

# Research/Science Update: Pilates for Rehab Conditioning

*Pilates, with its focus on body awareness and proper alignment, can be beneficial in a variety of rehab settings, including exercise for older adults and those recovering from sports injuries.*

*By Moira Merrithew*

**ONCE NOTED AS** a form of exercise for the highly skilled, rich or famous, Pilates is now being embraced by the medical and rehab communities. Pilates is a gentle restorative exercise that is suited for most people as they recover and work to rebuild their bodies. In his time, Joseph Pilates (the father of Pilates) was considered by many to be a master of rehabilitation. His approach focused on core

strength, precision and control of movement. Combine that with current exercise science, and you've got a recipe for success.

Today, Pilates continues to be used to create positive experiences for those with movement dysfunction.

Many individuals who are severely deconditioned, injured, physically disabled or otherwise mobility challenged do not often feel capable of performing any type of exercise. Fortunately, Pilates is an option for all fitness levels, ages and stages.

## Benefits of Pilates

There are many reasons why a fitness professional would choose to incorporate Pilates into a client's rehabilitative program. Pilates creates strong muscles and more range of movement. It improves postural problems; increases core strength, stability and peripheral mobility; helps prevent injuries; improves balance, coordination and circulation; heightens body awareness; and is low-impact.

There is a growing trend toward partnerships between Pilates experts and rehabilitation specialists. Fitness professionals can help to bridge the gap between the rehab and fitness communities, and, therefore, be able to reach individuals who otherwise would not have access to special programming such as Pilates.

## Mobility-challenged and active aging

Individuals who walk with assistance, as well as those who use wheelchairs, can benefit from a specialized exercise regimen. In Pilates, there are hundreds of exercises



that can be performed from a seated position. In many cases, participants will notice changes right away in their strength and mobility.

Seated Pilates movements are performed with or without the assistance of resistance bands or small weights. Small props can help participants simulate many of the exercises normally performed on traditional Pilates equipment with springs. The idea is to encourage correct posture, which works the core muscles, and then work toward strengthening the rest of the body.

### Sports injuries

Pilates can also be used for rehabilitation from a sports-related or other injury. Not only is the focus on strengthening the supporting muscles of the injury, but it is also on complex movements that integrate the injured body part into full-body functional and sport-specific movement patterns. Muscular compensations are identified, and then specific movement patterns are designed.

Since the basis of Pilates is postural alignment, core strength, and stability and mobility of the periphery (arms and legs),

most exercise progressions begin in a supported position. Movements can begin with simple breathing exercises that focus on deep, efficient and mindful breath. The idea of focusing the mind on what the body is doing can afford great benefits.

Active recovery is the period of muscle regeneration after a strenuous workout or game. Pilates can help during this period by gently working through movements that allow the muscles and joint structures to achieve their ideal functional positions. Also, Pilates can provide an interim step between non-weight-bearing exercises, open-chain exercises and explosive movements. The focus on mobility, flexibility and strength through a full range of motion helps restore the injured tissues to a healthy state before sport-specific training begins. In rehab, Pilates can be used at all stages, from the most acute phase to advanced functional re-education.

Pilates is particularly effective

in injury rehabilitation settings. According to Matt Nichol, head strength and conditioning coach for the Toronto Maple Leafs hockey club, Pilates teaches athletes to be mindful in their movements, and integrate their pelvis, trunk and shoulder girdle within a safe, challenging and progressive system. "Pilates can be a very effective supplement to an injury rehabilitation program, as it provides athletes with a challenging workout without impact or excessive weight bearing," says Nichol.

Traditional athletic training helps to develop the muscles required in a specific-sport movement pattern, but may not address the stabilizing muscles around the joints or the torso. Often, one muscle is identified and exercises

are designed to isolate that muscle, usually in a single plane of motion. However, Pilates exercises can be more complex than traditional moves, and will, therefore, recruit a larger number of muscle groups and strengthen the supporting musculature from many angles and in different ranges of motion.

### Breast cancer rehab

Although medical research specific to Pilates for breast cancer is nonexistent to date, there is a growing body of research that suggests that exercise in general can reduce the risk for recurrence, as well as enhance functionality and quality of life. "Given that the essential aims of Pilates are to build a strong core, facilitate effortless movement and re-pattern musculature, it seems a natural choice for those recovering from breast cancer and its side-effects," says Stott Pilates Master Instructor Trainer P.J. O'Clair. "Pilates is a gentle, restorative exercise regimen perfectly suited for those as they recover from breast cancer and work to rebuild their bodies. In addition to the restorative qualities gained from a Pilates program, the re-education of one's mind and body are extremely

beneficial and necessary features."

During cancer rehabilitation, the concepts of breathing, pelvic and lumbar spine alignment, rib cage placement, shoulder mobility and stability, and head and neck alignment can be applied to any Pilates movement. Bringing awareness to posture can be the first step in improving daily activities. Putting the body in a position where it moves and reacts more efficiently can take away unwanted stress and strain. Developing proper movement patterns will also allow the body to heal in a way that reduces the likelihood of compensatory injuries.

### Pilates for life

In any form and at any level, Pilates can be a starting point, an ending point or a mainte-

nance tool for almost anyone, including rehab clients and athletes. Virtually anyone can realize improvements to an array of movement dysfunction, including neurological disorders, cardiopulmonary restrictions, orthopedic complaints and a host of other physiological conditions. Now, more than ever, Pilates is a method that encompasses all individuals, no matter what their specific needs. **FM**

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