Our Practice / Services

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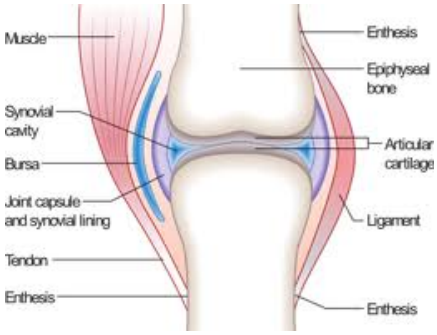
Joint Mobilisation / Manipulation

A joint is the moveable connection between two or more bones of the body. As well as the bones, most of these joints are made up of a covering layer of cartilage for shock absorption, joint (*synovial*) fluid for lubrication, ligaments and a joint capsule to hold it all together, and connecting muscles to move the joint and provide stability. Depending on where the joint is in the body, it will be capable of bending, twisting, rolling, sliding and gliding movements between the bones. Different degrees of these movements occur at different joints.



Sometimes the normal movement of a joint becomes restricted or painful. This can happen for various reasons. Inflammation, muscle tightness, immobilization after injury, faulty movement patterns, arthritis, and poor posture are some of the common causes. When a joint doesn't move as well as it should, or there is pain associated, this quickly affects that part and other parts of the body. One restricted joint can cause pain and altered movement over a wide area.

A major aim of manual physiotherapy is to restore normal pain-free movements to joints. This can be done in different ways. The most common methods include mobilisation and manipulation techniques.

Mobilisation

This involves using oscillating stretches to the joint surfaces. The therapist generally stabilizes one part of the joint, and moves the other. Movements will be in directions that encourage and simulate the normal joint movements. Depending on the problem being treated, these may be small and very gentle oscillations to treat pain, or they may be strong and end range techniques, to restore movement.

Mobilisation can be used in any part of the body. In particular:

1. The spinal joints. There are 50 *facet joints* throughout the vertebrae from our neck to our pelvis. There are around 40 joints between the ribs and spine, and 23 intervertebral disc joints between the vertebral bodies. And that is not all the spinal joints! Any or many of these joints may become restricted.

2. Hips. The hip joints are frequently tight in one or more directions. This may be due to arthritis, capsular joint restriction, or muscle tightness, among other causes.

3. Shoulders. The joints of the shoulder including the *scapula* (shoulder blade),

the *acromioclavicular joint*, the *sternoclavicular joint* and the main shoulder joint can become tight for various reasons.

4. Knee. This includes the knee joint, the *patellofemoral* joint, and the *tibiofibular* joints. These can become restricted after knee surgery, with swelling, and due to faulty biomechanics.

5. Ankle. The ankle and *subtalar* (heel) joints almost always get stiff after an ankle injury, particularly when there is associated swelling. These joints respond well to mobilisation.

6. Toes and midfoot. With all the walking and running we do, these joints suffer stress & wear and tear that frequently leads to pain and restriction.

7. Wrist joints, particularly after fracture.

Manipulation

This refers to the technique of stretching a joint to, and then slightly past its end of range movement. This causes a slight gapping of the joint, often referred to as *cavitation*. The sudden gapping 'breaks a vacuum', releasing nitrogen bubbles into the *synovial* (joint) fluid. This is what produces the popping or cracking sound of joint manipulation.

Many joints throughout the body are able to be manipulated. Most of the spinal facet joints can be treated in this way. Certain other joints in the arms and legs can also be manipulated. The cavitation can be beneficial for a few reasons. The sudden stretch can loosen tight tissues around the joint. It is also believed that joint manipulation has an inhibitory effect on surrounding tense muscles. And through complex neurological pathways, the treatment may inhibit pain production.

At Concord Sport & Spine Physiotherapy, we do not manipulate joints of the upper cervical spine. There is a very small, but in our opinion unacceptable, risk of serious injury with manipulation techniques at these levels. There have been reported cases of serious consequences due to damage to the vertebral arteries that are closely associated with these joints. We have found that mobilisation and soft tissue techniques offer all the benefits of manipulation without the risks.

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