TABLE OF CONTENTS

STOTT PILATES* - the contemporary approach to the mind-body exercises pioneered by Joseph H. Pilates.

INTRODUCTION	2	MIDBACK SERIES	44
		BACK ROWING PREPS	49
BASIC PRINCIPLES		SIDE ARM PREPS SITTING	58
BREATHING	4_	SIDE TWIST SITTING	62
PELVIC PLACEMENT	6	FRONT ROWING PREPS	64
RIB CAGE PLACEMENT	8	STOMACH MASSAGE	68
SCAPULAR MOVEMENT & STABILIZATION	10	ARMS PULLING STRAPS LONG BOX	72
HEAD & CERVICAL PLACEMENT	12	ROUND BACK SHORT BOX	76
		STRAIGHT BACK SHORT BOX	77
COMMON MODIFICATIONS		TWIST SHORT BOX	79
STARTING POSITIONS	14_	TREE SHORT BOX	80
		ELEPHANT	82
REFORMER FEATURES		MERMAID	84
SAFETY & USAGE	15	LEG CIRCLES	86
		KNEE STRETCHES	89
ESSENCES		RUNNING	92
EXERCISE ESSENCES	20	HIP LIFT	95
		HIP ROLLS	96
EXERCISES		SINGLE THIGH STRETCH	98
FOOTWORK	22_	SIDE SPLITS	100
SECOND POSITION	28		
SINGLE LEG	30	WORKOUT CHART	
HUNDRED	34	ESSENTIAL REFORMER	103
BEND & STRETCH	36		
LIFT & LOWER	38_	CONTEMPORARY APPROACH	
ADDUCTOR STRETCH	40_	STOTT PILATES EDUCATION	104
SHORT SPINE PREP	41_	CONTRIBUTORS	105
SHORT SPINE	42		

2200 YONGE STREET, SUITE 500, TORONTO, ON, CANADA M4S 2C6 www.stottpilates.com EMAIL info@stottpilates.com TELEPHONE 416-482-4050 FACSIMILE 416-482-2742

HEAD & CERVICAL PLACEMENT

HEAD AND CERVICAL PLACEMENT PRINCIPLE EXPLAINED

The cervical spine should hold its natural curve and the skull should balance directly above the shoulders when sitting in neutral. This position should also be maintained when supine. If there is a kyphosis (overflexion of the thoracic spine) or forward head posture, pads or foam cushions may be necessary in supine position to prevent the cervical spine from overextending.

In most instances, the cervical spine should continue the line created by the thoracic spine during flexion, extension, lateral flexion and rotation.

The idea of cranio-vertebral flexion should be incorporated anytime the thoracic spine moves into flexion. When flexing the upper torso from a supine position, focus on creating thoracic flexion and not overemphasizing cervical flexion. Cervical flexion should come from lengthening the back of the neck away from the shoulders and flexing the cranium on the first two vertebrae of

the cervical spine, not from jamming the chin into the chest. This is referred to as cranio-vertebral flexion. There should be enough room between chin and chest to fit a small fist. Once cranio-vertebral flexion and scapular stabilization are established, the upper torso can be flexed by contracting the abdominals to slide the rib cage toward the pelvis.

When extending the upper torso from a prone position, pay particular attention to maintaining an even extension from the thoracic to the cervical spine. Avoid lifting the head too high and creating overextension and compression of the cervical spine.

Be aware that the eyeline will affect the cervical placement. When flexing the upper torso from supine, the eyeline should be at the level of the knees. In thoracic extension, the focus should be slightly forward on the mat. When sitting in neutral, the gaze should remain at a constant height to avoid unnecessary flexion or extension of the cervical spine.

Head and Cervical Placement



neutral cervical alignment



cranio-vertebral flexion



correct upper body flexion



overextension of cervical



overflexion of cervical

HEAD AND CERVICAL PLACEMENT PRINCIPLE EXERCISES

The following movements demonstrate the principle of head and cervical placement.

1. CRANIO-VERTEBRAL FLEXION (A.K.A. HEAD NODS) STARTING POSITION

Supine, pelvis and spine neutral. Knees flexed, feet abducted hip-distance apart on mat. Arms long by sides, palms down.

To practice creating cranio-vertebral flexion before flexing spine off mat. Avoid jamming chin into chest, which results in overflexion of cervical spine.

INHALE lengthen back of neck, leaving head on mat.

EXHALE return to neutral.

2. MODIFIED ABDOMINAL PREPARATION

STARTING POSITION

Supine, pelvis and spine neutral. Knees flexed, feet abducted hip-distance apart on mat. Head resting in hands.

INHALE lengthen back of neck.

EXHALE while maintaining length through back of neck, gently slide scapulae down to stabilize, contract abdominals to slide rib cage toward pelvis and flex thoracic spine.

Maintain pelvis neutral throughout exercise, ensuring engagement of transversus abdominis.

INHALE hold flexion by maintaining abdominal contraction while expanding back and sides of rib cage. Allow weight of head to drop into hands, maintaining length in back of neck.

EXHALE return upper body to mat, allowing cervical spine to return to neutral once head is on mat.

3. MODIFIED BREAST STROKE PREP STARTING POSITION

Prone, pelvis and spine neutral. Hands on mat by shoulders, legs parallel and adducted. Place nose directly down toward mat using small foam cushion if necessary under forehead to support cervical spine (placing forehead on mat will create too much flexion of cervical, chin on mat creates too much extension.

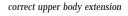
INHALE stabilize scapulae on the back.

EXHALE initiate by gently sliding scapulae down and reach top of head away from tailbone to begin extending thoracic spine. Allow rib cage to open and maintain bottom ribs in contact with mat.

INHALE maintain extended position and breathe into sides of rib cage without losing abdominal engagement.

EXHALE stabilize scapulae and lower upper torso to mat, maintaining length of cervical spine.







overextension of cervical



overflexion of cervical

SAFETY & USAGE

CARRIAGE STOPPER

The position of the carriage stopper determines how close the carriage slides in toward the wooden platform. This in turn dictates the range of motion required of the body's joints. The hole closest to the wooden standing platform is referred to as position #1; the next hole out is position #2, etc.

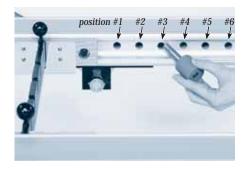
ADJUSTING THE CARRIAGE STOPPER

- Do not sit on carriage while adjusting.
- Remove all springs from gearbar.
- Insert the rubber stopper in one of the six positions.
- Be sure the carriage stopper is completely inserted in the hole and is not loose.

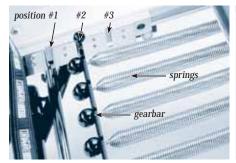
The carriage stopper position should be selected so that when lying supine, with heels on the footbar, there is a 90 degree angle of flexion at the hip joint when the carriage is against the stopper. If injury, disease or other limitations restrict flexion at the hips or knees, adjust the stopper by placing it further out.

Never press the carriage out further than your strength and stability allow.

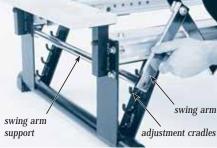
Reformer Features



carriage stopper



springs and gearbar



adjusting the footbar

GEARBAR

The gearbar position determines the amount of initial tension on the springs. The gearbar slot closest to the wooden standing platform is referred to as position #1; the next slot out is position #2, etc.

ADJUSTING THE GEARBAR

- Do not sit on carriage while adjusting.
- Remove all springs from the gearbar.
- Place the gearbar in desired position.
- Ensure gearbar slides fully into slots.

The gearbar should be positioned to create an appropriate amount of tension relative to the strength of the individual and relative to the carriage position. Usually, the further away the carriage stopper is from the platform, the further away the gearbar should be. Ensure indentations on gearbar face wooden platform to properly house plastic balls at end of springs.

There should always be some initial tension on the springs, i.e. the gearbar should not be in position #3 if the carriage stopper is in position #1 or #2.

SPRINGS

The number of springs determines the total amount of resistance being worked against. A standard STOTT PILATES Reformer (except Client Reformer) comes with 4 springs of equal tension and 1 spring with half the amount of tension in the center position. Springs should always be adjusted for individual.

ADJUSTING THE SPRINGS

- Please take care when attaching and detaching the tension-coiled springs.
- Firmly grasp the spring, rather than the ball, and stretch it to hook it in or out of the gearbar.
- Ensure the ball at the end of the spring rests securely in the gearbar.



pulleys

FOOTBAR

The footbar (except on the Client Reformer) can be set at four different heights to enhance the vast repertoire of exercises and to accommodate physical differences and abilities. The highest placement is referred to as position #1, the next, position #2, etc.

ADJUSTING THE FOOTBAR

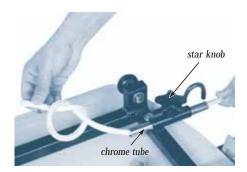
- The footbar can be adjusted while standing beside the Reformer or sitting on the carriage.
- Gently pull the footbar up with one hand, with the other hand lift the swing arm support out of the adjustment cradle.
- Lift or lower the footbar to the desired height and release the swing arm support into the nearest adjustment cradle.
- Make certain that the swing arm support is securely placed in one of the four cradles.

PULLEYS

We recommend adjusting the height of the pulleys to the same height as the top of the shoulder rests. Ensure star knobs are tightened securely.

The Rack & Roll™ Reformer has removable pulley bars. To remove for storing, loosen star knobs and remove pulley bars from receptacles. Place the pulley bars into the stacking block. No need to remove the ropes. Coil and place the rope slack neatly in the stacking block.

When replacing pulley bars, ensure they are firmly within the receptacles. Tighten star knobs securely.



ropes

ROPES

To determine correct length of ropes, set carriage stopper in second hole, engage springs so carriage does not move, then attach Reformer loops to ropes and place loops on carriage so fixed D-ring on loop lines up with metal plate of shoulder rest. Subtle adjustments can be made to length of rope (to ensure equal length) by sliding chrome tube housing the rope. Secure by tightening star knobs.

HEADREST

The headrest has three positions available: flat, half-raised or fully raised. It should be adjusted on an individual basis to make neck and shoulders comfortable and tension-free when lying supine.

In exercises where the hips are lifted higher than the shoulders, the headrest should always be in the flat position – even when beginning supine. In some exercises it is raised to provide a brace for the feet. When not supporting the head or feet, the headrest is usually flat in order to remain out of the way.

ADJUSTING THE HEADREST

- Find a notched adjustment block on the underside of the headrest.
- With no weight on the headrest, lift it and hinge the adjustment block so that it rests securely onto the wooden edge of the carriage.

SHOULDER RESTS

Your Reformer may have detachable shoulder rests. To remove shoulder rests, pull directly up on the hand-holds. To attach, slide the square posts into the square holes in the carriage with the padded side facing the footbar.

To store shoulder rests for stacking Rack & Roll Reformers, slide the square posts into the square holes in the stacking block.

If your shoulder rests are not detachable, adjust to the desired width before tightening; check frequently that they have not loosened with use.



storing rack & roll shoulder rests and pulleys



detachable shoulder rests



adjustable headrest

HUNDRED

footbar position #1, 2 or 3 springs, headrest adjusted for individual

STARTING POSITION

Supine, imprinted position. Legs parallel and adducted in air, knees flexed (tabletop position). Elbows flexed by sides of body. Hands in straps, fingers long, palms facing away. Scapulae stabilized.

EXERCISE

To prepare, inhale...

EXHALE lengthen back of neck, keep scapulae stabilized and contract abdominals to flex thoracic spine.

Simultaneously, extend elbows, reaching arms by sides level with shoulders, and extend legs on a diagonal as low as imprint can be maintained.

Then...

INHALE for 5 counts, keeping upper body flexion, scapular and pelvic stability, while doing small vertical pulses with arms.

EXHALE for 5 counts while continuing to pulse arms.

Complete 10 sets (a total of 100 counts).

To finish...

INHALE remain in upper body flexion, flex knees and continue to reach arms.

EXHALE flex elbows and return upper body to carriage.

Legs remain in the air.

NOTE: May be done starting in a neutral position and maintaining throughout once strength is gained and ability demonstrated.

ESSENCE

TARGET MUSCLES: transversus abdominis to compress abdomen and stabilize lumbo-pelvic region; deep pelvic floor to aid in firing transversus; rectus abdominis and obliques concentrically to create and isometrically to maintain thoracic flexion and stabilize pelvis; lats and pec major to stabilize arms challenged by resistance from behind; hip flexors, adductors and quadriceps isometrically to maintain position of legs; scapular stabilizers

STABILITY: lumbo-pelvic region against weight of legs; upper body in flexion; scapulae during arm movement

ENDURANCE: abdominals to maintain thoracic flexion and stabilize pelvis throughout

Hundred



1. starting position



3. flex knees



2. flexed position



4. retur

FOCUS

- maintain imprint throughout exercise
- stabilize thoracic flexion, rib cage and scapulae throughout to avoid neck tension
- stay wide across front and back of shoulder girdle with equal emphasis on anterior and posterior shoulder stabilizers to avoid protracting shoulders (carriage movement indicates loss of connection through shoulder stabilizers or pulsing from elbows)
- initiate movement of arms at shoulder joints rather than elbows
- avoid overworking rectus abdominis and flexing too high giving appearance of popping abdominals
- avoid overextending or 'locking' elbows
- keep wrist long without any 'breaking'

MODIFICATIONS

- 1. HEAD ON CARRIAGE. To practice breath with arm movement. Focuses on scapular stabilization and full breath pattern.
- 2. TABLETOP POSITION. Maintain knees flexed in the air. Ideal to release hip flexors or as an intermediate stage to develop strength to stabilize pelvis and lumbar region with legs fully extended.
- 3. NO STRAPS. Perform Hundred just as in Matwork, to reduce work of latissimus dorsi, scapular stabilizers and abdominals.
- 4. FEET ON FOOTBAR, NO STRAPS. To reduce workload on abdominals, making it easier to stabilize lumbo-pelvic region.
- 5. USE A SPACER. Insert a rubber pad, foam cushion or small ball at knees and/or ankles to help maintain activation of the hip adductors.
- 6. BREATHE IN STACCATO RHYTHM. Helps promote full breath pattern and avoid holding breath.
- 7. FLEX HIPS AND KNEES for 5 counts on inhale (to tabletop position), then extend legs for 5 counts on exhale. Challenges coordination.

Modification 2



tabletop position

MIDBACK SERIES

NOTE: To achieve full range of motion, straps can be shortened, or change to foam grip handles and carriage stopper can be moved to position #2 for the entire MidBack Series.

1. TRICEPS PRESS

footbar position #1, 1 or 2 springs, headrest adjusted for individual

STARTING POSITION

Supine, imprinted position. Legs tabletop. Hands in straps. Elbows flexed, resting on carriage, slight tension in straps. Front and back of shoulder girdle wide, scapular stabilization being actively maintained.

EXERCISE

To prepare, inhale...

EXHALE keep scapulae stable and extend elbows pressing palms toward carriage to move carriage out.

INHALE maintain scapular stabilization and flex elbows, controlling return of carriage.

Complete 5 repetitions.

MODIFICATIONS (EXERCISE 1)

- 1. PALMS FACING HIPS.
- 2. PALMS FACING UP.

Triceps Press











3. retur

2. STRAIGHT DOWN

footbar position #1, 1 or 2 springs, headrest adjusted for individual

STARTING POSITION

Supine, imprinted position. Legs tabletop. Hands in straps. Arms straight by sides, palms down. Front and back of shoulder girdle wide, scapular stabilization actively maintained.

EXERCISE

INHALE keep arms straight, scapulae stable and reach arms toward ceiling, controlling return of carriage.

EXHALE keep arms straight and pull down toward carriage to move carriage out.

Complete 5 repetitions.

MODIFICATIONS (EXERCISE 2)

- 1. PALMS FACING HIPS.
- 2. PALMS FACING UP.

Straight Down

1. starting position









2. reach arms

3. return

ROUND BACK | SHORT BOX

NOTE: Position box widthwise on carriage. Box can be placed over or pressed against shoulder rests. Pelvis positioned in center of box with enough room for sacrum to roll onto box and not off it. Footstrap adjusted so that there is tension with knees slightly flexed. It is important to keep feet hooked securely under footstrap. Do not let feet slip out as weight of torso is leaned or rolled away from footstrap.

footbar position #4, 2 springs, headrest flat

STARTING POSITION

Seated upright on box, pelvis and spine neutral. Legs adducted with feet hooked under footstrap. Each hand holding other wrist in front of lower abdomen. Scapulae stabilized.

EXERCISE

To prepare, inhale...

EXHALE initiate by rolling ASIS away from front of femurs and flex lumbar spine as low as abdominals remain flat (upper spine will flex in response to lumbar spine).

INHALE maintain flexion, initiate by stabilizing scapulae and lift arms overhead.

EXHALE lower arms and initiate with abdominals to flex torso forward over legs, bringing weight on top of sit-bones.

INHALE sequentially lengthen spine from tail to head, returning to neutral.

Complete 5 repetitions.

ESSENCE

TARGET MUSCLES: transversus abdominis to compress abdomen and stabilize lumbo-pelvic region; deep pelvic floor to aid in firing transversus; rectus abdominis and obliques concentrically to create and isometrically to maintain flexion; gluteus maximus and hamstrings concentrically to bring back of pelvis toward back of femurs; scapular stabilizers

STABILITY: spine during articulation; torso in flexion; scapulae MOBILITY: spinal articulation; pelvis on femurs

SEQUENCING: articulation of spine from tail to thoracic on roll back, from tail to thoracic on roll up

FOCUS

- initiate by rolling pelvis away from femur and increasing lumbar flexion with abdominals not leaning back
- avoid allowing upper body to lean further back than pelvis, causing lumbar to extend
- keep cervical spine in line with thoracic spine; avoid jamming chin into chest
- keep scapulae stabilized as arms lift overhead







2. roll back



3. lift arms



4. flex forward



5. return

STRAIGHT BACK | SHORT BOX

footbar position #4, 2 springs, headrest flat

STARTING POSITION

Seated upright on box, pelvis and spine neutral. Legs adducted with feet hooked under footstrap. Arms straight, shoulder-distance apart holding pole overhead. Scapulae stabilized.

EXERCISE

INHALE stay.

EXHALE hinge pelvis away from front of femurs, maintaining neutral spine. Hinge as far as possible without

changing spine.

INHALE maintain position.

EXHALE return to vertical sitting position, weight directly

on sit-bones.

Complete 5 repetitions.

NOTE: If neutral spine cannot be stabilized during hinge backward, imprint slightly to maintain stability and return to neutral as torso returns to vertical.

ESSENCE

TARGET MUSCLES: transversus abdominis to compress abdomen and stabilize lumbo-pelvic region; deep pelvic floor to aid in firing transversus; erector spinae, rectus abdominis and obliques to stabilize spine, particularly abdominals to prevent extension; scapular stabilizers

STABILITY: torso in neutral or imprint; scapulae

MOBILITY: pelvis on femurs

ENDURANCE: abdominals to maintain neutral spine in hinged position

FOCUS

- isolate hinge at hip joints and avoid extending or flexing spine
- maintain scapular stabilization throughout







3. return