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# RSI, fatigue and back-pain prevention

## Gillian Greenwood

The current restrictions on the use of aerosol generating procedures (AGP), and the subsequent increase in the use of hand scalers, has highlighted the importance of good posture and core strength.

Have you ever wondered why some people get back-ache and repetitive strain injury (RSI) while others do not? Ever wondered what it takes to become a highly skilled surgeon, dressage horse rider, golfer...? These professionals make their success look effortless. That is because their core muscles are doing most of the work - deep inside and out of sight. By using these muscles, their legs, arms, hands etc., become free to perform the very subtle, necessary movements that make them so skilled.

You too can use your postural muscles to stabilise your body to more efficiently perform the necessary movements in your day as a dental hygienist or therapist. Some of you might be doing this already but will likely benefit from understanding the mechanism. Some of you however will find your quality of movement transformed.

First of all I should explain to all you gym enthusiasts that there is a lot more to your core than holding 'the plank' for ages! We need to address two types of movement to be fit; explosive movements to run for the bus and fine accurate movements which are necessary to treat our patients. When Pilates is performed correctly the body is strengthened in order to accomplish these fine movements without hunching (using the neck) and bending over (using the back).

The fine movements are achieved with the help of our multifidus muscle which runs the length of our spine. This is a muscle that we cannot feel or directly control but its strength is key to good posture. However, if we activate our pelvic floor muscle and transverse abdominal muscle we will be activating our multifidus muscle. Activating our multifidus muscle will strengthen it to enable us to treat our patients while maintaining good posture and avoiding fatigue and damage to our wrists, back and neck.

## Finding your pelvic floor muscles

Sit on a seat and relax. Put your hand on your lower tummy (transverse abdominals). Make sure your tummy muscles are relaxed into your hand i.e. let your tummy all hang out.

**Ladies:** Gently lift your vagina and urethra muscles, as if you need to urinate but must not.

**Gentlemen:** Gently lift your urethra muscles, and imagine your testicles lifting too, as if you need to urinate but must not.

Now, check! Are you holding your breath, tensing your toes, shoulders etc?

Try again without putting tension anywhere or holding your breath.

Did you feel your tummy go in a little as you found your pelvic floor?

If you did, great! You just worked your pelvic floor (as well as your transverse abdominal muscles and multifidus muscles).

We need to relax our lower back and use our abdominals, pelvic floor and multifidus when we move our legs. You should never feel your lower back muscles under any circumstances. Not even a little bit.

## Finding your transverse abdominal muscles

Repeat the previous exercise but this time instead of lifting your pelvic floor gently draw your lower abdominals in and up a little. It will feel the same action from your hand's point of view, but you know that the movement was caused by your tummy going in, not your pelvic floor lifting up. (You just worked your multifidus muscle again.)

## Finding the arm and lower trapezius connection

We need to relax our neck and keep our shoulders down so that our arms can move freely. Think of your arms being connected to your lower trapezius, rather like a bat's wings. Your arms moving from the strength of your core not your neck.

So we have the transverse abdominals, pelvic floor, lower trapezius (and the multifidus - that we cannot feel) working. And the lower back and upper trapezius relaxed.

The above seems very simple perhaps, but do practice because it is important. It might seem a bit confusing however, so reread until it makes sense and feels less complicated.

This is the basis of all good Pilates, Yoga, weights... in fact all precision work, from the dental hygienist to the surgeon to the dressage horse rider. However it is unusual to be in a Pilates / Yoga class and have it explained to you. Somehow teachers expect people to be automatically using their pelvic floor! And remember you should never feel your lower back, not even a little bit!

Below is an exercise using Pilates/Yoga to move your arm in good form. This will promote good posture, taking the work out of your lower back, wrist and upper trapezius and will instead work your transverse abdominals, pelvic floor, and lower trapezius i.e. your core.

1. Gently draw in your lower tummy and gently lift your pelvic floor. (Try not to get tense anywhere or hold your breath!)
2. Lift your arm slowly in front of you, palm facing downwards, and elbow facing outwards
3. Try to feel a connection with your mid-back (lower trapezius). Your elbow should keep pointing sideways and stay straight without being tense
4. Stop the arm before you engage your upper trapezius muscles (neck), so your shoulder remains relaxed down the same as your other shoulder.
5. Lower the arm and repeat with the other arm.

## Another useful exercise:

1. Draw in your lower tummy gently and lift your pelvic floor. (Try not to get tense anywhere or hold your breath!)

2. Lift your arm slowly in front of you to chest height and try to feel a connection with your mid-back (lower trapezius). Turn your palm inwards try to keep your elbow pointing sideways
3. Imagine you have a pen in your hand and draw a perfect square, the size of a postage stamp. Draw the square in mid-air four times in one direction and then reverse the direction
4. Remember to use your 'core' for the work. ie your tummy and pelvic floor along with the connection to your mid back and try not to hold your breath
5. Your neck should stay relaxed
6. Lower the arm and repeat with the other arm
7. To make the exercise more challenging draw a smaller postage stamp.

This can be repeated but this time draw a perfect circle.

Repeat again but this time draw a spiral starting with a 5p size and gradually getting smaller until it becomes a dot and then gradually getting larger again to the 5p size. Then change direction.

For more exercises check out my ebook "Pilates and Lifestyle by Gillian Greenwood" is available from Amazon for the Kindle.

**About the author:** Gillian Greenwood (BCPTT AFAA RSA ITEC) is a Body Control Pilates® and Yoga teacher with over thirty years teaching experience, gaining her education in Los Angeles, New York and London. She also teaches pre/post-natal exercise, ballet for absolute beginners and stress management, presents workshops, writes articles for health magazines. Over the years her clients have included: Julian Clary, Flora Fraser, film director John Irvin, singer Marcella Detroit, the Princess of the Arab Emirates and the Princess of Thailand. She is an AFAA Associate Consultant and Examiner, (Aerobic Fitness Association of America).

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