

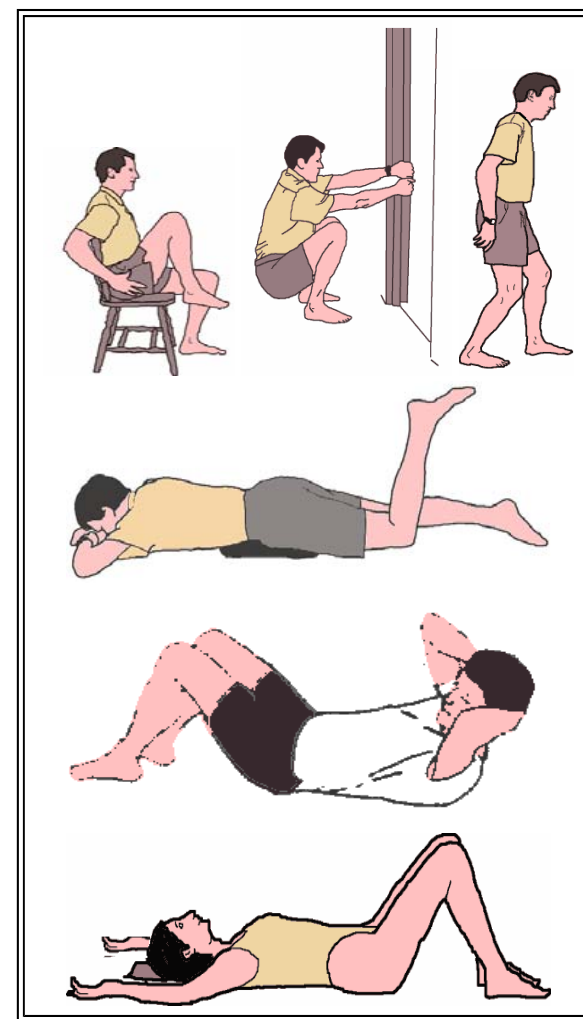
# The Back Maintenance Manual (1): Pilates Exercises for Low Back Pain

(Sample 5 of 6 free Samples)

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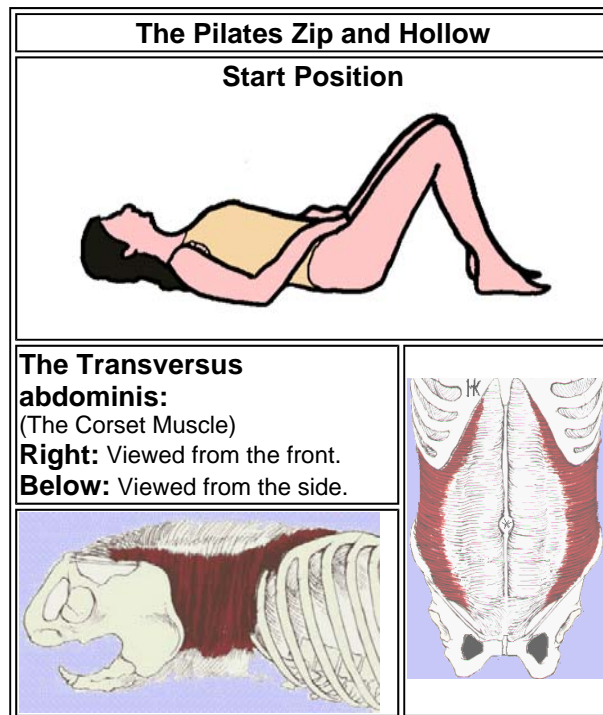
## The Zip and Hollow:- Start Position

1. Lie on your back in the relaxation position (see diagram).
2. Put your hands on the area of your abdomen that would be covered by the front part of a bikini. (the "bikini patch").
3. Have your thumbs touching at the navel, and your fingers touching at the midline, about 6 cm below the navel.

## The Zip and Hollow:- Action

1. Now imagine that you have to zip into a very tight pair of jeans: -
2. Hollow the area under your thumbs and fingers toward your spine. There may only be a very small movement. (Maintain Pelvic Neutral!)
3. Now imagine (if it hasn't already happened), that the area under your fingers is being zipped together like that tight pair of jeans! (keep the rest of your body relaxed, and maintain Pelvic Neutral!)

(If you are having trouble making the above happen, try leaving just one hand over the "bikini patch", and sucking your thumb with the other- suck gently for stage (2), and hard for stage (3)- Sounds weird, but it does help!).



## What it does

This is an isometric abdominal exercise. Use it gently throughout the day to facilitate Transversus abdominis protection of the lower back.

## Watch Points

1. Maintain Pelvic Neutral!
2. Stay relaxed in the other parts of your body!

## Comments

1. When you strongly contract the Transversus abdominis, you feel as though your breathing is in a straight jacket. In most situations, it is enough to engage the Transversus abdominis at 2 to 30% of maximum, and this is less restrictive to your breathing.
2. Many Pilates and physiotherapeutic programs promote the "Zip and Hollow" together with Multifidus activation for lumbar stability, but neglect the other muscles of lumbar stability. That's not good: the Gluteus maximus and Psoas muscles are also important in their roll as "dynamic" (i.e. while you are moving) lower back stabilizers. If you are serious about protecting your lower back, you should learn how to activate these muscles too!

## Further Reading

1. See ref 5

**(Attention: does not replace the advice of a medical specialist - Refer "Back Pain Red Flags", page 55).**

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## Experimenting with Breathing, Start Position:-

1. Sit in a high backed chair with buttock well back in the seat and back fully supported.
2. Place your left hand over the left side of your rib cage - thumb touching the ribs at the back, and fingers touching ribs at the front.
3. Place your right hand over your solar plexus.

## (1) Chair Sitter's Breathing Technique:-

1. Breathe in slowly and deeply. Relax - do not zip and hollow!
2. Which parts move as you breathe? - Your abdomen? - Perhaps the front of your chest?

## (2) Pilates/Yoga Breathing Technique:-

1. Gently zip and hollow your lower abdomen. (refer page 11).
2. Think "spine lengthen upward".
3. Breathe slowly and deeply, through your nose and stay relaxed - again, do not hyperventilate!
4. Which parts move as you breathe now? Your upper abdomen? The sides of your chest? Possibly also the ribs at the back of your chest are now also moving?
5. **You should feel the ribs expand all three ways, especially toward the back and sides.**

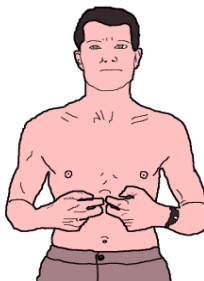
## (3) Pilates/Yoga Breathing Technique: Wringing the breathe out:-

Place your fingers as in the lower two diagrams. This will allow you to monitor the movement of your ribs just below the sternum. Take a deep breathe in, and note the expansion between your fingers. Now breathe out, and note the decreased gap between your fingers. Pause and wring the breathe out by closing the gap between your fingers further, and after another pause, do it again!

## Why do Pilates Style of Breathing?:-

Pilates himself had asthma as a child, and he adapted this style of breathing from yoga (7,8). Back and sides breathing is also recommended by Alexander teachers(6). Simple enough to teach as breathing exercises for both children and seniors with asthma.

It also promotes spinal stability. See following discussion, also page 26.



## Pilates Style Breathing Stabilizes your Lumbar Spine.

Refer back to your experience when you tried "Chair Sitter's Breathing". When you breathed in, you noticed that your rib cage tilted so as to "look upward" and that your mid spine (the middle of your back) arched. Can you understand how a deep breath can push your middle spine outside of its strong middle range, and how Pilates/yoga style breathing can stop that? - Here are two examples:-

## (1) Pilates Style breathing brings control and poise to professional singers:-

At an amateur singing competition, contestants were reminded not to move shoulders and arms as they breathed - You wouldn't see Pavarotti doing that, nor would you see Pilates do it!

## (2) Pilates Style breathing brings control and stability to those who run:-

20 years ago I trained hard for a half marathon. I never made it. I developed mid and lower back pain with sensory loss to the side of my foot - signs of L5-S1 disc protrusion. For many years after that, my mid lumbar spine felt vulnerable if I took deep breaths during running. Pilates style breathing fixed that - I don't feel vulnerable nowadays.

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## Fine Control of the Zip and Hollow- Start Position

- Lie in the Relaxation Position in pelvic neutral.
- Imagine four buttons along the mid line of your abdomen:-
  1. On the pubic symphysis.
  2. Mid-way between the pubic symphysis and the belly button.
  3. On the belly button.
  4. Just below the breast bone.

## Fine Control of the Zip and Hollow- Action

1. Lengthen up through the spine and tuck your chin slightly.
2. Gently zip and hollow over button 1.
3. Gently zip and hollow from buttons 1 to 2.
4. Gently zip and hollow from button 1 to 3.
5. Gently zip and hollow over the entire mid line of your abdomen.
6. Now slowly increase the force of the zip and hollow over the entire length of your abdominal mid-line -increase gradually, and keep the rest of your body relaxed!
7. Now relax back to a gentle level 1 or 2 zip and hollow. Try to maintain this level throughout your day!

## Best exercise, lower abdominal muscles: Fine Control of Zip & Hollow:-



**Watch Points:-** Maintain a relaxed and properly positioned body, specifically:-

- Avoid that "tight assed" feel!
- Don't let the Rectus abdominus (the "washboard abs") cut in.
- Gently anchor your scapulas!
- Maintain Pelvic Neutral.
- You should be able to breathe easily.

## What it does:-

- Applying a gentle zip and hollow throughout the day guarantees that the transversus abdominis will automatically trigger when required to fulfil its role in lumbar stability.

## Comments

The most subtle part of the zip and hollow is to contract the front part of your pelvic floor muscles without gripping about the anus or under the tail bone (that's that "tight assed" feel).

- In women, it should feel like sucking water up into the vagina!
- In men, the movement is "raising the urethra" - imagine wading into a very cold river!

## Zip and Hollow throughout the day!

- Once you have mastered the gentle zip and hollow while in the relaxation position, try it lying on your stomach, and standing.
- During most activities, such as walking, jogging or gardening, you need only "zip and hollow" to level 1 or 2.

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