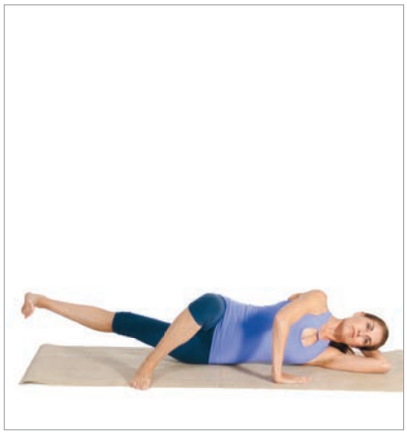
Side Lying Leg Lifts - Abduction



Stepping Out Abduction

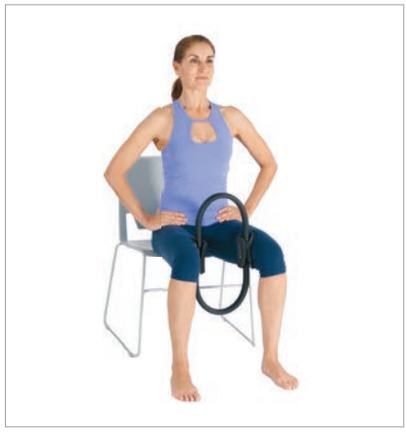
Standing Leg Lifts - Abduction

Hip Adduction



Side Lying Leg Lifts - Adduction

Standing Leg Lifts - Adduction

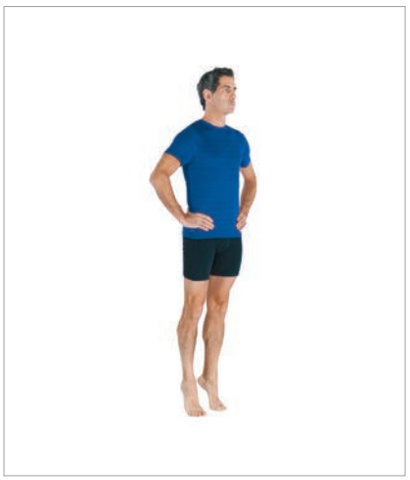


Seated Isometric Adduction

Foot and Ankle Strength

Plantar Flexion

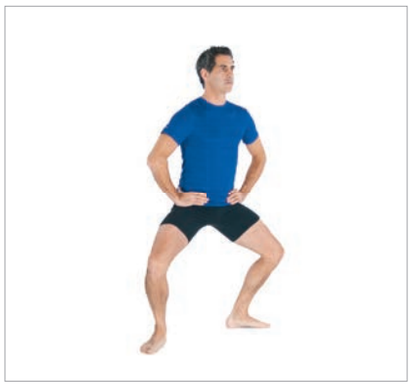
Dorsi Flexion



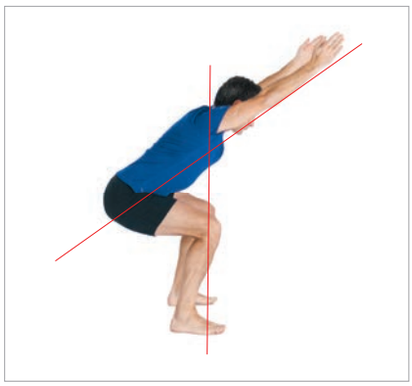
Heel Raise

Functional Movements

Marching with Arm Swings

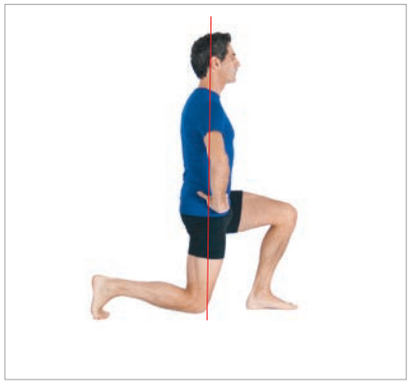


Knee Bends

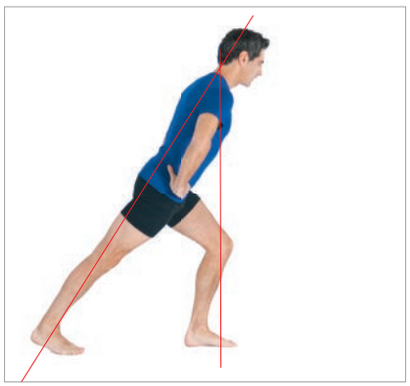


Squats - Narrow, Parallel

Squats - Wide, Turned Out



Upright or 90/90 Lunge



Tilt or Forward Lunge

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The Upper Body

The upper body consists of the cervical spine, thoracic spine, ribs, shoulders, arms, elbows, wrists and hands. Upper body actions run on a spectrum from the fine motor skills of texting, drawing and sculpting to the power moves of throwing a ball or lifting a heavy object. The anatomical complexity and multiple functions of the upper body require a solid understanding of upper body anatomy, biomechanics and training principles to successfully train clients for functional and athletic activities.

Upper Body Training Principles

There are many ways to design an effective upper body training program but any program should begin by creating optimum movement patterns with a balance of strength, mobility and stability. When upper body movement is not well coordinated, injury can easily be the result. The following principles provide a framework for creating strength and balance in the upper body:

Optimize joint mobility and stability

- Create glenohumeral stability, coordination and endurance.
- Develop appropriate scapular mobility.
- Train dynamic scapular stability or scapular control.

Train functional movement patterns

- Pulling, pushing and lifting with both arms, one arm and in multiple directions.

Integrate upper body movements with the rest of the body

- Include rotation, cross body moves and exercises like throwing where power moves through the body to the arm.

OPTIMIZING JOINT MOBILITY AND STABILITY

The upper body has many more joints participating in most actions than the lower body does so understanding the balance between stability and mobility and thinking in terms of integrated rather than joint specific movement patterns is crucial for training success. The two areas to focus on are glenohumeral stability and endurance and scapular stability and mobility.

GLENOHUMERAL STABILITY AND ENDURANCE

Glenohumeral stability and endurance means training the rotator cuff to position the humeral head in the glenoid fossa so larger muscles and movements can be performed without compromising the glenohumeral joint. The muscles in this area are small so training should focus on endurance rather than strength or high repetitions with low resistance rather than high resistance with low repetitions. Training should also focus on maintaining the congruency of the joint or keeping the humerus relatively centered in the glenoid fossa as it rotates.

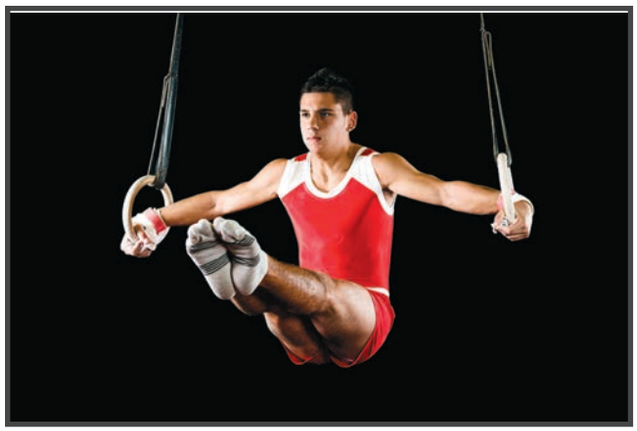
SCAPULAR MOBILITY AND COORDINATION

Optimizing scapular stability and mobility are important for creating power transfer through the shoulder joint and for minimizing stress on any one element of the upper body kinetic chain. Mobility exercises are designed to coordinate the actions of the lower body, spine, shoulder, arm and head to maximize power transfer and minimize joint stress in functional movements. If there is a limitation in mobility, for example the scapula is not moving into upward rotation when the arm is lifted, stress will be placed on the glenohumeral joint potentially leading to shoulder impingement.

SCAPULAR STABILITY AND DYNAMIC CONTROL

Scapular stability means positioning the scapula for optimum force transfer during movement. For example, in a push up, the scapulae may move into retraction as the body lowers but should return to a neutral position before starting a second rep. This provides a stable base for the glenohumeral joint to move into extension as the body lowers and to flex as the body rises.

In the case of raising the arm overhead in preparation for throwing a ball, the stability of the scapulae needs to be dynamically controlled through the range of motion. In other words it needs to move at just the right speed into upward rotation to support the action of the glenohumeral joint and the rest of the arm. In this example, if the scapulae stayed perfectly stable in one position, the arm could not rise high enough to produce the necessary power to throw the ball.



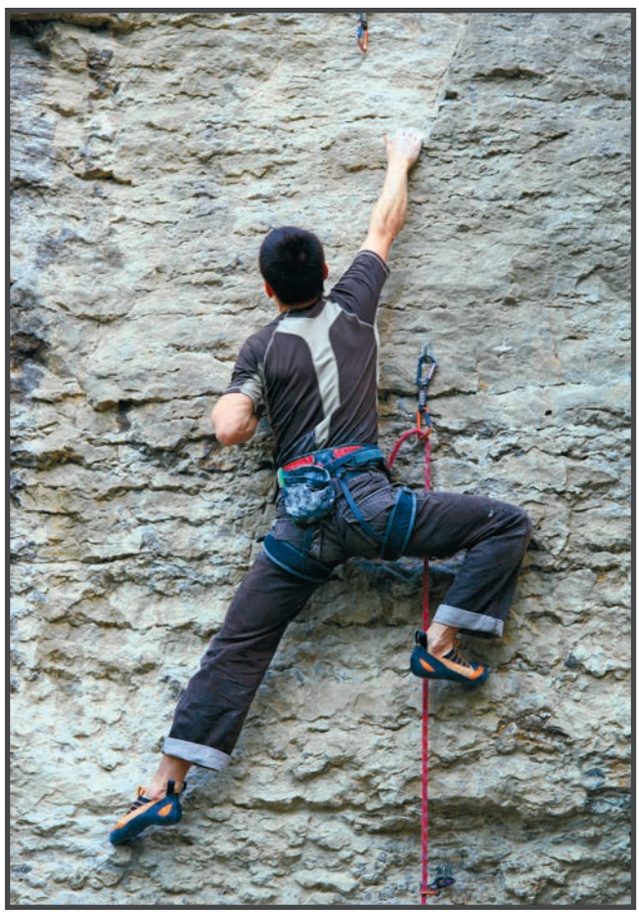
PULLING, PUSHING AND LIFTING

Because of the multi planar and multi joint actions of the upper body, training functional movement patterns is the best way to create strength and balance in the upper body. Pushing in all directions: forward, overhead, down and laterally; pulling in all directions: in, down and up and lifting in a variety of ways all provide a general framework for planning a well balanced training session. Using one or both hands and working with different hand grips can easily modify the exercise to create applications for any activity.

INTEGRATING THE UPPER AND LOWER BODY IN FUNCTIONAL MOVES

In addition to pushing, pulling and lifting, the upper body should be trained in movements incorporating the legs, hips and spine. For a power move like a tennis serve, most of the force hitting the ball is not generated by the shoulder and arm but by the legs and spine. Working on moves like throwing, or rotational moves can integrate the upper and lower body creating both more power and less likelihood of injury because a well coordinated movement spreads the load out between joints and transfers the energy smoothly from segment to segment.

For example, a golfer who does not integrate the rotation of the swing through the body from the feet to the hands to the club to the ball, will not generate the power needed for a good drive. Developing integrated mobility of the upper and lower body is crucial for many functional movements and a common limitation to developing power and efficiency in daily and athletic activities.



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Shoulder Stability, Mobility and Muscle Balance

The scapulae are relatively mobile islands of bone floating on the back of the rib cage and connected through the acromioclavicular joint, the clavicle and the sternoclavicular joint to the thorax. The clavicle, the scapula and all of their associated joints work together to create movement of the shoulder. The scapulae function as platforms which the upper limbs use for support. The position, stability and strength of the scapulae are almost entirely dependent on the action of the muscles that surround them. This complex system is called the scapulothoracic joint. The shoulder muscles work isometrically in balanced partnerships to stabilize the scapulae for weight bearing exercises like the plank. The same partnerships work concentrically and eccentrically to move the scapulae and the upper limb for exercises such as lat pulls. These muscular relationships allow the scapulae to be supported in all planes for safe and efficient motion.

ELEVATION AND DEPRESSION OF THE SCAPULA

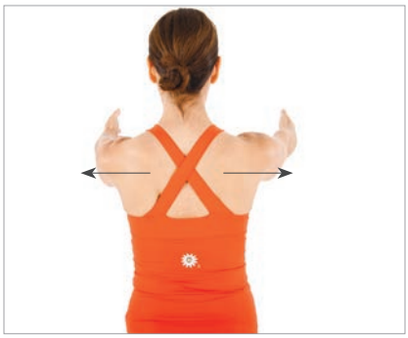
Elevation slides the shoulder blades up toward the head while depression draws them down toward the hips. The balance of these two actions keep the scapulae centered between the head and the bottom of the rib cage. The scapular depressors are generally weaker and less active than the elevators and require more training to create balance.

Scapular elevation

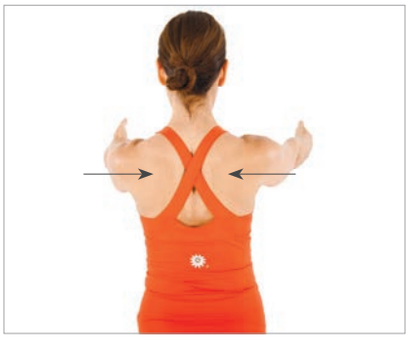
Scapular depression

PROTRACTION AND RETRACTION OF THE SCAPULA

Retraction pulls the scapulae toward the spine. Protraction pulls the scapulae away from the spine and around the rib cage. These muscles work together to keep the scapulae stable and balanced between protraction and retraction when bearing weight on the upper body as in a plank exercise. Dynamic scapular stability is critical for generating power in the upper body.



Scapular protraction



Scapular retraction

UPWARD AND DOWNWARD ROTATION OF THE SCAPULA

In upward rotation, the scapulae rotate so the glenohumeral joint angles up toward the ceiling while the bottom tip of the scapula swings laterally and superiorly around the rib cage. As the arms lower the scapulae depress and downwardly rotate, swinging the bottom tip of the scapulae toward the spine. The scapulae upwardly rotate approximately 1 degree for every 2 degrees of humeral movement in abduction or flexion above 60 - 90 degrees. This is called scapulohumeral rhythm.

Scapular upward rotation

Scapular downward rotation

Movements of the Glenohumeral Joint

The glenohumeral joint is designed for maximum range of motion. The humeral head is a very big ball fitting into the very small socket of the glenoid fossa of the scapula. Compare this to the close fitting ball and socket of the hip which also has a large range of motion but much more structural stability than the glenohumeral joint. Unlike the hip joint, the glenohumeral joint combines its motion with the scapula and the clavicle to allow the shoulder to throw a ball, swing from a trapeze or pull ourselves out of the pool.

In addition to the synergy between the glenohumeral joint and the rest of the shoulder joints, many actions of the arm are accompanied by movements of the thoracic spine. For example, the range of motion of the arm in flexion may be limited by the mobility of the thoracic spine in a client with kyphosis. Or, in observing a tennis player serving, or a baseball pitcher throwing, thoracic extension is part of the wind up to deliver power to the ball. Most functional moves of the upper body are working multiple joints in multiple planes so training for that reality is essential for success.

MEDIAL AND LATERAL ROTATION

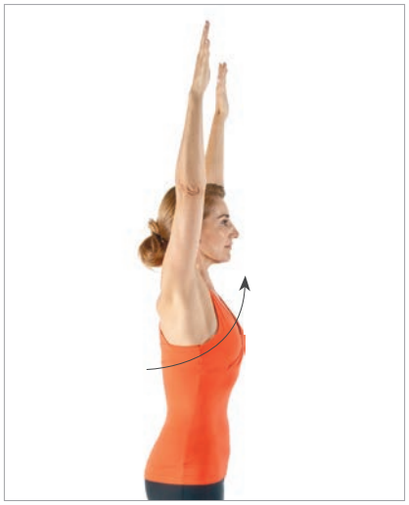
The humerus rotates in the glenoid fossa into medial (internal) and lateral (external) rotation. The rotators are responsible for positioning the humerus in the glenoid fossa so the larger, more superficial power muscles can move the humerus safely.

Shoulder medial rotation

Shoulder lateral rotation

FLEXION AND EXTENSION

The flexors and extensors move the arms forward and back in the sagittal plane. Once the arms move above shoulder height, upward rotation of the scapulae is necessary to allow the humerus to keep moving. For full flexion or flexion beyond straight overhead, thoracic extension is often necessary.

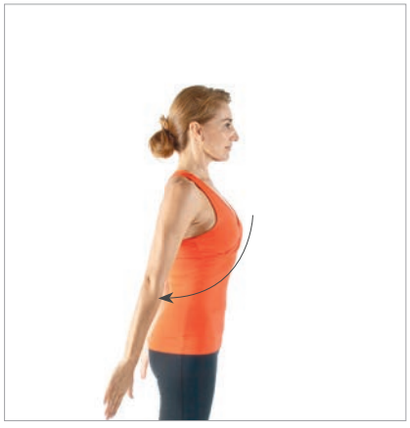


Shoulder flexion

ABDUCTION AND ADDUCTION

Abduction takes the arms away from the torso while adduction brings the arms to the side of the body or toward the midline if combined with flexion or extension. Upward rotation is again necessary when the arms move above shoulder height in abduction.

Shoulder abduction and adduction



Shoulder extension

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UPPER BODY TRAINING

EXERCISE PROGRESSIONS: GLENOHUMERAL STABILITY AND SCAPULAR MOBILITY

Glenohumeral Stability

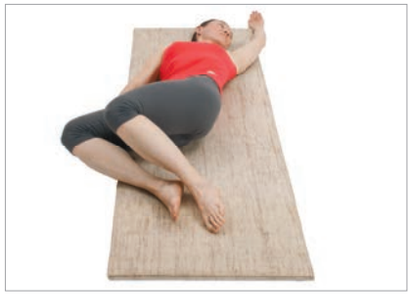
Lateral Glenohumeral Rotation

Medial Glenohumeral Rotation

Scapular Mobility

Arm Raises Together

Arm Raises Alternating



Angels in the Snow

Telescope Arms

Pinwheel

Develop Scapular Stability - Plank Preps

Sternum Drop

Plank Prep - All Fours Single Arm Lift

Front Plank

Modified Front Plank

Front Plank

Front Plank with One Leg Lifted

Front Plank with Opposite Arm and Leg Reach

Front Forearm Plank or Hover

Push Up

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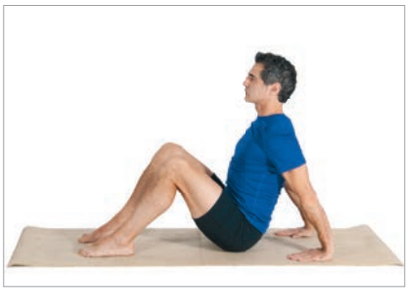
UPPER BODY TRAINING

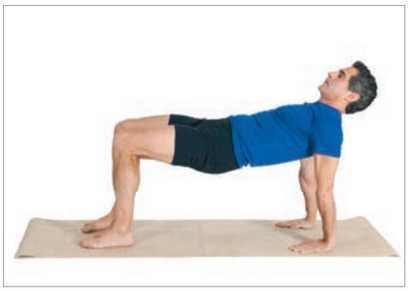
EXERCISE PROGRESSIONS: BACK AND SIDE PLANK

Back Plank

Back Plank - Elevation



Back Plank - Depression



Modified Back Plank

Mod. Back Plank - Marching

Back Plank

Back Plank - Leg Lift

Side Plank

Modified Side Plank

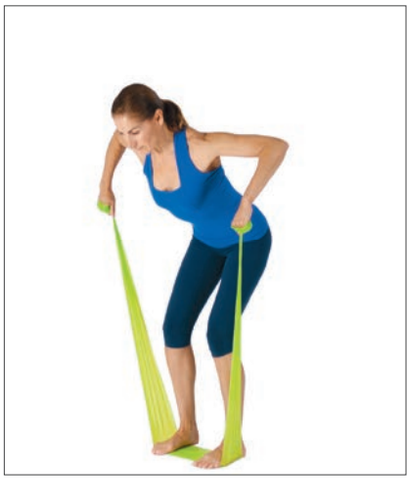
Side Plank - Feet Staggered

Side Plank - Feet Stacked

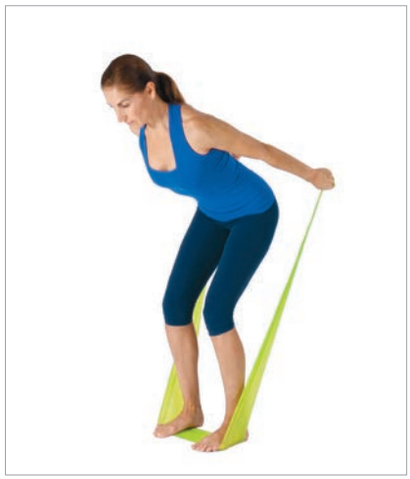
Side Plank with One Leg Lifted

Side Forearm Plank or Hover

Activating the Posterior Shoulder

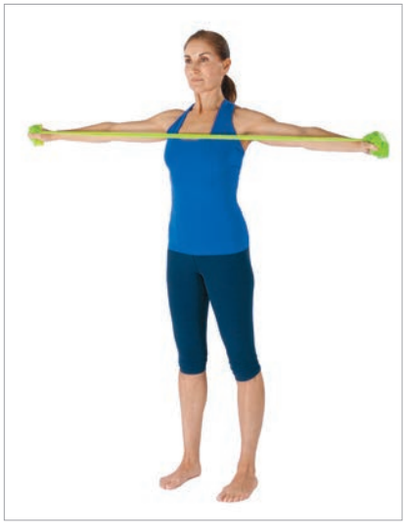


Rows



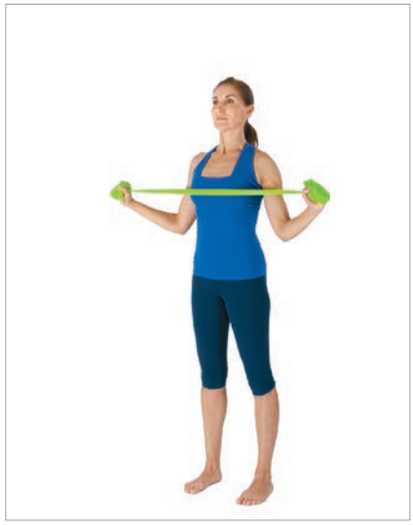
Triceps Press

Triceps Dip



Lateral Press

Overhead Press



Pulling Down

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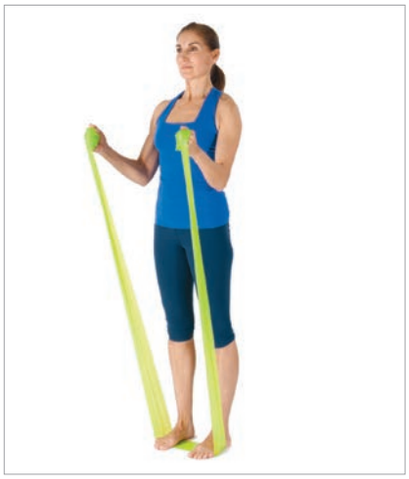
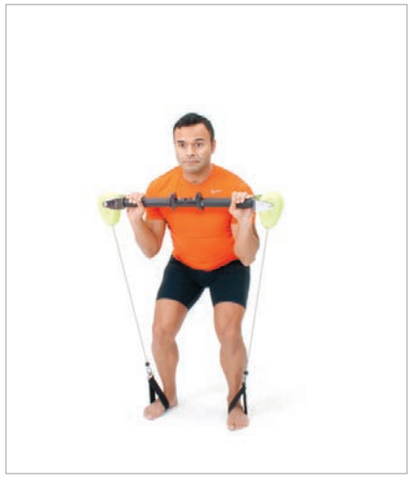
Activating the Anterior Shoulder



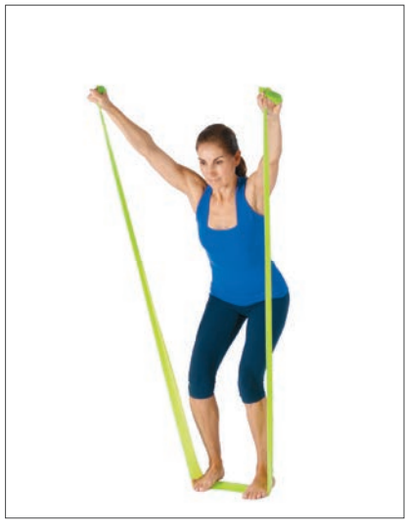
Biceps Curl

Chest Press

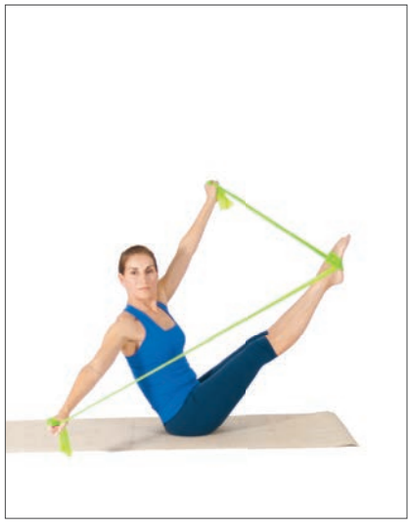


Lifting

Side Raise



Forward Raise



Integration of Upper and Lower Body

Stretching

Ever watch a dog or a cat after they the get up from a rest? One of the first things they do, after a great big yawn, is stretch. It is a natural instinct in all animals, including us humans. Stretching, as part of any physical fitness regime, provides an opportunity to restore and relax the body while facilitating both recovery and flexibility. While there are many theories surrounding stretching and the different stretching techniques it is clear that stretching is a great way to enhance flexibility, muscle control, awareness and range of motion.

Stretching techniques vary, but they all strive to increase flexibility and range of motion by overcoming the stretch reflex. Stretching techniques include static stretching, contract/release and active isolated stretching. Stretching can be slow and controlled, ballistic or dynamic. Each of these versions have value and can be used to find the most effective stretch for the client.

The Stretch Reflex

The human body has many brilliant ways of protecting itself against potential harm. The stretch reflex is one such mechanism. It moderates muscle length and protects against overstretching a joint. When a muscle is stretched, sensors called muscle spindles are stimulated and send a signal to the brain to contract the stretching muscle to limit its range of motion. To change the range of motion of a joint and reset this stretch reflex, many different strategies are employed. Some clients respond better to one technique than another so it is good to have options in your training toolkit.

Dynamic Stretching Techniques

Dynamic stretching involves gaining flexibility by moving in and out of end ranges of motion. It is an excellent way to increase flexibility while simultaneously developing stability of the joint at the end range. While some literature categorizes dynamic stretching as a technique of its own, others refer to it as dynamic preparatory movements for real world and sports specific activities. Activities such as yoga and Pilates are exercise modalities known for their dynamic stretching exercises.

Contract/Release

Contract/Release, or hold relax, is one form of PNF (proprioceptive neuromuscular facilitation) stretching. In a hamstring stretch for example, the muscle is put in a stretched position then the hamstring is contracted isometrically and released. Isometrically contracting a muscle for longer than 6 seconds creates high tension which is followed by sudden relaxation. This negative feedback lengthening is called autogenic inhibition. To perform, contract and release the muscle for 6 seconds three times before holding a sustained stretch for 30 seconds.

Active Isolated Stretch

Active Isolated Stretching, or AIS, is a method which is intended to naturally create neuromuscular relaxation by activating the antagonist of the muscle being stretched. In a hamstring stretch, for example, the hip flexors would be used to stretch the hamstring. It is the concentric contraction of the opposing muscle which creates the stretch in the targeted muscle. Activation of the opposite side of the joint pulls the muscle into a stretched position. Activation is designed to overcome the tendon stretch reflex by creating short, slow and controlled movements of the joint enhancing the stretch tolerance. Six to ten repetitions of a slow movement through range of motion is recommended before holding the stretch.

Static Stretching

Static stretching is a widely used and accepted form of stretching. A stretch is held for a specific period of time, usually for 30 – 45 seconds or longer. To improve flexibility, the American College of Sports Medicine recommends 2 to 4 repetitions totaling 60 seconds. It is currently believed that static stretching overcomes the stretch reflex by desensitizing receptors to tension. This in turn allows muscles to handle more force.

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MOBILITY AND RESTORATION

EXERCISE PROGRESSIONS: LOWER BODY STRETCHES - SUPINE, KNEELING AND SEATED

Supine Stretches

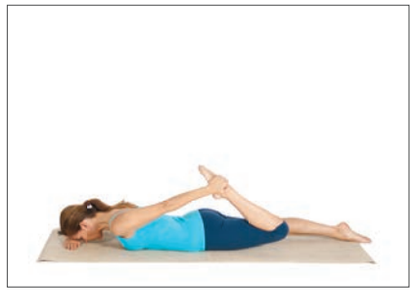
Hip Lateral Rotators

Hamstrings

Abductors/Lateral Leg

Adductors

Hip Flexors



Quadriceps

Kneeling and Seated Stretches

Hip Flexors

Quadriceps

Hamstrings

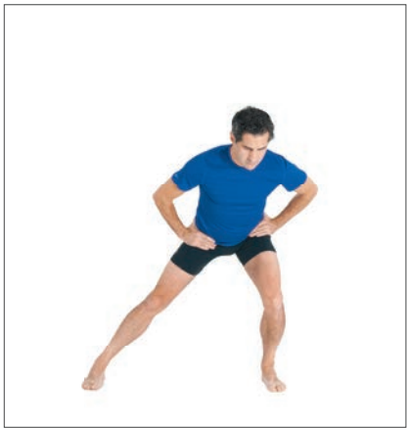
Abductors/Lateral Leg

Adductors

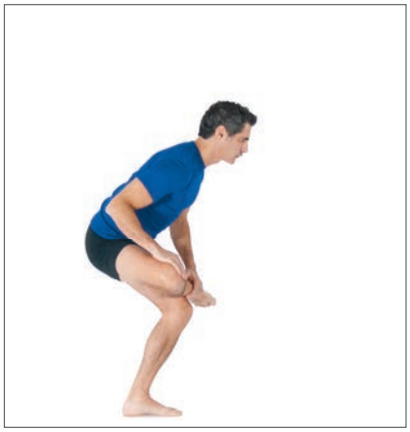
Hip Lateral Rotators

Standing Stretches

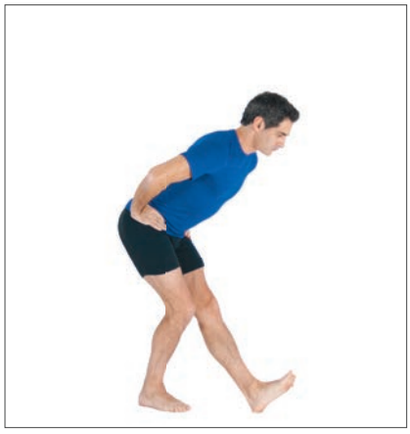
Hip Flexors



Adductors

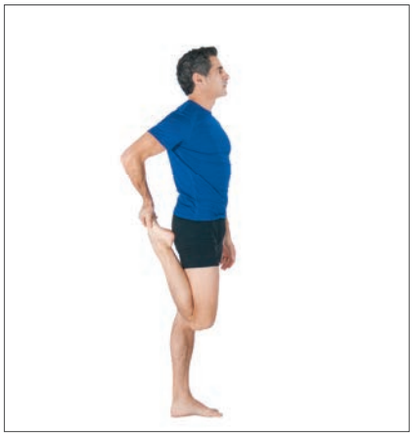


Hip Lateral Rotators



Hamstrings

Abductors/Side Body



Quadriceps

Calf

Soleus

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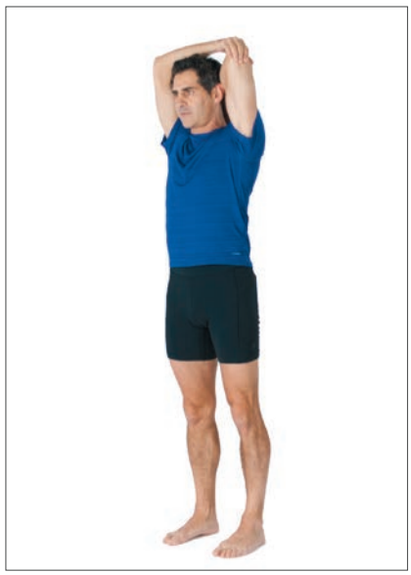
Upper Body Stretches

Chest

Posterior Shoulder



Triceps

Eagle Stretch

Neck

Stretching

Forearm and Wrist Extensors - Starting Position

Forearm and Wrist Extensor Stretch

Wrist and Finger Extensors

Wrist and Finger Flexors

Fingers and Thumb

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MOBILITY AND RESTORATION

MYOFASCIAL RELEASE, REST AND RECOVERY

Rest, Relaxation and Recovery

In our modern, always on the go society, rest and relaxation are not always a priority. Many ancient forms of health care and physical practice, from meditation to yoga, emphasize the rejuvenating power of rest in creating greater levels of awareness, fostering creativity and healing the effects of our daily activities.

Stress and Relaxation

Stress affects the autonomic nervous system (ANS) which controls many of our life sustaining functions such as heart beat, thermoregulation, respiration, and digestion. The ANS also works with the mind, affecting our emotions and our behavior. Continuous stressful stimuli can interfere and exhaust the routine ANS function while relaxation soothes the body and restores us to our natural state by modulating hormone release, slowing respiration rate and clearing the mind.

WHOLE BODY MOVEMENT AS RELAXATION

Movement can itself be a form of relaxation. Rhythmic, breath driven movements like those used in Tai Chi, or the repetitive action of running or cycling have been proven to release endorphins which can create a feeling of well being. Whole body exercise has also been shown to improve the function of the cardiovascular, respiratory, myofascial and neurological systems. When these systems are tuned up, the body is better able to handle stress and recover from illness, injury or hard physical training.

Incorporating moments of rest, breath and mindfulness into a session or into a client's home program will encourage them to take better care of themselves and to respect their bodies need for recovery. Cueing clients to focus on the breath in any given activity helps facilitate ease and relaxation which in turn creates a more productive learning environment, increases awareness of functional and dysfunctional movement patterns, decreases the likelihood of injury and increases client empowerment and satisfaction.

We encourage you to find these moments within the exercises and incorporate them into the client's workouts.

Recovery and Rest

An important part of physical training is the concept of recovery. Recovery takes many forms including resting between sets in an exercise sequence, getting a good night's sleep to allow tissues to recover and the nervous system to integrate a new skill and performing myofascial release or self-massage techniques to help tissues recover from over work.

Allowing time between intensive exercise sessions is critical to minimizing injury and maximizing strength and performance gains. Cellular repair is done by the body at night while we sleep so making sure there is recovery time between training sessions keeps the body from breaking down from too much strenuous activity.

Sleep and rest are also critical for learning a new skill or improving performance. When a client is having trouble with a new move, simply sleeping on it will often bring about positive change. On a smaller scale, incorporating short rest periods into a training session allows the muscles to recover enough to keep pushing.

Myofascial Release or Self Massage

The term myofascial release is often used to describe different manual therapy techniques which include soft tissue massage, manipulation and mobilization, trigger point therapy, strain-counterstrain therapy and foam rolling. All of these techniques are designed to positively effect musculoskeletal limitations by relaxing muscles, improving blood and lymphatic circulation, and removing toxins from immobile tissue.

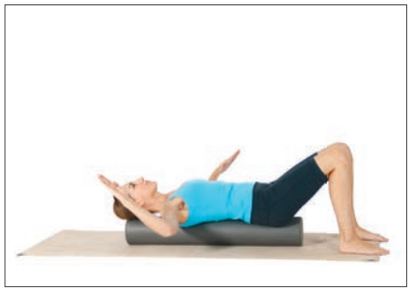
As a personal trainer or Pilates instructor, hands on techniques may be beyond your scope of practice so using self massage or myofascial release techniques on the foam roller are an excellent way to help clients recover. They can also be used to loosen tissue and improve range of motion through providing pressure on the tissue. Myofascial release can be used very successfully at the beginning of a session to decrease chronic tension patterns at the end of a session to help the tissues recover from the workout. Self massage can be used quite successfully with dynamic flexibility techniques to improve or maintain range of motion.

Roller Stretches

Chest Opener

Bookends Starting Position

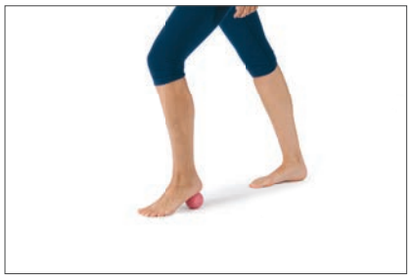
Bookends Stretch



Flip Flops

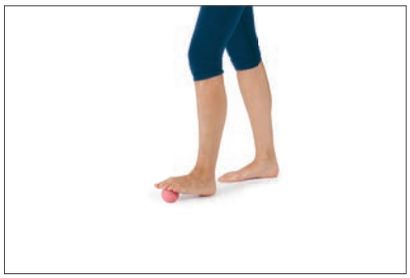
Angels in the Snow

Myofascial Release for the Feet



Heel Release

Arch Release



Metatarsal Release

Toe Release

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Myofascial Release

Posterior Hip

Hamstrings - Two Legs

Hamstrings - Single Leg

Calves - Hips Down

Calves - Hips Up

Quadriceps/Anterior Thigh

Tibialis Anterior - Anterior Shin

Iliotibial Band/Lateral Thigh - Supported

Iliotibial Band/Lateral Thigh - Unsupported

Adductors/Medial Thigh

Lateral Torso

Upper Back

Occiput and Head