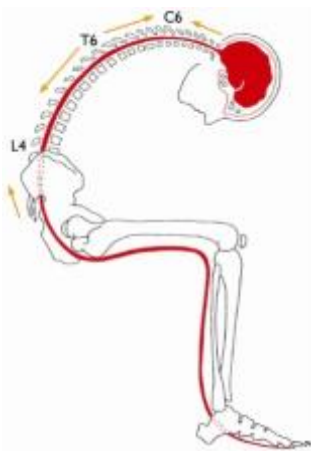


Neurodynamics & Mechanosensitivity

When muscles and bones move incorrectly or are impeded, it can result in pain and discomfort. In the same way, if our nerves cannot move correctly through our body, they can become irritated and cause pain and restriction of movement. Nerves can be impeded at various locations throughout the body, and the site of pain is not always the same as the site that is causing the problem – e.g. the nerve could be impeded in your back and you feel the pain in your knee. This is because the nervous system is continuous throughout your body, and problems at one part can refer pain to another.



Common examples of structures that can impede a nerve's movement include: a swollen joint, muscle tightness or spasm squeezing a nerve, or a swollen compartment e.g. carpal tunnel syndrome.

When a nerve gets impeded, your mechanosensitivity can be altered – this means that the nerve's electrical activity becomes abnormal when mechanical force is applied to it (i.e. when you move/stretch), causing symptoms of pain, pins and needles or numbness. The more sensitive the nerve becomes, the less force is needed to initiate the response, and the symptoms become more intense.

Abnormal neurodynamics and mechanosensitivity can occur in your upper and lower body. Common sites include the sciatic nerve and the femoral nerve in the upper leg, the common peroneal nerve in the calf, and the median, radial and ulna nerves in the arm.

Testing for abnormal neurodynamics involves placing tension on the nerves (stretching them and moving them) in different positions to see if it reproduces your symptoms.

Treatment then revolves around locating and eliminating the irritation around the nerve, and then getting normal movement of the nerve again. This could be via massaging/muscle releases to stop the contraction/spasm of muscles around a nerve, or by decreasing the swelling/increasing the space in a joint or compartment.

“Nerve Sliding” exercises can then be beneficial to get the nerve moving again. This involves sliding the nerve throughout the whole body, without placing excess tension on the nerve. Your nerve will be able to move more freely, the irritation will lessen and your mechanosensitivity will be gradually returned to normal – all meaning that your pain will be decreased.

