

Treating inflammation with PRICE - immediately after injury and for 3-5 days afterwards

Tissue injury usually involves damage to small blood vessels that results in bleeding at the site of injury. This bleeding leads to the five main signs of inflammation: heat, redness, swelling, pain and loss of function. The inflammatory reaction is necessary as it is part of the natural healing process. However the body tends to overreact to sudden traumatic injury and as a result more

inflammatory fluid accumulates than is necessary for healing. This fluid contains a protein that turns into replacement 'scar' tissue. Too much scar tissue may prevent the structure returning to normal function with reduced flexibility and increased risk of re-injury. The advice below should be followed for 3-5 days depending on severity. It can be remembered by the acronym **PRICE**.

- **PROTECT** - Protect the injured tissue from undue stress that may disrupt the healing process and/or cause further injury. Make sure the mode of protection can accommodate swelling.
- **REST** - This reduces the energy requirements of the area, avoids any unnecessary increase in blood flow, ensures protection of the area and optimises healing. For example using slings, crutches or static rest (ie. sitting or lying down).
- **ICE** - The ice helps constrict the local blood vessels and reduces cell activity which helps limit bleeding and reduce the accumulation of unnecessary scar tissue. Crushed ice wrapped in a damp towel (to prevent ice burn) is best (ice cubes can be wrapped in the cloth and smashed against a wall to crush the cubes). Ice should be applied immediately after injury for 20 minutes every 3-4 hours or no more than 5-10 minutes at a time on bony areas.
- **COMPRESSION** - Simple off-the-shelf compression bandages such as Tubigrip™ and adjustable neoprene supports are adequate. It is important to ensure the bandages are not too tight to cause pins and needles or any loss of feeling around the joint.
- **ELEVATION** - For the greatest effect, the injured part should be higher than the level of the heart. This helps lower the blood pressure, limit bleeding and encourage drainage of fluid through the lymphatic system.

When following **PRICE** it is also important to avoid **HARM**, hence the saying: 'Give **PRICE** and avoid **HARM**'.

AVOID

- H - Heat (eg. hot bath, sauna)
- A - Alcohol
- R - Running
- M - Massage

these are counter-productive to **PRICE** treatment

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REHABILITATION OF THE

SPORTING BACK

YOUR INJURY

Low back pain affects the elite athlete as much as the inactive 'slouch' potato but there are differences in the nature of the pain, the diagnosis and expectations regarding the rate of recovery. Recovery is often faster when dealing with physically fit people due to the underlying level of fitness. Low back pain often results from an imbalance between the back and the stomach muscles. This may lead to instability or incorrect functioning of the lower part of the spine. Strengthening these muscles and correcting any imbalance is therefore very important. Loss of stability in your spine can lead to microscopic damage to the surrounding soft tissues so it is particularly important to address this problem quickly to minimise damage.

WARM UP & WARM DOWN

When injured it is particularly important that you warm up with a fast walk for 3-4 minutes before you start your exercises. This increases your circulation and helps prepare your muscles for the activity to come. When you have finished your exercises it is important to allow your heart rate to slow down gradually by ending with a gentle walk for 3-4 minutes.

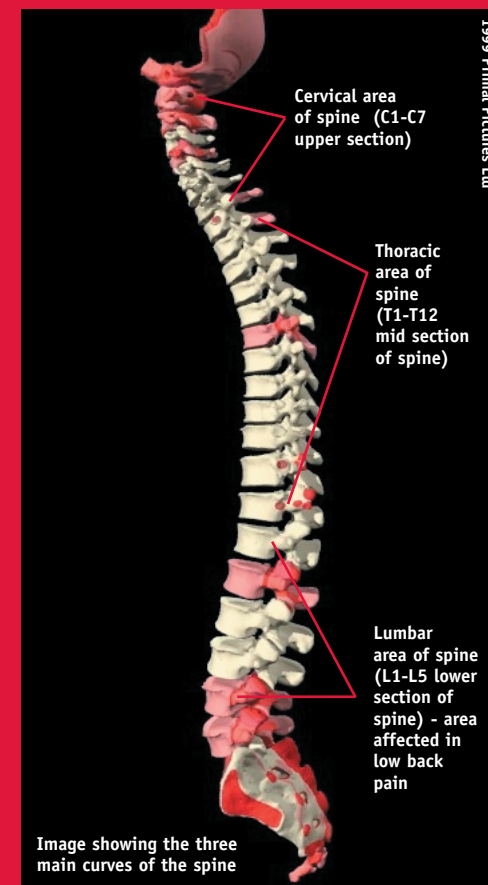


Image showing the three main curves of the spine

YOUR REHABILITATION PROGRAMME

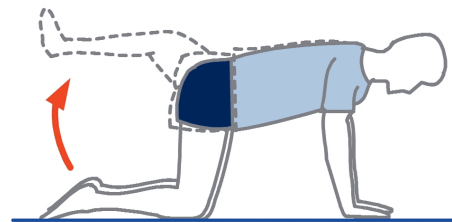
This exercise programme has specific exercises to help stretch and strengthen tight muscles as well as improve the stability of the core muscles used to maintain a good posture during sporting and daily activities. It is important to

ensure the exercises are performed with good technique as good postural control is important at all times and will help prevent possible problems in the future.

STABILITY EXERCISES

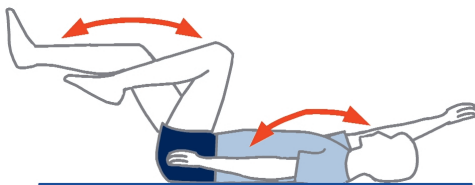
1. Hip rotation

Begin on your hands and knees and hold your spine stable throughout the rest of the exercise. Push your feet and knees into the floor and keep your elbows slightly bent. Keeping your back and head straight, raise one hip out to the side and return to the starting position. **Repeat on each side 5 times.**



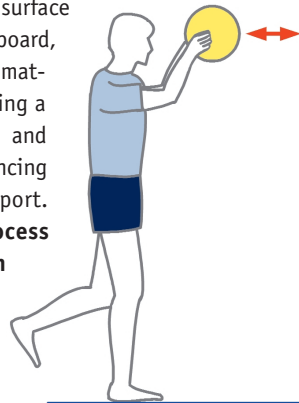
2. Supine cycling with arms

Lie on your back with your knees bent, tighten your stomach and buttock muscles to hold your spine in a neutral position. **Move alternate arms and legs together 10-15 times keeping your spine stable.**



3. Ball throwing on one leg

Stand upright keeping your buttocks and stomach muscles tight and back straight throughout the exercise. Balance on one leg and gently throw a ball against a wall. **Repeat on each leg holding for 20-30 seconds.** When you are able to achieve this progress by standing on an unstable surface such as a wobble-board, trampet or a bed mattress. Begin by using a wall for support and progress to balancing with no support. **Repeat the process balancing on each leg.**

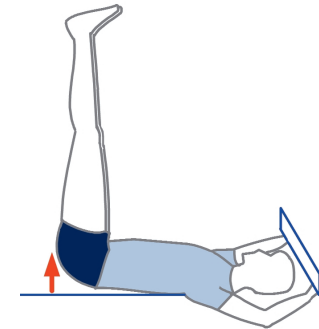


PRACTITIONER CONTACT DETAILS

STRENGTH AND STABILITY EXERCISES

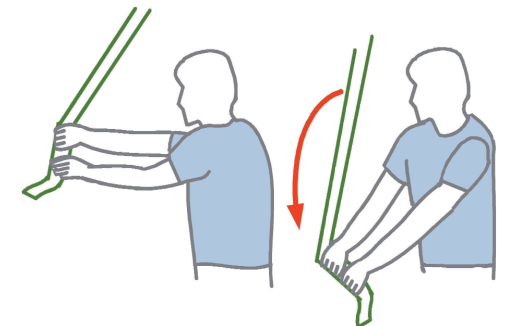
1. Supine hip raise

Lie on your back with your legs in the air and knees straight if possible (slightly bent if the stretch is too much in the back of your legs). Hold onto a solid object behind your head and tighten your stomach muscles to raise the hips and feet straight upwards. This is a small, slow movement and takes some practise to do well. **Repeat this exercise 5-10 times.**



2. Canoe paddling exercise

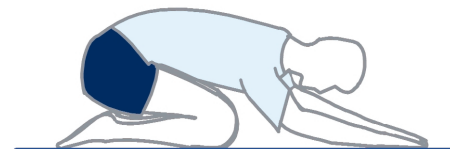
Standing upright in the position shown, securely anchor a Theraband or equivalent rubber tubing to a solid object overhead. Grasp the tubing with both hands and pull down and across the body as if paddling on one side in a canoe (with a single bladed paddle). Keep your stomach and buttock muscles tight so your spine stays straight. **Do this movement 10 times and then repeat on the opposite side.**



STRETCHING EXERCISES

1. Forward kneeling stretch

Bend down with your weight spread equally through your knees and hands. Bend your knees and sit back on your heels leaving your hands out in front as in the diagram. Drop your shoulders and relax. **Hold this stretch for 30 seconds and repeat 3 times.**



2. Backwards stretch

Roll up a small towel so it's about 2-3 inches thick. Sit back against a chair as shown with the towel propped between your back and the chair. Place one foot on the chair and your hands behind your neck and lean backwards until you feel a gentle stretch in your stomach. **Hold for 5-10 seconds and repeat 3 times.**

