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Massage for Post Polio Syndrome (PPS) and Late Effects of Polio (LEOP) Paitents

In acute poliomyelitis, the polio virus attacks the motor neurons and / or brain stem nuclei resulting in a wide and variable distribution of weakness in skeletal and bulbar musculature. After the acute polio phase surviving motor units sprout axons to reinnervate the denervated muscle fibres. This process of denervation and reinnervation is ongoing over the muscle lifespan.

The sensory cells however are spared and as a result there is no sensory deficit. Pain is not due to an attack or inflammation of the sensory neurons and there is no sensation loss. As a result, the client is able to accurately report how intense or safe the pressure of massage feels, and massage is therefore not contraindicated. However, some patients do report altered sensation, thought mostly to be due to cold intolerance.

Massage is known for its general benefits in reducing pain, muscle tightness, joint stiffness and oedema (swelling).
It can also help with decreasing stress, anxiety and blood pressure while also improving blood and lymph flow. In doing so massage can be used to help relax overworked areas and to support and revitalise muscles. It is therefore a useful tool to assist in the relief of symptoms such as muscle or joint pain, hypersensitivity, fatigue, weakness and oedema commonly reported amongst the PPS population.

There is limited research on the benefit of massage specific to PPS. However, because pain can arise from a variety of causes, often due to the change in biomechanics of joints and musculature over time (eg joint and soft tissue stress from changes in posture, and adaptation of movement as new weakness appear, over-use syndromes, muscle pain, osteoporotic pain from weakened skeletal structure) massage has a place in the overall management of symptoms.

Massage therapy can be tailored to the needs of the client. Atrophied muscles and skeletal deformities can leave polio survivors with sensitivities about body image and massaging affected areas. Trust needs to be built with a client and massage techniques developed with them for best results. It is important to note that a too aggressive application can result in increased pain for a few days which may then lead to a decrease in function while recovering. Massage techniques can be taught to the client for self-management of symptoms. Care must be taken in regards to the prescription of any associated stretches.

Clinical Application:

- Light to moderate massage rather than deep tissue massage to localised areas may be more effective in improving blood flow and decreasing muscle spasm without increasing pain levels. Trigger point therapy and soft tissue mobilisation techniques can also effectively reduce muscle spasm.
- Lymphatic massage can help reduce swelling and hypersensitivity.
- General body massage for relaxation.
- Application of heat before massage may help to relax muscles and the client.

Precautions:

- Certain conditions require more care in the application of massage. With chronic lymphedema, hypersensitivity, fragile skin, open wounds, or co-morbidities such as neuropathies where sensation is impaired (eg diabetic neuropathy), caution should be exercised.
- Limbs with chronic lymphedema may require a referral to a massage therapist or physiotherapist specifically trained in the management of lymphedema.