



PHYSIO-LOGIC
neurological rehabilitation

NEWSLETTER

Published Quarterly

The Physio-Logic newsletter brings informative, relevant and up to date information on the rehabilitation management of neurologically

This Issue:

Pilates: The Contemporary Approach to the original works of J.H. Pilates

Botox: Not just for sending away for decoder rings.

New Location: Mississauga

Staff Profile: Liz Farquhason

Next Issue:

CI
Benefits of Exercise

PILATES

The Contemporary Approach to the original works of J.H. Pilates

What is Pilates?

Pilates is an exercise philosophy designed to improve core stability through a series of mind and body exercises. Named after its creator Joseph Pilates, Pilates has been described as a stretch and strengthen workout that targets the abdominals as well as the muscles that surround the spine.

Joseph H. Pilates was born in Germany in 1880 and was a sickly child determined to overcome his various afflictions. He studied Yoga, Zen meditation and rigorous exercise regimes of the ancient Greeks and Romans. In New York during the 1920s, he developed a series of controlled movements that engage the mind and body in developing strong, flexible muscles without building bulk.

Pilates teaches effective and challenging exercise that targets:

- **Developing core (abdominal and back) muscle strength**
- **Toning and elongating muscles**
- **Restoring the natural curves of the spine**
- **Improving endurance, flexibility, coordination and balance**
- **Reducing or relieving pain**
- **Developing body awareness**

Exercises involve basic mat work and sessions begin with gentle warm-up exercises emphasizing relaxation and alignment. For example, the individual usually begins on the floor in a neutral spine position focusing on breathing and locating tension. Then coordinated and controlled movements are introduced in stages.

Who should do Pilates?

Pilates is appropriate for clients who require general conditioning, performance enhancement or a post-rehabilitation exercise program to attain and/or maintain functional stability and movement.

Pilates strongly emphasizes quality of movement. An

improvement in the musculoskeletal and neuromuscular systems can be achieved. If the RIGHT move is made consistently, in time postural and alignment changes will be achieved, in turn gaining normal or more optimum movement. Carrying out daily tasks and/or performing other exercise routines and/or sports activities can be done with greater ease.

Physiotherapists @ Physio-Logic often recommend that clients also participate in a pilates program as an adjunct to their neurotherapy program.

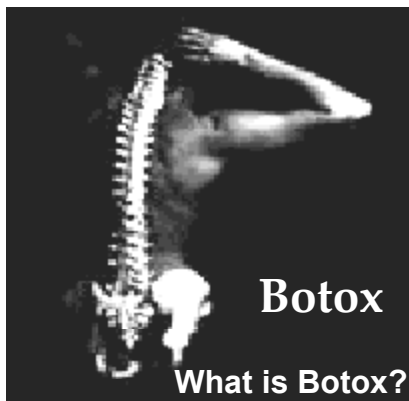
For more information please contact Physio-logic directly

@ 416 490 8243 or

office@physio-logic.com



Feature Article:



Botox is a medication made from the Botulinum toxin, a substance produced by the Clostridium bacteria. While food containing the toxin can cause Botulism, a type of food poisoning, the medication Botox can be helpful in treating spasticity and dystonia.

How Botox works

When diluted and prepared for therapeutic use, the toxin can be injected in minute amounts into spastic and dystonic muscles, where it blocks neuromuscular transmission by binding to receptor sites on motor nerve terminals, inhibiting the release of acetylcholine. This creates a localized chemical denervation on this muscle and renders it weakened, producing the desired effect of quieting the constant firing of the muscles that are causing the spasticity and dystonia.

Why Botox?

Current treatment for the condition of spasticity and dystonia include physiotherapy, neuropharmacological

agents, and surgical intervention. The administration of neuropharmacological agents has a systemic effect and is not selective to only the spastic muscles. Therefore, non-spastic muscles can become weakened and there may also be a sedating effect. . Physiotherapy can be of limited benefit when there is excessive tone that is not reduced by mobilization. Surgical intervention is costly and can include risk to the patient.

Application and Treatment Considerations

In the last few years, Botox has been used in the treatment of large spastic muscle groups in the Brain injured, Spinal Cord injured and Stroke population as well as in children with Cerebral Palsy.

Botox injections are performed under EMG guidance to accurately assess the degree of muscle activity and to determine the specific motor point of each muscle. This is where the nerve enters the muscle. The Botox is injected into the motor point so that it can block acetylcholine at the motor end plate and be most effective.

The action of Botox will last for approximately 3-12 weeks depending on the dosage used and the muscle's response to treatment. During the period that the muscle is in a weakened state, the physiotherapist has a window of opportunity to change the spastic pat-

tern and gain more normal positioning of the limb.

Splinting

Splinting of the limb is essential for Botox to be effective in the management of spasticity. This should take place within one to two weeks of the injection. Splinting is best done by an orthotist who can work from a cast and has access to specialized tools and machinery. Orthotists use high temperature plastics that are molded from a cast, from which further modifications can be made. Splinting done by orthotists is also covered under Assistive Devices Program.

The splint should be worn throughout the day and night with brief periods of rest to check skin and circulation. Regular splint modification is necessary to gradually stretch the joint, muscle and soft tissues to gain as much range of motion as possible.

Cost

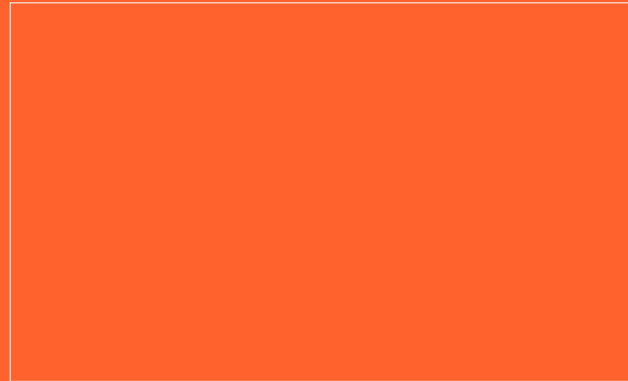
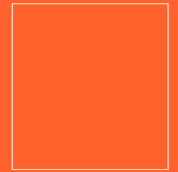
The cost of Botox injection is covered by OHIP for those patients over 65 years of age or those with an Ontario Drug Plan. Otherwise, the cost per vial is. The number of vials required will be determined by the physician and will be dependent on the number of muscles needing to be injected as well as the size of the muscle group and the severity of the spasticity.





PHYSIO-LOGIC
neurological rehabilitation

265 Yorkland Blvd., Suite 104,
Toronto, Ontario, M5M 2F4



Staff Profile: Liz Farquhason



Liz joined P_L in the spring of 2002 and has become... related to the rehabilitation of neurologically impaired individuals? Send them to us. We will research and answer them for you in our newsletter format so that everyone can benefit from the information.

Physio-Logic is a practise of Physiotherapists who have a special interest in the treatment of the neurologically impaired individuals.

Do you have questions related to the rehabilitation of neurologically impaired individuals? Send them to us. We will research and answer them for you in our newsletter format so that everyone can benefit from the information.

Send your email address to receive Physio-Logic's newsletter, office@physio-logic.com in electronic format, or go to our web site www.physio-logic.com and download straight from there.

Toronto:
265 Yorkland Blvd.
Suite 104,
Toronto, Ontario
M5M 2F4

Mississauga:
2227 South Millway
Suite 305,
Mississauga, Ontario