



GET BACK IN THE SWING

Physically Speaking

May, 2011

Heavy travel schedules, change in surface and demanding training sessions are only a few of the challenges that put elite tennis players at risk to develop back and neck problems.

- Most back and neck problems are caused by the weakening of spinal tissues that occurs with years of wear and tear, and are rarely the result of one incident or injury.
- Incorrect posture, improper lifting and twisting, incorrect or excess training, loss of flexibility, poor core stability and poor tennis mechanics are the most likely causes of back and neck pain in tennis players.
- Early warning signs can range from mild discomfort and stiffness, to sudden onset of acute pain, such as when you twist as you pick up your tennis bag or as you reach for a poor ball toss during your serve.

Many episodes of back pain can be prevented. You can get back to winning form when you make simple postural improvements, use good lifestyle habits, train correctly and use good tennis stroke mechanics.



Tennis and Sport
Photos: Getty Images

BACK ACHING SITUATIONS

Many players have experienced one or more of these situations:

- Carrying and lifting heavy bags.
- Long international flights, squashed on the plane, maybe with delays and hours in airports.
- Sitting in cars for extended time in heavy traffic on the way to the hotel or courts.
- Waking up with a stiff neck or back due to a too soft or hard hotel mattress or pillow.
- Soreness or stiffness when you change court surfaces.
- Tightness or pain in your neck or back after sitting at the computer or watching TV.
- You stretch to reach a ball and feel a pull or a pain in your back or neck.

If you have experienced any of these, it is time for some preventative action to get back into the swing! Your WTA Primary Health Care Providers (PHCP's), fitness trainer or medical team, can advise you that you need to work on your core stability &/or flexibility.

WHAT CAUSES BACK PAIN?

Muscle guarding and spasm

- A muscle spasm is when the muscles tighten around the spine to limit movement and protect strained or sensitive areas from further damage. They are quite painful.
- Muscle spasms often occur after an injury or when the spine is repeatedly in poor postural alignment.
- The muscle may continue to spasm even after the underlying problem is gone, or remain "twitchy" - easily returning to spasm - for a long period.

Muscle Strain

- Muscles are highly elastic and can absorb a lot of force without tearing completely.
- Sudden over-stretching or over-loading of muscle can tear and damage the fibers within the muscle, called a "strain". A rupture (a complete tear where all the muscle fibers are torn) may occur in rare circumstances.

Ligament Sprain

- Ligaments are not very elastic, and only stretch to about 25% of their length.
- If stretched beyond that point, they may tear and result in an unstable joint. Ligament sprains are most common in other joints, such as the knee and ankle; it is rare that there is enough force to directly cause a sprain in the back.
- In tennis players, spinal ligament stretching is usually from poor posture and/or incorrect lifting or tennis technique over time.

Loss of Facet Joint or Sacroiliac Joint Mobility

- Facet joints link all spinal vertebrae; sacroiliac (SI) joints attach the spine to the pelvis.
- Stiffness in these joints can cause pain, loss of function and can also refer pain into the arm and/or leg.
- Sometimes, stiffness can be a result of a **structural or anatomical variation** that has existed since birth.

Disc Strain, Bulge or Herniation

There are various stages of disc injury. The disc is a soft structure and acts like a 'cushion'. There is one between each bony vertebra.

- The first stage of a disc problem is weakening of the fibrous outer layers of the disc (annulus). Once these outer layers give way, a bulge forms as the inside (nucleus) is pushed through the weakened fibers. Finally, the disc wall may tear, or rupture and disc material can escape.
- A bulging disc can put pressure on the adjacent nerve root, causing pain and other symptoms, in the arm or leg.

Stress Fractures or Stress Reactions

- Stress fractures are the result of tiny breaks (called micro-fractures) that causes a small crack in the bone structure.
- They arise from repeated over-loading of bone over time and can be related to poor technique, for example with the serve.
- Read the topic, **Bone Up on Bones** for more information about stress fractures and bone health.





GET BACK IN THE SWING

Physically Speaking

HEALTHY BACK CARE HABITS

BAGGAGE HANDLING

- Lifting bags incorrectly can cause back and neck problems.
- Use luggage with wheels. To evenly spread the load, use back-pack style racquet bags.
- If possible, avoid heavy lifting immediately after a long drive or flight. Ask for help from the hotel bellman, airport porter or tournament transport driver.

GOOD LIFTING

When picking up your tennis bag or luggage or anything heavy, use correct technique.



DO:

- Keep your legs shoulder width apart
- Bend your knees
- Keep a slight arch in your lower back
- Tighten your core stabilizer muscles
- Keep the item close to your body

DON'T:

- Bend and twist using your back!



MOVE IT!

- During travel, change your position frequently. Stand, walk up and down the plane aisles, stretch and do circulation exercises.
- Sitting for long periods of time can reduce blood flow, increase disc pressure, stretch ligaments, and load up the muscles.
- Avoid hours on the computer on your social network pages or chatting to friends. Get up, move and stretch every 20 minutes.

PILLOW TALK

- If the hotel pillows are not right for you (too large, firm, soft or flat) ask housekeeping for a different one.
- Use a **cervical roll** to improve the neck support in the pillow (roll up a towel and put it inside the pillowcase).
- Use a cervical pillow on the plane and when sitting for long periods. You can purchase these at the airport.
- Sleep on your side or back. Sleeping on your stomach increases pressure on your neck and back.

GOOD POSTURE

- Most car and airplane seats provide little back or neck support. The constant vibration puts extra load on your spine as it attempts to absorb the force.
- Sit up straight with your chin tucked in and support your low back when sitting.



PREPARE WELL....

- There are different demands on your body when you change surfaces and different injuries relate to these court surface changes.
- Preparation is the key! Incorporate surface specific drills and exercises (the PHCPs can help show you) into your routine.
- Add variety to your practice routines and work with good technique and to avoid repeated high loading of your back and neck.
- Develop a strong core to help you generate more force and power on the court, and to use your body more efficiently and keep your spine in winning shape.

... AND REST AND RECOVER WELL

- Good recovery is vitally important to keep your spine in fantastic physical shape.
- Have a massage every other day to help maintain flexibility, circulation and reduces stress.
- Use hydrotherapies, eat and drink properly and get refreshing, restful sleep every night.

To learn more about tennis preparation and recovery, read the topics, **Recovery**, **Smart Practice**, **Prepare for Surface Change**, **Power Within** and complete the **ScheduleZone** and **RecoveryZone** online activities.

- Access to these resources is from the PlayerZone or ask a member of the Sport Sciences and Medicine or Player Development Departments.

SEEK ADVICE AND HELP

- Promptly see a PHCP if you have any symptoms like pain, stiffness or problems moving on- or off- court.
- The PHCP will work with you (and your support team as appropriate) to develop the most suitable treatment and prevention plan.
- There are many treatment options available: manual therapy, massage, exercises to increase stability and flexibility, dry needling, taping, ice, electrotherapy modalities, postural correction and training good body mechanics.

What are you waiting for? Isn't it time that YOU got back in the swing?

