

The 5 basic principles of pilates described in this article were developed by STOTT PILATES.

Pilates is a mind-body system that emphasizes controlled movements and conscious breathing patterns. This gentle activity provides many benefits that not only attend to some physical concerns of aging, but also help clients achieve greater well-being and selfesteem through their golden years.

Aging adults may experience numerous concerns with their bodies. Pilates can help address these issues. For instance, this type of exercise can combat loss of muscular strength and endurance without putting undo stress on the joints. Touted for their core benefits, most pilates movements focus on strengthening the deep stabilizing muscles of the torso, helping to prevent back strain and maintain good posture. In addition, the joints often become less stable with age. Pilates helps maintain stability by strengthening the deep support muscles of the joints, allowing people to do more dynamic activities such as walking, stair climbing or tennis.

This approach to exercise is based on the 5 basic principles listed below:

- breathing
- pelvic placement
- rib cage placement
- · scapular movement and stabilization
- · head and cervical placement

These techniques are essential for helping participants realize their goals. They encourage greater body awareness and work together to create a safe, effective foundation for pilates exercise. As a result, clients perform individual movements more efficiently and achieve the maximum benefits from each exercise. Finally, the principles provide the backbone for functionality in everyday life.

### Practicing the principles

The pilates exercises described in this section will increase understanding of the 5 basic principles. To start,

participants should choose a solid chair with a firm seat, and their knees should be slightly lower than their hips when seated.

### Principle 1: breathing

Many people are unaware of their breathing patterns and tend to breathe in a shallow manner. Breathing more deeply, particularly during pilates, fully oxygenates the blood, helps prevent unnecessary tension, activates the deep torso stabilizer muscles, and helps focus the mind on what the body is doing. Breathing into the lower lobes of the lungs increases power, as the exercise below shows.

#### Sample exercise:

Sit as tall as you can near the front of your chair, keeping your feet flat on the floor.

- Breathe in through your nose and out through a slightly pursed lip. As you do this, keep your shoulders relaxed—don't let them rise. Breathe in and out 5 times.
- Continue to breathe as you try to contract your pelvic floor. This helps you reach the deepest layer of your stomach muscles, which help support your lower back. Repeat 5 times.
- Place your hands at your waist like a girdle. Breathe in. As you breathe out, draw up the pelvic floor and try to tighten your stomach without allowing the spine to move. Repeat 5 times. (Feel this abdominal engagement. This is the position you should be in to begin each exercise.)
- 4. Still with your hands at your waist, breathe in. As you breathe out, draw up the pelvic floor and try to squeeze your legs together, as if you had a tennis ball between your thighs. Repeat 5 times.

For the rest of these exercises, clients should breathe in through the nose and out through the mouth, as well as tighten the stomach muscles before starting each movement.

Principle 2: pelvic placement
Back pain and strain and postural
problems become more common with
age. Pilates can help minimize back pain
and achieve optimal posture, while
maintaining the natural curves of the
spine.

The position of the pelvis dictates the position of the lower back. Being able to support the pelvis in a neutral position keeps strain off the lower back. Furthermore, it takes abdominal strength to move away from neutral as the spine bends, and to return to this position. The following exercise promotes awareness of the spine and how the abdominal muscles, in tandem with the deep spinal muscles, help keep the spine healthy.

#### Sample exercise:

Sit against the back of your chair, keeping your feet flat on the floor. Place a solid pillow behind your back, if necessary. Sit up on your sit bones, so that your lower back has a natural curve (neutral) and is not pressed into the chair or pillow behind you. Think of lengthening your ears away from your shoulders. Keep your shoulders relaxed.

- Keep your spine neutral as your breathe in.
- Breathe out as you contract your abdominal muscles and press your lower back into the pillow. Try to stay sitting as tall as possible and allow the movement to originate from your abdominals. Breathe in and return to neutral. Repeat 5 times.

### Principle 3: head and cervical placement

Ideally, the neck (cervical spine) should hold its natural curve, with the head

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balanced directly above the shoulders when sitting in a neutral position. Excessive bending and rotation of the neck in any direction can put stress on the joints and lead to neck problems. One way to ensure participants stay within safe limits during exercise is to notice the focus of their eyes, as described below.

### Sample exercise:

Sit near the front of your chair, your spine and pelvis as neutral as you can, feet flat on the floor.

- Sit tall, abdominal muscles tightened. Breathe in. As you breathe out, allow your eye level to drop to your knees as you lower your head. Avoid looking directly to the floor, as you will then be bending your neck too much. Breathe in and lift your head and eyes back to neutral. Repeat 5 times.
- Sit tall, abdominal muscles tightened. Breathe in. As you breathe out, turn to look toward the right shoulder. Breathe in and return to starting position. Repeat on other side. Repeat entire sequence 3 times each side.

### Principle 4: scapular movement and stabilization

As the shoulder blades move with the arms, stability is important. Weakened muscles in the shoulder blade area can easily lead to neck and shoulder tension. Also, if the shoulder blades become rigid and lack mobility, pressure can build up into the shoulder joints, leading to pain and inflammation. The following exercise helps participants attain optimal shoulder position to minimize this possibility.

Sample exercise:

Sit near the front of your chair, spine and pelvis as neutral as you can, feet flat on the floor.

To find a good position for your shoulders, place your hands on top of your head (so your fingers touch in the middle), lift your shoulders and open your elbows as wide as you can without changing your neck position. Slide your shoulders down and lower your arms. You should feel open through the front of your shoulders. This is your neutral shoulder position.

- Reach your arms out in front of you at shoulder height.
   Breathe in. As you breathe out, slide your shoulder blades together; breathe in and bring them back to neutral. Repeat 5 times.
- Reach your arms out in front of you at shoulder height.
   Breathe in. As your breathe out, slide your shoulder blades away from each other. Breathe in and return to neutral.
   Repeat 5 times.
- Reach your arms out in front of you at shoulder height. Repeat through the full range of movement you've just completed in the previous 2 exercises: Breathe in and slide the shoulder blades together; breathe out and slide them away from each other. Repeat 5 times.
- Leave your arms by your sides. Breathe in and raise your shoulder blades, being careful not to tense them too much. Breathe out and lower your shoulder blades to neutral. Repeat 5 times.
- Leave your arms by your sides. Breathe in and slide your shoulder blades down, being

- careful not to tense them too much. Breathe out and raise them to neutral. Repeat 5 times.
- Go through the full range of movement you've just completed in the previous 2 exercises: Slide your shoulder blades up toward yours ears and then carefully down. Avoid pressing down too much. Repeat 5 times.

Roll your shoulders to get rid of any tension.

### Principle 5: rib cage placement

Losing strength in the upper middle back (thoracic spine) can worsen lower back or neck tension, as the rib cage position directly affects the spine. Quite often the rib cage will lift up as an individual tries to sit tall or raise an arm. This flattens out the thoracic spine. Alternatively, the rib cage may drop down and give the appearance of an excessive curve in the upper middle back. When sitting or standing, it is best to have the rib cage directly above the pelvis.

#### Sample exercise:

Sit near the front of your chair, spine and pelvis as neutral as you can, feet flat on the floor, arms down by your sides.

- Arm scissors: Breathe in.
   Breathe out as you raise your right arm in front of you, being careful not to raise your rib cage. Repeat with the left arm. Alternate 3 times each side.
- Arm circles: Breathe in and raise both arms in front of you, being careful not to raise your rib cage. Breathe out as

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you open your arms wide and lower them. Repeat 5 times.

### Incorporating the principles

Once people grasp the 5 basic principles from the above movements, they can try the armchair pilates practice presented here, which incorporates these techniques. Performing exercises such as these correctly on a regular basis (3 times per week is recommended) can help do the following:

- improve the circulatory system through movement
- · improve postural strength
- increase musculoskeletal strength and joint range of motion
- · maintain functional ability

Pilates also connects the mind and body. Combined, these benefits make pilates an ideal form of exercise for older adults.

Former professional dancer Moira Merrithew, cofounder of STOTT PILATES, was trained and certified at Joseph Pilates' original studio in New York. Together with a team of health professionals, she has spent years refining the original pilates mind-body method of exercise to include modern principles of anatomy and exercise science. Merrithew is the featured performer and cocreator of more than 60 STOTT PILATES videos, the author of numerous technical manuals and published articles, and a sought-after presenter and media personality. More information is available at www.stottpilates.com.

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### Armchair pilates practice

The exercises provided in this section incorporate the basic principles of pilates described on the previous pages. As with any exercise program, participants should consult a doctor before performing this routine.

Contraindications: Seated exercise may be contraindicated for clients with intervertebral disc problems or a history of these problems. People with osteoporosis should not perform the Spine Twist, Spine Stretch Forward and Mermaid exercises; these movements may also be contraindicated for those with intervertebral disc problems or a history of these problems. Individuals should seek the advice of a physician.









A. Spine Twist
Sit near the front of your chair, spine
and pelvis as neutral as you can, feet flat
on the floor.

Cross your arms in front of you. Breathe in. Breathe out as you rotate your upper body to one side, contracting your abdominals. Breathe in to stay; breathe out to return to center. Repeat other side. Repeat 3 times on each side.

Repeat the exercise, this time placing your left hand on your left shoulder and your right hand on your right shoulder.







B. Mermaid Sit near the front of your chair, spine and pelvis as neutral as you can, feet flat on the floor.

Breathe in as you reach your right arm to the ceiling. Breathe out as you lean to the left. Breathe in to return; breathe out to lower arm. Repeat on the other side. Repeat sequence 3 times.





C. Breast Stroke Prep Sit near the front of your chair, spine and pelvis as neutral as you can, feet flat on the floor. Rest your hands against the front of the chair.

Breathe in, sitting up tall. Breathe out as you press your hands against the chair and raise your chest towards the ceiling. Make sure to keep your abdominal muscles working. Breathe in to stay; breathe out to return. Repeat 3 times.





D. Spine Stretch Forward Sit near the front of your chair, spine and pelvis as neutral as you can, feet flat on the floor, hands on your knees.

Breathe in to sit up tall. Breathe out as you flex forward, leading from the top of your head and still working your abdominal muscles. Breathe in to stay; breathe out to roll up through your spine, leaving your head until last. Repeat 3 times.

### More armchair pilates

Additional chair pilates exercises and routines are available in the STOTT PILATES Armchair Pilates Series. To learn more, visit the Videos section at www.stottpilates and navigate to the At Home series webpage.