

KONNECTOR

A BEGINNERS GUIDE TO THE KONNECTOR®

By Viktor Uygan

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KONNECTOR

INTRODUCTION

Welcome to the Konnector. This versatile and functional addition to the Reformer advances the traditional Pilates repertoire by connecting all four limbs. The four straps of the Konnector are attached through a series of pulleys to one rope. This acts to connect the limbs to each other and to integrate the action of the limbs and the torso in every movement. The Konnector enhances proprioception and illuminates imbalances like no other system can. The profound feedback from the straps helps you to feel, understand and correct imbalances with a minimum of cueing.

Welcome to the Konnector by Balanced Body, a true evolution of the Pilates Reformer.

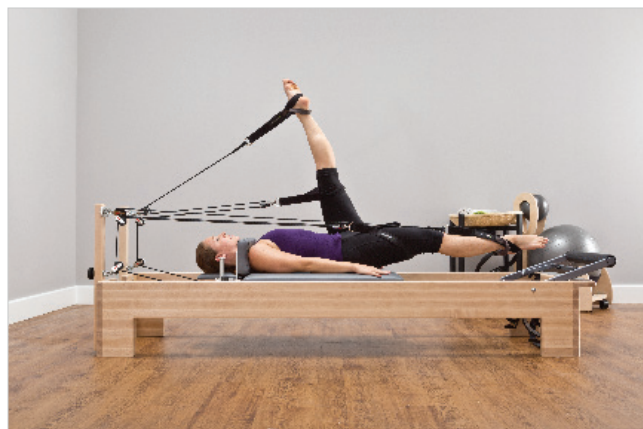
The Evolution of Pilates

THE KONNECTOR IS BORN

While working with a diverse range of clients over the last 20 years, Viktor Uygan has continually searched for ways to help his clients perform at their best. The deep understanding of movement he developed through practicing and teaching dance, Pilates, Gyrotonic, Body Code and other training modalities inspired him to create new equipment to support his client's fitness goals. The first Konnector, Konnector Light, used a one rope pulley system with 2 straps to allow independent movement of the arms or legs.

Being able to move two limbs independently led Viktor to consider the possibility of moving all four limbs independently in order to better reflect how the body functions. After much experimentation, the Konnector was born.

Konnector is a single-rope pulley system with attachment points for all four limbs. The patented system enables independent and simultaneous movement of both arms and legs. The user experiences constant proprioceptive feedback through a single rope. This facilitates full-body integration and stronger core activation in dynamic new ways.



Why the Konnector

- ▶ Enhances proprioception leads to increased awareness of imbalances & asymmetries.
- ▶ The interconnection of all 4 limbs creates true integration of the limbs and the trunk by reflecting the fascial connections in the body.
- ▶ Creates an environment that easily replicates functional movement patterns like reciprocal leg motion and rotation.
- ▶ Expands the potential of the Reformer to improve movement patterns effectively and efficiently.

The Science Behind The Konnector

ENHANCED PROPRIOCEPTION

Proprioception is the sensory system that tells us where our body is in space and how it is moving. Konnector provides excellent proprioceptive feedback because with all four limbs connected, it is easy to feel how movement in one limb affects the other limbs. When proprioception is enhanced, the ability to sense and correct imbalances is improved.

Because all four limbs can move independently but remain connected through one rope, the Konnector replicates the architecture of the human body by stimulating the connections between the upper and lower body, between the right and left sides of the body and between one arm and the opposite leg. These connections mimic the neuromyofascial chains within the body and create an effective training environment for functional movement. This is the heart of the Konnector method and the reason why it increases the effectiveness of a Reformer workout.

INTRODUCTION

Viktor Uygan

DANCER, PILATES INSTRUCTOR AND INVENTOR

Konnector was born out of Viktor Uygan's experience as a professional dancer, dance coach and Pilates teacher combined with an intuitive understanding of engineering. Since he was child in Turkey, the connection between movement and how things work has inspired him to continually experiment with equipment and movement methods to enhance his career as a dancer and his work with dancers and Pilates clients.

Viktor began studying dance at the Ankara State Dance Company in Ankara, Turkey. He continued training at the Hamlyn School of Ballet in Florence, Italy under the direction of Franco DeVita and Raymond Lukens.

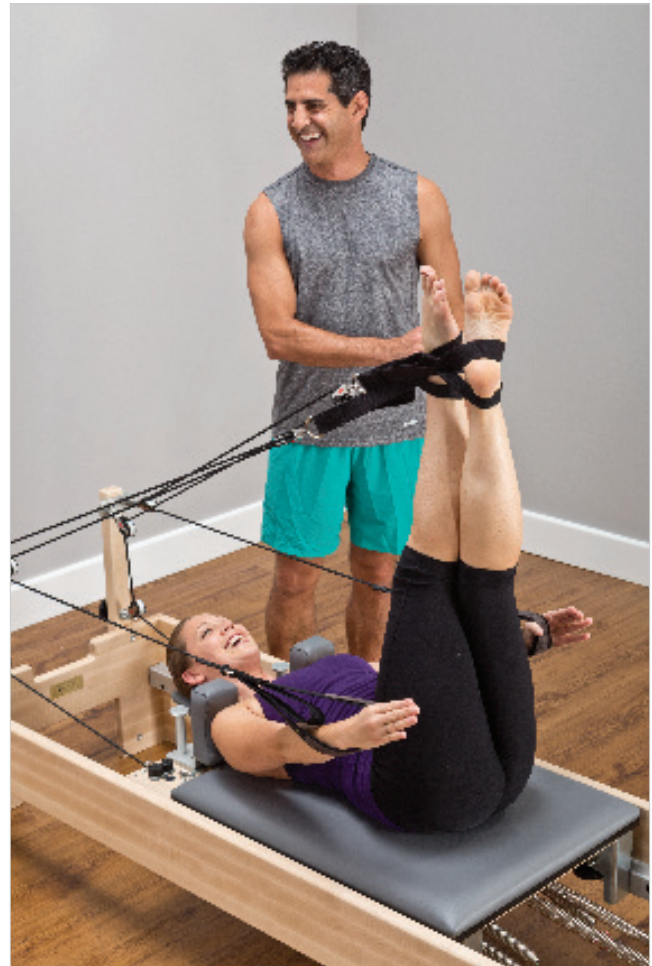
Viktor received advanced diplomas with honors in the Cecchetti technique. He has 15 years of professional experience dancing with companies including Ankara State and Hartford Ballet as well as guest performing in the United States and Europe. He has worked with great choreographers including David Allan, Kirk Peterson, Richard Glasstone, AnnMarie DeAngelo and Alla Osipenko and performed in works by Balanchine, Tudor, Graham, Choo San Goh and with Wayne Sleep for a tribute to Princess Diana.

Viktor is certified in the American Ballet Theater national training curriculum for young dancers. He is a successful dance coach with many of his students winning 1st place at national and international competitions and going on to successful professional careers. His work has been presented at Gala performances in Germany and New York and also won the YAGP Best Choreographer award for 2007 and 2008.

In 1992 Viktor started studying the BodyCode System and Gyrotonics from Master Pino Carbone, creator of the BodyCode System and owner of the first European Gyrotonic center in Florence, Italy.

He was introduced to Pilates in 1993 after moving to the United States and completed his training in 1999 through DK Body Conditioning at the University of Nevada. He has also studied Pilates for Golf and Meridian Stretching techniques.

Viktor began his work on the Konnector method using resistance bands for mat and Reformer exercises. The method gave rise to the Konnector Reformer. Viktor's studio, Konnector Pilates, which he runs with his wife and former dance partner Kelly, is his inspiration and laboratory where he works with clients and creates equipment and movement techniques for post rehabilitation, dance and athletic conditioning. Opened in 2002 the studio is located in Mission Viejo, California.



The Konnector Straps

BLACK LOOPS, GRAY LOOPS

The Konnector has two sets of double loops.

- ▶ The black set provides similar resistance to the straps on a regular Reformer. The black straps are usually used for leg work or when performing traditional Reformer exercises.
- ▶ The gray set provides almost 50% lighter resistance than on a regular Reformer because as the rope moves through more pulleys, the resistance decreases. The gray straps are usually used for arm work or where a lighter resistance is desirable.

To keep the straps organized so clients know which one to pick up, the straps are placed around the shoulder rests in the following order:

- ▶ Gray straps on the bottom.
- ▶ Black straps on top.



Strap starting position - Black strap on top, gray strap on bottom.

TRADITIONAL REFORMER WORK

In order to perform traditional Reformer exercises, simply use the black straps. This is the easiest way to maintain both the traditional functions of the Reformer and the enhanced function of the Konnector with minimal transition time or training for instructors or clients.

The straps can also be locked in place to approximate the bilateral nature of the traditional Reformer. See video for instructions on locking the straps.

ADJUSTING STRAP LENGTH

You can adjust the length of the ropes by holding the small or the large loops on the straps or, when using one set of straps, the extra straps can be placed on the post or shoulder rest as follows:

To make the rope even shorter feed the rope from the gray strap through the original rope stopper and adjust the rope to the desired length.



Long loop on post = Longer rope



Long loop on shoulder rest = Medium rope



Short loop on shoulder rest = Short rope

USING THE TRI LOOPS

The Konnector comes with special Tri Loop straps to provide extra support to the hands and feet. The large loop has a smaller strap sewn on the outside that can be used around the wrist or the ankle.

- ▶ For the feet, the large loop goes around the arch of the foot and the small strap goes around the back of the ankle to hold the foot in the strap. This keeps the foot secure in the straps whether they are in plantarflexion, dorsiflexion or neutral position.



- ▶ For the hand, the large loop goes around the wrist and the small strap supports the palm of the hand to help maintain alignment of the wrist.



Terminology

LIMB REFERENCE

Refers to starting position and/or movement pattern.

Symmetrical

Both of the limbs attached to the straps are in the same position (i.e. bent or straight, turned out or parallel).

Asymmetrical

The limbs attached to the straps are in different positions (i.e. Supine Arms, one arm is moving upward while the other is moving downward)

DIRECTION REFERENCE

Together

The limbs are moving in parallel. For example, both legs are lowering and lifting. This is most like the original Reformer work.

Reciprocal

The limbs are moving in opposition to teach other. For example one leg is lowering while the other leg lifts.

MOVEMENT PATTERNS

Double Limb

Both limbs move at the same time using the same movement pattern.

Single Limb

One limb moves at a time for a specified number of repetitions.

Alternating Limb

One limb completes the movement pattern before the other limb begins.

Reciprocal Limb

The limbs are moving in opposition to each other at the same time. For example, one arm lifts as the other lowers. In reciprocal exercises, the carriage should remain stationary as the limbs move.

All Four Limbs

All four limbs move at the same time.

SUPINE ARM WORK

BLACK STRAPS IN HANDS

Springs: 1R1B - 2R

Straps: Black on feet; Gray strap, short or long loop, around the shoulder rest

Body position: Supine, arms in straps, legs in tabletop

Supine Arm Work on the Konnector allows the arms to move independently. The single rope of the Konnector means that as one arm moves, the other arm must respond creating integration of the upper limbs into the trunk and training dynamic stability of the shoulders, arm and trunk.

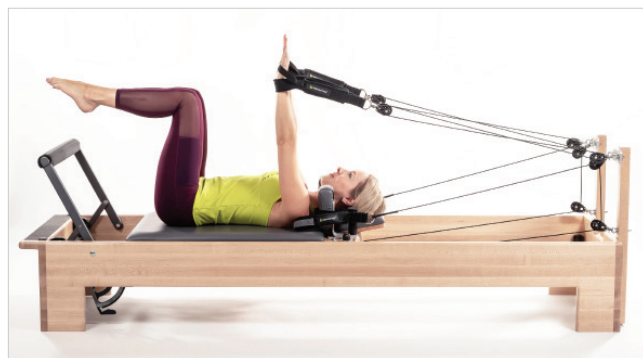
Supine Arm Work | Beginner

STARTING POSITION

Lie supine on the carriage with the head on the headrest, shoulders slightly away from the shoulder rests, legs in tabletop and the black straps in the hands. Arms are straight with the shoulders flexed to 90 degrees.

Tri Loops

Using the Tri Loops is recommended to give clients feedback and support of the wrist. Place the thick loop behind the wrist and the small loop in the hand. As the arms move, cue clients to keep the wrists straight and to press the palms into the small strap.



1. Supine Arm Work starting position.



1. Triceps Press starting position - Lower the arms until the upper arms are parallel to the carriage and bend the elbows to 90 degrees.

Triceps Press

MOVEMENT SEQUENCES

Together

Lower the arms until the upper arms are in line with the body and bend the elbows. Extend and flex the elbows. Upper arms remain stationary as the elbows move.

Single

From the bent elbow position, stabilize one arm as the other arm extends and flexes at the elbow. Repeat on one side several times before switching sides.

Alternating

From the bent elbow position extend and flex the elbow of one arm. Finish one repetition then repeat with the other arm.

Reciprocal

Flex one elbow while simultaneously extending the other elbow. The carriage remains stationary as the arms move.



Triceps Press - Single, alternating and reciprocal, hold one elbow in the bent position as the other arm straightens and bends.

Arm Lowers

MOVEMENT SEQUENCES

Together

From the starting position, lower the arms toward the carriage.

Single

Lower both arms until the upper arms are in line with the body. Stabilize one arm just above the carriage as the other arm raises and lower for several repetitions before switching sides.

Alternating

Beginning with both arms parallel to the carriage, stabilize one arm as the other arm raises and lowers. Finish one repetition then repeat with the other arm.

Reciprocal

Begin with one arm up toward the ceiling and one parallel to the carriage. Swap arm positions. The carriage remains stationary as the arms move.



1. Arm Lowers starting position - Reach the arms toward the ceiling with the scapula anchored on the carriage.



Arm Lowers - Lower the arms toward the carriage.

Latissimus Dorsi Pull (T-Shape)

MOVEMENT SEQUENCES

Together

From the starting position, lower both arms toward the torso.

Single

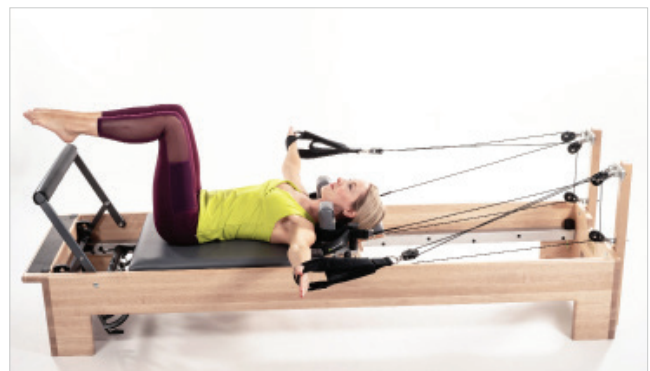
One arm remains stable, either along side the body or open out to the side. The other arm opens out to the side and returns to the body for several repetitions before switching sides.

Alternating

Perform one repetition of the single arm Lat Pull then switch sides.

Reciprocal

Swap the arm positions with one moving toward the hips as the other is rising toward the shoulder. Keep the carriage still as the arms move.



1. Lat Pull starting position - With the arms in scaption or abduction at shoulder height, bring the straps down toward the hips and back up.



Lat Pull Single Arm - Stabilize one arm in the high or low position and move the other arm up and down.

SUPINE ARM WORK

BLACK STRAPS IN HANDS

Arm Circles

MOVEMENT SEQUENCES

Together

From the starting position lower arms to 45 degrees of shoulder flexion. Circle both arms up out to the side and down to return to the starting position. Reverse directions by starting with the arms moving down.

Single

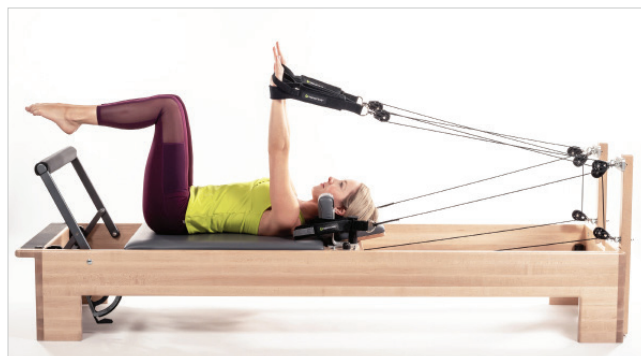
Stabilize one arm at 45 degrees of shoulder flexion as the other arm circles several times. Switch sides.

Alternating

Stabilize one arm at 45 degrees of shoulder flexion as the other arm circles. Complete one full circle before switching to the other side.

Reciprocal (Helicopter)

Begin with the arms 45 degrees of shoulder flexion. One arm circles up and around as the other arm circles down and around for several repetitions before reversing the direction. Arms move at similar pace and speed as they circle. Carriage is stationary as the arms move.



1. Arm Circles starting position - Begin with the arms reaching toward the ceiling.



Arm Circles - Circle the arms down toward the hips then out to the side. Circle in both directions.

KONNECTOR DETAILS

Together

- ▶ Carriage moves like a regular Reformer when both arms move together.
- ▶ Compensations and joint mobility issues become evident if one arm moves faster or more fully than the other.

Single and Alternating

- ▶ As one arm moves, the stationary arm must dynamically stabilize against the forces transferred from the other arm.
- ▶ The movements of the limbs demand proximal control of the torso to maintain trunk integrity against the challenge of the moving limbs.

- ▶ With single limb movements, the carriage will move but not as much as when the limbs move together.

Reciprocal

- ▶ Maintaining control is a shared responsibility between the moving limbs, the core and the carriage.
- ▶ As arms swap positions, the carriage remains completely still. Carriage movement is an indication that the arms are moving at different speeds and or ranges of motion.

PURPOSE

- ▶ Strengthens the arms.
- ▶ Strengthens the abdominals.
- ▶ Train lumbopelvic stability with arm work.
- ▶ Integrates the arms with the core.

PRECAUTIONS

Low back and sacroiliac joint problems:
Keep the knees into the chest and the low back on the carriage or in a supported neutral position.

Shoulder, arm and wrist injuries:
Keep wrists straight. Modify or eliminate as needed.

Pregnancy
Elevate the torso or avoid after 16 weeks.

FEET IN STRAPS

BLACK STRAPS ON FEET

Springs: 1R1B - 2R

Straps: Black on feet; Gray strap, long loop around the shoulder rest

Body position: Supine, feet in straps, arms at sides

Feet in Straps with the Konnector not only allows the legs to work together, just as they would in traditional Reformer work, but also allows the legs the freedom to work independently. Konnector movement options include the legs moving in opposition to each other or dynamically challenging the stability of the core and pelvis when one leg is stationary and the other is moving. These movement options help to identify imbalances between the two legs while fine tuning the amount of control needed to stabilize the lower spine and pelvis.

Feet In Straps | Beginner

LOW STARTING POSITION

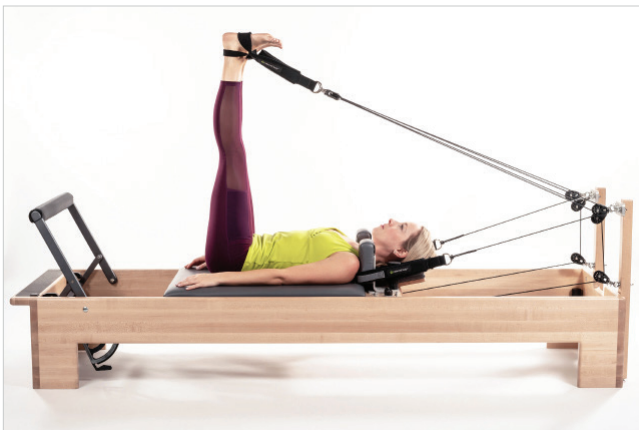
Lie supine on the carriage with the head on the headrest, shoulders slightly away from the shoulder rests and arms alongside the hips. Place the black straps on the arches of the feet, legs are straight and lowered to about 45 degrees of hip flexion. This is the engaged low starting position.

Tri Loop Strap

Place the small strap around the ankle to allow it move freely whether dorsiflexed, plantarflexed or neutral.

HIGH STARTING POSITION

Lie supine on the carriage with the head on the headrest, shoulders slightly away from the shoulder rests and arms alongside the hips. Place the black straps on the arches of the feet, legs are straight and at as close to 90 degrees of hip flexion as comfortable. This is the high starting position.



1. Feet in Straps High starting position - Legs begin in as much hip flexion as possible without losing the neutral position of the lower back and pelvis.

Leg Lowers

MOVEMENT SEQUENCES

Together

From either starting position, raise and lower the legs together. Legs can be parallel or laterally or medially rotated.

Single

Stabilize one leg in either the high or low starting position. Raise and lower the moving leg several times. Switch sides.

Alternating

Stabilize one leg in either the high or low starting position. Raise and lower the moving leg for one repetition and switch sides.

Reciprocal

Begin with one leg high and one leg low. Raise one leg while lowering the other. Maintain the stability of the carriage as the legs move.



Leg Lowers - Legs lower toward the carriage while maintaining the stability of the lower back and pelvis.

FEET IN STRAPS

BLACK STRAPS ON FEET

Open/Close

MOVEMENT SEQUENCES

Together

From either the high or low starting position, open the legs out to the side and return. In high position, carriage is still. In low position, carriage will move. Legs can be parallel or laterally or medially rotated.

Single

From either the high or low starting position, move one leg out to the side and return to starting position. The other leg remains stable. Repeat for several repetitions.

Stable leg may be held in toward the mid-line of the body (less challenging) or out to the side (more challenging).

Alternating

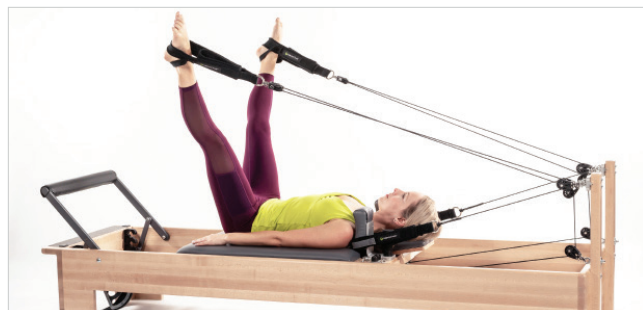
From either the high or low starting position, move one leg out to the side and return to starting position. Complete one repetition before switching sides.

Reciprocal

From either the high or low starting position, separate the legs by opening one leg out to the side. Without moving the carriage, swap leg positions. Keep the legs the same distance from one another as they move.



Open/Close from low starting position - The carriage moves as the legs open and close.



Open/Close from high starting position - With the legs in 90 degrees of hip flexion, the carriage stays still as the legs open and close.

Circles

MOVEMENT SEQUENCES

Together

From either the high or low starting position, circle the legs several times in each direction. Legs can be parallel or laterally or medially rotated.

Single

Stabilize one leg in either the high or low position. Circle the moving leg for several repetitions then reverse directions.

Alternating

Stabilize one leg in either the high or low position and circle the moving leg. Complete one repetition before switching sides.

Reciprocal (Helicopter)

From the low starting position circle one leg up as the other leg circles down. Carriage remains still as the legs move.



Leg Circles - The legs circle through the center and then out to the sides together.



Leg Circles Reciprocal - One leg circles up as the other leg circles down.

Knee Bends

MOVEMENT SEQUENCES

Together

With legs in the low position, bend and straighten the knees. Legs can be parallel or laterally rotated.

Single

Holding one leg in the low position with the knee straight, bend and straighten the free leg.

Alternating

Holding one leg in the low position with the knee straight, bend and straighten the free leg. Finish one repetition before switching to the other side.

Reciprocal

Bend one knee while straightening the other knee. Keep the carriage stationary as the legs switch positions.



Knee Bends Parallel - Knees bend and straighten.



Knee Bends Parallel single, alternating or reciprocal - One leg stays steady with the knee bent or straight as the other leg bends and straightens.

KONNECTOR DETAILS

Together

► Carriage moves like a regular Reformer when the legs move together.

► When the legs are moving together on the Konnector, imbalances will show up by one leg moving at a different rate or with a different range of motion than the other.

Single and Alternating

► As one leg moves, the stationary leg is working dynamically to maintain stability.

► The movements of the limbs demand proximal control of the torso to maintain trunk integrity against the challenge of the moving limbs.

► With single limb movements, the carriage will move but not as much as when the limbs move together.

Reciprocal

► Maintaining control is a shared responsibility between the moving limbs, the core and the carriage.

► As the legs swap positions, the carriage remains completely still. Carriage movement is an indication that the legs are moving at different speeds or have different ranges of motion.

PURPOSE

► Strengthens the muscles of the thighs and pelvis.

► Trains lumbopelvic stability.

► Enhances abdominal connection to the legs.

► Integrates the legs, pelvis and torso.

PRECAUTIONS

Low back and sacroiliac joint problems:

Make sure the low back is stable and not changing position as legs move.

Hip flexor injuries and hip arthritis:

Work only in a range of motion that does not increase symptoms.

MARIONETTE SERIES, ARMS MOVE, LEGS STABLE

BLACK STRAPS ON FEET, GRAY STRAPS IN HANDS

Springs: 1R1B - 2R

Straps: Black on feet, Gray in hands

Body position: Supine, hands in gray straps arms are bent, feet in black straps and legs extended to 45 degrees

The Marionette series highlights the uniqueness of the Konnector as all four limbs have the ability to move independently. Because all the limbs are connected, integration between the limbs and the torso is required for maintaining stability. This series is a wonderful challenge to both the body and the mind.

Arm Movements with Stable Legs | Intermediate

STARTING POSITIONS

Lie supine on the carriage with the head on the headrest and the shoulders slightly away from the shoulder rests. Place the large loop on the arches of the feet, with the small strap of the tri loop around the ankle. The legs are straight and lowered to about 45 degrees of hip flexion. The gray straps are in the hands and the arms are in the specific starting position for each exercise. The arms will move while the legs remain stable.

STARTING POSITION VARIATIONS

Triceps

Upper arms in line with the body, elbows bent.

Arms up

Shoulders flexed to 90 degrees and arms straight.

Arms in scaption

Open arms out to the sides in the scaption or abduction plane.



1. Marionette series, arms moving Triceps Press starting position - Upper arms parallel to the table, elbows bent to 90 degrees.



1. Marionette series, arms moving, starting position - Arms in scaption position.



1. Marionette series, arms moving Arm Lowers and Circles starting position - Arms in 90 degrees of shoulder flexion.



Marionette series final position - In all exercises, the arms pull the straps down toward the hips.

Triceps Press

MOVEMENT SEQUENCES

To begin, lower the arms toward the hips and bend the elbows to 90 degrees keeping the upper arms slightly off the table. Straighten and bend the elbows.

Together

Palms can face the ceiling, the torso or the carriage.

Single

Keep one arm stable in the triceps, arms up or scaption position as the moving arm bends and straightens.

Alternating

Perform one repetition per side then switch.

Reciprocal

Bend one elbow as the other arm straightens. Keep the carriage still.



1. Triceps Press starting position - Elbows bent. Straighten the arms to perform the exercise.



Triceps Press Single Arm variation - Hold one arm stable in bent elbow position as the other arm bends and straightens.

Arm Lowers

MOVEMENT SEQUENCES

Begin with the arms up and the shoulders in 90 degrees of flexion. Lower the arms toward the carriage and return.

Together

Palms can face the ceiling, the torso or the carriage.

Single

Stable arm can be in the triceps, arms up, arms alongside body or arms in scaption position.

Alternating

Perform one repetition per side then switch.

Reciprocal

Lower one arm as the other arm rises. Keep the carriage as still as possible.



Arm Lowers Single Arm variation - Lower one arm toward the carriage with the elbows straight. The stable arm can be in low, triceps, high or in scaption position.

MARIONETTE SERIES, ARMS MOVE, LEGS STABLE

BLACK STRAPS ON FEET, GRAY STRAPS IN HANDS

Latissimus Dorsi Pull (T-Shape)

MOVEMENT SEQUENCES

Begin with the arms in abduction or scaption and pull the straps down toward the hips.

Together

Shoulders can be medially rotated, neutral or laterally rotated.

Single

Stable arm can be in the triceps, arms up, arms alongside body or arms in scaption position.

Alternating

Perform one repetition per side then switch.

Reciprocal

Lower one arm as the other arm rises. Keep the carriage still and the torso as stable as possible.



Lat Pull starting position - Arms are in 90 degrees of shoulder scaption or abduction.



Lat Pull Single Arm - Left arm is stable in triceps position while the right arm moves up and down.

Arm Circles

MOVEMENT SEQUENCES

Arms reach out to 45 degrees of shoulder flexion. Circle both arms for several repetitions before reversing direction.

Together

Circles can be any size and can go in either direction.

Single

Stable arm can be in the triceps, arms up, arms alongside body or arms in scaption position while the other arm circles.

Alternating

Perform one repetition per side then switch.

Reciprocal

The circles move in opposite directions.



Arm Circles starting position - Arms are in 45 degrees of shoulder flexion.

Leg Lowers

MOVEMENT SEQUENCES

From either starting position, lower the legs toward the carriage while plantarflexing the ankles and lift the legs up while dorsiflexing the ankles.

Together

Legs can be parallel, laterally rotated or medially rotated.

Single

Stable leg can be held in high or low position.

Alternating

Perform one repetition per side then switch.

Reciprocal

Lower one leg as the other leg rises.



1. Leg Lowers starting position - Hips flexed.



Leg Lowers - Legs move down toward the carriage keeping the pelvis and lower back stable.

Open/Close

MOVEMENT SEQUENCES

From either the high or low starting position, open the legs out to the side and close them to return. Arms remain stable as the legs move. With the legs in the high starting position the carriage remains still for all exercises.

Together

Legs can be parallel, laterally rotated or medially rotated.

Single

Stable leg can be held in toward the midline or out to the side to increase the pelvic stability challenge.

Alternating

Perform one repetition per side then switch.

Reciprocal

Without moving the carriage, swap leg position. Keep the legs the same distance from one another as they move.



Open/Close Low Position - Legs open and close keeping the pelvis and lower back stable.



Open/Close Low Position Single Leg - One leg stays in the closed position while the other leg opens.

MARIONETTE SERIES, LEGS MOVE, ARMS STABLE

BLACK STRAPS ON FEET, GRAY STRAPS IN HANDS

Circles

MOVEMENT SEQUENCES

From either starting position circle the legs for several repetitions in each direction.

Together

Legs can be parallel, laterally rotated or medially rotated.

Single

Stable leg can be held in the high or low position close to the midline or it can be opened slightly to the side to increase the stability challenge.

Alternating

Perform one repetition per side then switch.

Reciprocal

One leg starts down toward the carriage while the other starts in the high position. The legs draw circles in opposite directions while keeping the carriage stable. The legs return to the starting position by passing each other along the midline.

Helicopter

For Helicopter, the legs circle in opposition 3 times then pass each other through the center twice to change the direction of the circles.



Circles - Legs circle in either direction while keeping the pelvis and lower back stable.



Circles Reciprocal and Helicopter - Right leg starts high, left leg starts low.



Circles Reciprocal and Helicopter - Right leg circles out and down as left leg circles out and up.



Circles Reciprocal and Helicopter - Left leg moves to the high position as the right leg moves to the low position. The legs can switch positions by passing each other along the midline (Reciprocal), or circling back in the direction they just came from (Helicopter).

Knee Bends

MOVEMENT SEQUENCES

From the starting position with the legs in the low position, bend and straighten the legs while keeping the pelvis stable.

Together

Legs can be parallel or in lateral rotation.

Single

Stable leg can be in high or low position and can be straight or bent.

Alternating

Perform one repetition per side then switch.

Reciprocal

Bend one knee as the other knee straightens. Keep the carriage still.



1. Knee Bends starting position - Legs in low starting position.



Knee Bends - Bend the knees and flex the hips maintaining the stability of the pelvis and lower back.

KONNECTOR DETAILS

▶ Because the Konnector is one rope, the stationary arms are required to stabilize the shoulders and torso dynamically as the legs move.

Together

▶ Carriage moves like a regular Reformer when both legs move together.

▶ When the legs are moving together, imbalances will show up by one leg moving at a different rate or with a different range of motion than the other.

Single Leg and Alternating Legs

▶ As one leg moves, the stationary leg is providing dynamic stability against the varying forces of the moving leg.

▶ When the two sides of the body have to manage the changing forces of the moving limbs, the stabilizers of the trunk, shoulder girdle and pelvis are stimulated to maintain balance throughout the body.

▶ With single limb movements, the carriage will move but not as much as when the limbs move together.

Reciprocal Legs

▶ The control is a shared responsibility between the moving limbs, the core and the carriage.

▶ Legs move in opposition to one another.

▶ As the legs swap positions, the carriage remains completely still. Carriage movement is an indication that the legs are moving at different speeds and or ranges of motion.

PURPOSE

▶ Strengthens the muscles of the thighs and pelvis.

▶ Trains lumbopelvic stability.

▶ Enhances abdominal connection to the legs.

▶ Integrates the legs, pelvis and torso.

MARIONETTE SERIES, ARMS AND LEGS MOVE

BLACK STRAPS ON FEET, GRAY STRAPS IN HANDS

Springs: 1R1B - 2R

Straps: Black on feet, Gray in hands

Body position: Supine, hands in gray straps arms alongside body, feet in black straps and legs extended

Arms and Legs Move, Limbs Straight | Intermediate

LOW STARTING POSITION

Lie supine on the carriage with the head on the headrest and the shoulders slightly away from the shoulder rests. Place the black straps on the arches of the feet, legs are straight and lowered to about 45 degrees of hip flexion. Take the gray straps in the hands and lower them along the sides of the body. This is the low engaged starting position.



1. Marionette series, arms and legs move low starting position - Legs in black straps, hips flexed to 45 degrees. Hands in gray straps.

MOVEMENT SEQUENCES

Limbs moving in the same direction

From the Marionette series starting position, lift and lower the arms and legs together.



Marionette series, arms and legs move together - Limbs Straight.

HIGH STARTING POSITION

Arms and legs may start in the high position with the shoulders and the hips flexed to about 90 degrees of flexion.



1. Marionette series, arms and legs move high starting position - Legs in black straps, hips flexed to 90 degrees. Hands in gray straps.

Limbs moving in opposition

Beginning in the low starting position raise the arms into flexion as the legs lower toward the carriage.



Marionette series, arms and legs move in opposition - In this case the legs lower as the arms rise.

Unilateral, Limbs Straight

MOVEMENT SEQUENCES

The left arm and leg lift and lower while the right arm and leg remain stable. Repeat several times on one side then switch the moving and stable sides.

Alternating

Complete one sequence on the left followed by one sequence on the right.

Reciprocal

Lower the left arm and leg as the right arm and leg lift. Keep the carriage still as the arms and legs move.



Unilateral, Limbs Straight - Left arm and leg move up while the right arm and leg stay stable.



Unilateral, Limbs Straight - Left arm and leg move down while the right arm and leg stay stable.

Contralateral, Limbs Straight

MOVEMENT SEQUENCES

From the starting position, lift the right arm and the left leg. Lower and lift the right arm and the left leg for several repetitions while keeping the non-moving limbs stable.

Alternating

Complete one sequence using the right arm and left leg, followed by one sequence using the left arm and the right leg.

Reciprocal

Lower the right arm and left leg as the left arm and right leg lift. Keep the carriage still as the arms and legs move.



Contralateral, Limbs Straight - Right arm and left leg lift while left arm and right leg stay in position.



Contralateral, Limbs Straight - Left arm and right leg lower while right arm and left leg stay in position.

MARIONETTE SERIES, ARMS AND LEGS MOVE

BLACK STRAPS ON FEET, GRAY STRAPS IN HANDS

Arms and Legs Move, Limbs Bend | Intermediate

MOVEMENT SEQUENCES

Limbs moving in same direction

From the Marionette Series starting position bend and straighten the arms and legs together.



Limbs Bend - Elbows and knees bend at the same time.

Limbs moving in opposition

From the Marionette Series starting position, bend the elbows while the legs stay in the low position. Straighten the arms as the legs bend then straighten the legs as the arms bend.



Limbs Bend - Elbows bend as knees straighten then elbows straighten as knees bend.

Unilateral, Limbs Bend

MOVEMENT SEQUENCE

Bend and straighten the left arm and leg while the right arm and leg remain stable. Repeat several times on one side then switch the moving and stable sides. The stable limbs can be bent or straight.

Alternating

Complete one sequence then switch sides.

Reciprocal

Bend the right arm and leg while straightening the left arm and leg. Keep the carriage still as the arms and legs move.



Unilateral, Limbs Bend - Bend the left arm and leg while keeping the right arm and leg still.



Unilateral, Limbs Bend - Straighten the left arm and leg while keeping the right arm and leg still.

Contralateral, Limbs Bend

MOVEMENT SEQUENCE

Bend and straighten the right arm and the left leg while the left arm and the right leg remain stable. Repeat several times on one side then switch the moving and stable sides. The stable limbs can be bent or straight.

Alternating

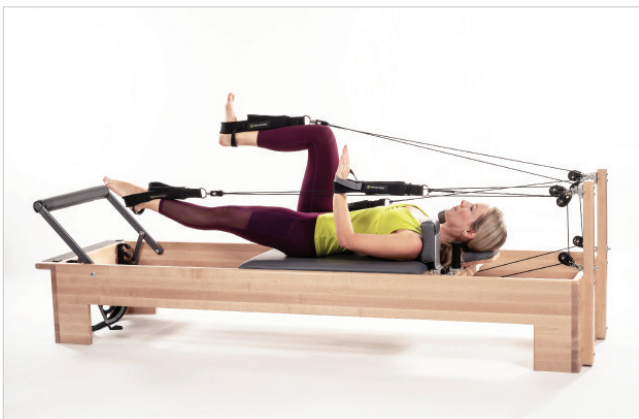
Complete one sequence with the right arm and left leg before completing one sequence with the left arm and right leg.

Reciprocal

Bend the right arm and the left leg while straightening the left arm and the right leg. Keep the carriage still as the arms and legs move.



Contralateral, Limbs Bend - Bend the right arm and left leg while keeping the left arm and right leg still.



Contralateral, Limbs Bend Alternating and Reciprocal - Straighten the right arm and left leg while the left arm and right leg bend.

KONNECTOR DETAILS

- ▶ The key feature of the Konnector is the ability to move the limbs independently. In the Marionette series all four limbs can move independently. This creates an environment where the stability of the torso can be challenged in a number of different ways.
- ▶ Once these basic patterns are understood, experiment with the movement options afforded by the Konnector.
- ▶ Because the Konnector is one rope, stability and mobility can be emphasized on one side of the body with the unilateral exercises or across the body in the contralateral exercises.

PURPOSE

- ▶ Trains proximal control with moving limbs.
- ▶ Enhances abdominal connection to the arms and legs.
- ▶ Integrates the legs, pelvis and torso.

PRECAUTIONS

Shoulder, arm and wrist injuries:

Keep wrists straight. Reduce shoulder range of motion and keep arms below 90 degrees of flexion.

Low back and sacroiliac joint problems:

Make sure the low back is stable and not changing position as legs move.

Hip flexor injuries and hip arthritis:

Work only in a range of motion that does not increase symptoms.

Pregnancy

Elevate the torso or avoid after 16 weeks.

SEATED ARM WORK FACING STRAPS

BLACK STRAPS CONNECTED TO FOOT STRAP, GRAY STRAPS IN HANDS

Springs: 1B - 2R

Straps: Black attached to foot strap; Gray in hands

Body position: Seated facing the risers, foot strap attached to black straps behind pelvis or thorax

Using the Konnector with the Seated Arm Work series highlights left/right imbalances and increases core activation by integrating upper body mobility with spinal stabilization. The Konnector also allows for independent arm movement, torso integration and spinal rotation.

Seated Arm Work Facing Straps | Beginner

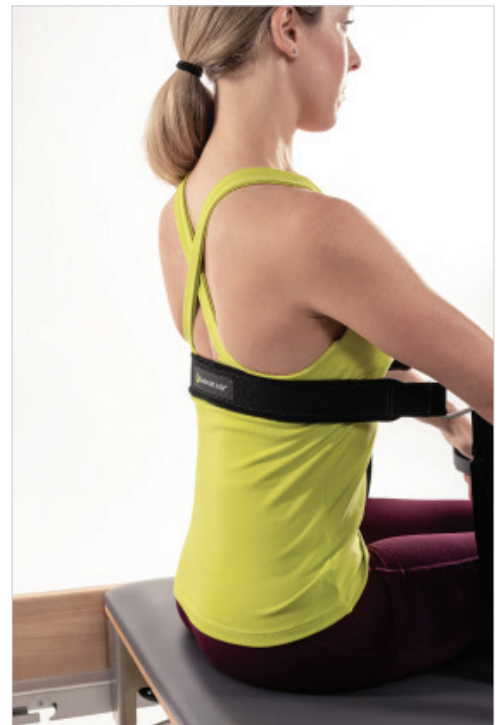
STARTING POSITION

Sit on the carriage facing the straps with the hips a hand width from the front edge of the carriage and the legs extended through the shoulder rests. Take the foot strap off the Reformer and attach the 'D' rings of the black straps to the ends of the foot straps. The foot strap may be placed either behind the pelvis or behind the thorax around the bottom of the scapula.

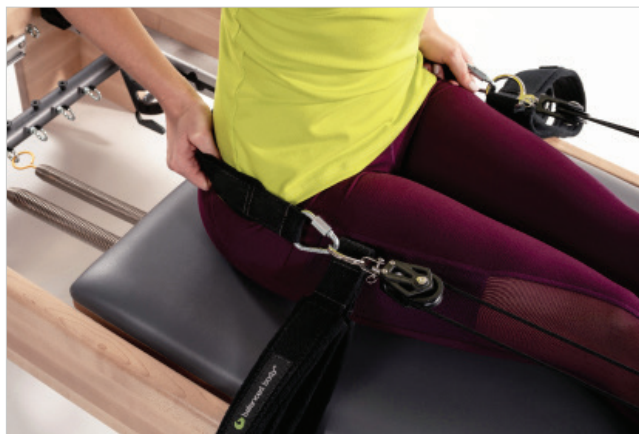
Take the gray straps in the hands. Place the palms in the short loop of the gray strap. Choke up on the rope if more resistance and range of motion is desired. Keeping the arms straight, press them down to bring them alongside the body. This is the engaged starting position.

SITTING POSITION VARIATIONS

- ▶ Sitting on box
- ▶ Sitting cross legged
- ▶ Low kneeling
- ▶ High kneeling



1. Seated Arm Work Facing Straps starting position - Foot strap behind thorax.



1. Seated Arm Work Facing Straps starting position - Foot strap behind pelvis.



1. Seated Arm Work Facing Straps starting position - Foot strap behind pelvis. Legs straight through shoulder rests.



1. Seated Arm Work Facing Straps starting position - Sitting on box



1. Seated Arm Work Facing Straps starting position - Cross legged



1. Seated Arm Work Facing Straps starting position - Low Kneeling



1. Seated Arm Work Facing Straps starting position - High Kneeling

Triceps Press

MOVEMENT SEQUENCES

With the arms straight, bring the upper arm in line with the torso. Keeping the upper arm in place, flex and extend the elbows.

Together Single

Flex and extend one elbow while keep the other arm stable. The stable arm can be straight with the upper arm in line with the torso or bent.

Alternating

Flex and extend one elbow then change sides.

Reciprocal

Bend one elbow while extending the other elbow. Keep the carriage still.



1. Triceps Press starting position - Bring the upper arms in line with the torso and bend the elbows.



Triceps Press Single Arm - Straighten one elbow while keeping the other arm still.

SEATED ARM WORK FACING STRAPS

BLACK STRAPS CONNECTED TO FOOT STRAP, GRAY STRAPS IN HANDS

Chest Expansion/Straight Arm Press

MOVEMENT SEQUENCES

With the arms straight, press them back into extension then move them forward into flexion maintaining some tension on the straps.

Together

Single

Flex and extend one shoulder while keep the other arm stable. Repeat several times on one side before switching.

Alternating

Flex and extend one shoulder for one repetition then change sides.

Reciprocal

Flex one shoulder while extending the other shoulder. Keep the carriage still.



Chest Expansion - Pull the straps back while keeping the torso steady.



Chest Expansion Single Arm - Pull one strap back while the other arm stays forward.

Rows

MOVEMENT SEQUENCES

Begin with the arms straight and the shoulders in slight flexion. Bend the elbows and pull them back behind the torso. The elbows can be at waist height for Low Rows or just below shoulder height for High Rows.

Together

Palms can face up or down for the Rows.

Single

Hold one arm stable in the bent position while the other arm performs a High or Low Row. Repeat several times before switching sides.

Alternating

Complete one repetition on one side then switch sides.

Reciprocal

Bend one arm as the other arm straightens. Keep the carriage still.

Add Rotation

To add spinal rotation, rotate to the side the arm is pulling back on. Keep eye gaze looking forward as the spine rotates or allow it to follow the rotation of the torso.



Low Rows - Bend the elbows and pull them behind the torso. Elbows at waist height.

BLACK STRAPS CONNECTED TO FOOT STRAP, GRAY STRAPS IN HANDS



High Rows - Bend the elbows and pull them back just below shoulder height.



High Rows Single Arm - Reach one arm forward and keep it stable as the other arm pulls back.



Low Row Rotation - Rotate the torso toward the pulling arm while reaching the other arm forward.

KONNECTOR DETAILS

Using the foot strap

- ▶ Placing the foot strap either behind the pelvis or just level with the tips of the scapula on the thorax enhances back body proprioception and feedback.
- ▶ The foot strap at the level of the pelvis assists clients with sitting up tall on the sitting bones and brings awareness to the placement of the pelvis.
- ▶ The foot strap at the level of the scapula assists clients with lengthening and extending the thoracic spine.
- ▶ The movement of the hands through the foot strap creates a torsional stress on the torso. By working to counteract the torsion, the stability system of the torso is activated and torso stability is trained.

Gray straps

- ▶ With the gray straps in the hands, the resistance is roughly half what it would be with the black straps or on a regular Reformer. Add spring resistance as needed to create the appropriate challenge for the client.

PURPOSE

- ▶ Strengthens the muscles of the arms and thorax.
- ▶ Trains lumbopelvic stability.
- ▶ Enhances abdominal connection to the arms.
- ▶ Integrates the arms, pelvis and torso.

PRECAUTION

Shoulder, arm, and wrist injuries:

Keep the weight light and make sure the arms don't go so far back that the shoulders roll forward. Keep the wrists straight. Avoid if symptoms increase.

SEATED ARM WORK FACING FRONT

BLACK STRAPS ON FEET, GRAY STRAPS IN HANDS

Springs: 1R - 2R

Straps: Black around feet; Gray in hands

Body position: Seated facing the footbar

Seated Arm Work Facing Front | Beginner

STARTING POSITION

Sit on the carriage facing the footbar with the hips at the shoulder rests and the legs extended. Take the black straps and place the long loops around the feet. Hold the gray straps in the hands. The hands may be in the long loop, or if more resistance is desired, the short loop. The arms are bent with elbows alongside the body.

STARTING POSITION VARIATIONS

In all of these starting position variations, the black straps are in the hands instead of around the feet and the gray straps are around the shoulder rests. Without the straps around the feet, the arm work is very similar to the traditional Reformer exercises. See page 25 for sitting option photos.

- ▶ Sitting on box
- ▶ Sitting cross legged
- ▶ Low kneeling
- ▶ High kneeling

Forward Reach

MOVEMENT SEQUENCES

Together

Reach the arms forward keeping them at the level of the chest with the elbows straight. Bend the elbows and bring them alongside the body.

Single

From the starting position, bend and straighten the elbow of one arm. The other arm remains straight and reaching forward. Repeat several times before switching sides.

Alternating

Complete one repetition on one side then switch sides.

Reciprocal

Bend one arm as the other arm straightens. Keep the carriage still.

Rotation

Rotate the torso away from the arm reaching forward. The head can remain looking forward or it can move with the rotation.



1. Seated Arm Work facing footbar starting position.



Forward Reach - Straighten the elbows and reach the arms forward in line with the chest.



Forward Reach Single Arm - Reach one arm forward while the other remains bent.



Forward Reach Rotation - Rotate away from the arm that's reaching forward.



1. Hug A Tree starting position.

Hug A Tree

MOVEMENT SEQUENCES

With the arms reaching forward, turn the palms to face each other, soften the elbows, slightly round the arms and open the arms out to the side.

Together

Close the arms bringing the fingertips together and open the arms to return to the starting position.

Single

Close and open one arm as the other arm remains stable. Stable arm may be held open or closed. Repeat several times before switching sides.

Alternating

Complete one repetition on one side then switch sides.

Reciprocal

Swap arm positions, closing the left arm as the right arm opens out to the side. Carriage remains stationary as the arms move.



Hug A Tree Single Arm, Alternating and Reciprocal - Bring one or both arms toward the midline with the elbows slightly bent.

SEATED ARM WORK FACING FRONT

BLACK STRAPS ON FEET, GRAY STRAPS IN HANDS

Salute

MOVEMENT SEQUENCES

From the starting position, bend the elbows and bring the fingertips level with the forehead. Palms are facing away from the body, the elbows are bent and wide.

Together

Straighten the arms up and out on a diagonal. Bend the elbows to return to starting position.

Single

Straighten both arms out on a diagonal. Bend one arm, bringing fingertips to forehead. Repeat several times before switching sides.

Alternating

Complete one repetition on one side then switch sides.

Reciprocal

Alternately bend and straighten the arms, reaching up and out on the diagonal. Carriage remains still as arms move.

KONNECTOR DETAILS

Straps around feet

▶ Placing the straps around the feet shortens the rope length which allows the carriage to move in a similar fashion to the original arm work.

▶ As arms move there is feedback to the feet. The legs also need to stabilize against the rotational pull of the arms requiring the core to stabilize and the legs to activate.

Stable arm

▶ When stabilizing a limb, stabilizing the limb closest to the body will be the least challenging and stabilizing the limb away from the body will be the most challenging.

PURPOSE

▶ Strengthens the muscles of the arms and thorax.

▶ Trains lumbopelvic stability.

▶ Enhances abdominal connection to the arms.

PRECAUTIONS

Shoulder, arm and wrist injuries:

Keep the wrists straight. Keep arms below 90 degrees of flexion or abduction.

Low back injuries:

Choose the most comfortable sitting position for the back.



1. Salute starting position - Bend the elbows and bring the fingertips level with the forehead.



Salute - Straighten the elbows and press the straps away from the forehead on a high diagonal.

KNEELING SIDE ARMS

BLACK STRAPS IN HANDS

Springs: 1B - 1R

Straps: Both Black one hand; Gray straps - short loop around shoulder rests

Body position: Kneeling sideways on the carriage

When using the Konnector for the traditional Kneeling Side Arms series, it is important to understand body position and strap utilization in order for the exercise to feel satisfying, the carriage to travel and for the resistance to be similar to what you and your clients are used to on the Reformer. Once you are comfortable teaching and using the Konnector for the Kneeling Side Arms series we encourage you to play with the movement opportunities the Konnector provides.

Draw A Sword | Advanced

STARTING POSITION

Kneel on the carriage facing sideways with the knees slightly away from the shoulder rests. Hold both black straps in the outside hand. Turn the body diagonal to the shoulder rests to avoid the straps rubbing against the torso.



1. Kneeling Side Arms Draw a Sword starting position.

MOVEMENT SEQUENCE

Pull the strap across the body and extend the elbow. Bend the elbow to return to the starting position. Angle the body on the carriage to prevent the straps from rubbing against the shoulder and torso during the exercise.



Draw A Sword - Angle the body to prevent the strap from rubbing against the shoulder and torso and pull the straps across the body.

KNEELING SIDE ARMS

BLACK STRAPS IN HANDS

Overhead Press | Advanced

STARTING POSITION

Kneel on the carriage facing sideways with the knees slightly away from the shoulder rests. Hold both black straps in the hand closest to the shoulder rests.

MOVEMENT SEQUENCE

Press the inside arm straight up overhead. Bend the elbow to return to starting position. Keep the torso balanced as the arm extends.



1. Kneeling Side Arms Overhead Press starting position - Hold both straps in the hand closest to the shoulder rests.



Overhead Press - Press the inside arm overhead.

Double Arm Variation

Hold one black strap behind the body in the hand farthest from the shoulder rest. Hold the other black strap in the hand closest to the shoulder rest. The inside arm presses up toward the ceiling as the outside arm reaches out to the side.

Get Creative

The Connector affords the ability for almost infinite creative possibilities. With a black loop in each hand, one strap behind the body and one alongside the body, you are ready to play.

► See companion video for some creative options.



1. Double Arm Variation starting position.



Double Arm Variation - Press the inside arm up toward the ceiling as the outside arm reaches out to the side.

LONG BOX PULLING STRAPS

BLACK STRAPS IN HANDS, GRAY STRAPS ON FEET

Springs: 1B - 1R

Straps: Gray on feet; Black in hands

Body position: Prone on the long box facing the risers.

Long Box Pulling Straps | Advanced

STARTING POSITION

The starting position is prone on the long box facing the risers with the gray straps on the feet and the black straps in the hands.

Sit on the long box facing the risers with the feet on the head rest. Place the gray strap on top of the black strap and over the shoulder post. Take the gray strap and place the narrow tri-loop strap around the ankle and the long loop around the bottom of the foot. Secure the foot strap with the velcro tie or with a hair tie. The 'D' ring of the strap is facing up toward the ceiling. Do the same with the other foot.

Place one foot on the floor as the other leg slides back over the long box until the torso is prone on the long box. Lift the other leg off the floor and bring the legs together. The chest should be off the front edge of the box with the spine neutral.

Take the black straps in the hands with the arms straight and pull them back until they are in line with the body. This is the engaged starting position. For more challenge, add spinal extension.



1. Long Box Pulling Straps starting position - Sit and place the loops around the feet.



3. Long Box Pulling Straps starting position - Bring both legs together to lie prone on the long box.



2. Long Box Pulling Straps starting position - Place one foot on the floor and slide the other leg over the long box.



1. Long Box Pulling Straps starting position - Feet in the grey straps, hands holding the black straps.

LONG BOX PULLING STRAPS

BLACK STRAPS IN HANDS, GRAY STRAPS ON FEET

Pulling Straps

MOVEMENT SEQUENCES

Together

From the starting position, reach both arms forward until the arms are level with or above the shoulders. Pull the straps back to the starting position.

Single

Hold one arm in the starting position and sweep one arm forward toward the risers then back to the starting position. Repeat several times before switching sides.

Alternating

Complete one repetition on one side then switch sides.

Reciprocal

Sweep one arm forward as the other arm sweeps back. The carriage remains stationary as the arms swap.



Pulling Straps - Pull the straps down toward the hips moving from shoulder flexion toward shoulder extension.

Pulling in a T (Airplane)

MOVEMENT SEQUENCE

Together

From the starting position, extend the arms out to the sides in a 'T' position parallel to the floor. Pull the arms back toward the hips. For a larger range of motion, the arms can start higher than the shoulders.

Single

Hold one arm in the starting position and abduct one arm out to the "T" position while the other arm remains in the starting position or at the side of the torso. Repeat several times before switching sides.

Alternating

Complete one repetition on one side then switch sides.

Reciprocal

Sweep one arm up toward the head as the other arm sweeps back toward the hips. The carriage remains stationary as the arms switch positions.



Pulling in a T (Airplane) - Begin with the arms out to the side in abduction. They can be level with the shoulders or higher.



Pulling in a T (Airplane) Single Arm - Hold one arm steady in either the low or the high position and move the other arm.

Triceps Pull Back

MOVEMENT SEQUENCE

Together

From the starting position, flex and extend the elbows. Keep the upper arms stationary as the the elbows bend and straighten.

Single

Flex and extend the elbow of one arm. The other arm remains stationary in the engaged starting position. Repeat for several repetitions before switching sides.

Alternating

Complete one repetition on one side then switch sides.

Reciprocal

Swap the arms by extending the right elbow as the left elbow flexes. The carriage remains stable as the arms swap sides.



Triceps Pull Back Single Arm - Bend and straighten one elbow while the other arm stays stable in either the bent or the straight position.

KONNECTOR DETAILS

- ▶ Reaching the feet and legs long into the gray strap enhances feedback, core activation and back body proprioception.
- ▶ These exercises look easy, but the Konnector challenges proximal control against distal movement providing an additional challenge to all of these exercises.
- ▶ Placing the straps around the feet shortens the rope length which allows the carriage to move in a similar way to the original arm work.

PURPOSE

- ▶ Activate and strengthen the deep longitudinal system in neutral and in extension.
- ▶ Strengthen the spinal extensors, arm extensors and hip extensors.
- ▶ Train lumbopelvic stability in prone position.

PRECAUTIONS

Starting position safety:

Attaching a strap to all four limbs and lying prone on the long box is challenging and may be dangerous. Direct your clients how to safely get into and out of the exercises.

Balance issues:

Avoid with clients who have balance issues, are pregnant and uncomfortable lying prone or any client for whom prone work and spinal extension is contraindicated.

Shoulder issues:

Keep the arms below 90 degrees of abduction or flexion or avoid.

Back injuries:

Keep spine neutral if client can not tolerate back extension. Place pillow or towel under hips to decompress the low back.

Pregnancy:

Avoid prone work after 12 weeks.

LONG BOX HAMSTRING PULL

BLACK STRAPS ON FEET, GRAY STRAPS IN HANDS

Springs: 1B - 1R

Straps: Black on feet; Gray straps in hands

Body position: Prone on the long box facing the footbar

Long Box Hamstring Pull | Intermediate

STARTING POSITION

The starting position is prone on the long box facing the footbar with the black straps on the feet and the gray straps in the hands.

Place the black strap on top of the gray strap and over the shoulder post. Sit on the long box facing the footbar with feet on the edge of the carriage. Take the black strap and place the wide end of the tri-loop strap around the ankle with the narrow strap around the bottom of the foot. Secure the foot strap with the velcro tie or with a hair tie. The 'D' ring of the strap is facing up toward the ceiling. Do the same with the other foot.

Reach behind and take hold of both gray straps with your hands. Place one foot on the floor, and slide the other leg over the box.

Lie the body prone and lift the other leg off the floor and slide it back over the long box until both legs are together. The chest should be off the front edge of the box. The spine is neutral. For additional challenge the spine may extend.

With the gray straps in the hands, choke them and hold close to the 'D' ring. Cross the arms and hold stable on the front of the long box. The carriage will move a little bit from the closed home position.



1. Long Box Hamstring Pull starting position - Sit on the long box facing the footbar and place the black straps around the feet.



3. Long Box Hamstring Pull starting position - Choke up on the gray straps and hold them in front of the box.



2. Long Box Hamstring Pull starting position - Place one foot on the ground and swing the free leg around until it is on the box.



4. Long Box Hamstring Pull starting position.

Hamstring Pull

MOVEMENT SEQUENCES

Together

Flex and extend the knees. Reach long through the legs into the straps as the legs move.

Single

Stabilize the flexed knee on one side, as the moving leg extends and flexes for multiple repetitions.

Alternating

Complete one repetition on one side then switch sides.

Reciprocal

Flex one knee while extending the other knee. Keep the carriage stable as the legs switch positions.



Hamstring Pull, limbs moving in the same direction - Knees bend as the arms reach.



Hamstring Pull - Bend the knees to bring the heels toward the hips.



Hamstring Pull, limbs moving towards each other - Begin with the legs straight and the arms overhead.

LIMB MOVEMENT VARIATIONS

Limbs moving in the same direction

Bend the knees as you reach the straps in the hands overhead.

Limbs moving towards each other

Begin with the arms overhead and the legs straight. Flex the knees and the elbows at the same time. Reverse limb movements to return to starting position. Carriage remains stationary as limbs move.



Hamstring Pull, limbs moving towards each other - Bend the knees and the elbows.

Get Creative!

UNILATERAL

Single Side
All Four Limbs

CONTRALATERAL

Single Side
All Four Limbs

KONNECTOR DETAILS

- ▶ Holding the straps in the hands shortens the rope length which allows the hamstrings to be active through full range of knee flexion and extension.
- ▶ These exercises look easy, but the Konnector challenges proximal control over the distal activation. This provides a additional challenge to all of these exercises.
- ▶ Placing the straps around the feet shorten the rope length which allows the carriage to move in a similar fashion to original arm work.

PURPOSE

- ▶ Activate and strengthen the deep longitudinal system in neutral and in extension.
- ▶ Strengthen the spinal extensors, arm extensors and hip extensors.
- ▶ Train lumbopelvic stability in prone position.

PRECAUTIONS

Starting position safety
Attaching a strap to all four limbs and lying prone on the long box is challenging and may be dangerous. Direct your clients how to safely get into and out of the exercises.

Balance issues
Avoid with clients who have balance issues.

Shoulder issues
Keep the arms below 90 degrees of abduction or flexion or avoid.

Back injuries
Keep spine neutral if client can not tolerate back extension. Place pillow or towel under hips to decompress the low back.

Pregnancy
Avoid prone work after 12 weeks.