

# AQUATHERAPY

## KERN & ASSOCIATES PHYSICAL THERAPY

**W**ater has long been utilized as a primary tool in the facilitation of un-weighted natural body movements. At Kern & Associates Physical Therapy we have over 20 years of clinical experience on aquatic therapy. Our staff, through research and hands-on experience are convinced that aquatic therapy possesses unique benefits in rehabilitation. It allows a smooth engagement of gradual resistance, facilitates range of motion and affords varying speeds of activity. Simply put, "aquatic therapy allows people to rehabilitate more effectively because they can do things in the water that they can't do on land." In addition, water's properties of buoyancy, support and moist heat reduce the risk of inflammation of joints and tissues that may be aggravated by exercise on dry land. The patient recuperating from an injury or rehabilitating from a chronic condition need not lose muscle tone and strength while restricted from his/her normal sport or activity, but can rather continue a fitness training program in a aqueous environment.

### WHY DO WATER THERAPY?

**Muscular Strength:** Most people think of lifting weights when they think of strength. Water offers a different kind of resistance. By moving a limb through the water, the water pushes back against the limb. Resistance may be increased by increasing speed of movement or by placing a wider object on the limb.

**Endurance:** This is the body's ability to repeat a muscular skeletal movement with a moderate workload through a period of time. Endurance and tone can often be achieved in the water faster than on land. By decreasing stress on joints, the body is able to endure increased repetitions (i.e. increased endurance) with less negative joint response.

**Flexibility:** This is the ability to move the joints through a functional range of motion. Flexibility exercises are done by stretching major muscle groups in a sustained manner. The warm water environment enhances the

muscle flexibility, often resulting in improved mobility.

**Cardiovascular Health:** This is accomplished in the pool by aerobic training. Aerobic exercise in the pool occurs through repetitive activity involving large muscle groups. Increased strength is achieved primarily when the muscle is working to fatigue. This can be done in the water with jogging, cross-country skiing, jumping jacks, step-ups etc. This should be done with caution in water over 85 degrees.

**Balance:** In the pool, the water is constantly pushing against the body. A turbulent environment is created by any movement in the water. This can make certain balance exercises challenging and produce, at the same time, the water's buoyancy to create a supportive cushion reducing both fear and risk of injury.

**Mental Health:** For those that have been unable to participate in land based exercise, the pool offers a comforting alternative. Both the endorphin release and the social atmosphere create a feeling of well being, encouraging the patient to continue with an aquatic exercise program.

**Body Composition:** This is the percentage of body fat mass to lean body mass. For women a desirable percentage is 18-20% and for men it is 10-12%. While doing aerobic exercise in the water 77% of the calories burned come from fat stores, thus reducing the fat mass in the body. Muscle, though heavier than fat, is stimulated while moving through the water resistance. This should be done with caution in water over 85 degrees

**Arthritic Individuals:** Pain and stiffness in arthritic joints can be decreased through low to moderate intensity exercise. This movement releases synovial fluid (the fluid in the joint that helps | to lubricate the joint) and therefore helps the joint move less painfully. Water therapy is particularly soothing, and the support of the water makes doing the mild to moderate exercises much easier. Two types of arthritis are:

**Osteoarthritis Arthritis (OA):** This is arthritis caused by the wearing away and degeneration of the cartilage that lines the joints. This is generally part of the aging process. Symptoms usually include pain with movement, decreased range of motion, and muscle atrophy (wasting). Warm water therapy allows the muscle to relax as the buoyancy of the water provides a safe way to move the joints. The water temperature for arthritis may be higher - up to 95 degrees.

**Rheumatoid Arthritis (RA):** RA can affect any age and is due to an autoimmune disease process. This disease causes inflammation in the tissues around the joint, which prompts the autoimmune system to react. Symptoms include pain and limited mobility during flare-ups. Those with RA should use caution in warm water if they are in a flare and the joints are inflamed.

**Low Back Pain:** Low back pain can come from many different causes. With acute low back, one experiences increased pain. Along with pain comes spasm of the muscle and decreased joint movement. Many individuals find that the warmth of the water decreases spasm and allows for movement to occur sooner with less pain. Individuals can do impact free exercise and eliminate the fear of the long rehabilitation from muscle atrophy. All too frequently back pain can be caused by weakness of the back, hip, and leg muscles, allowing the body to be put into improper postures. These postures can make a person more susceptible to incur low back pain. The warm water pool can be a prevention as well as a rehabilitation tool. Those who have chronic low back pain can also benefit by using the water medium to allow more pain free movement so that strength and flexibility can be achieved faster.

**Fibromyalgia:** This is an inflammation of the fibrous tissue. Muscles become very sore and stiff and there are multiple focal points of pain. People with this diagnosis have a very difficult time performing an exercise routine without irritating their symptoms. Warm water therapy has been particularly effective

for these individuals. Previously unable to exercise due to “flare ups” and pain, they are now able to develop strength and endurance to progress to a gym setting.

**Joint Injuries:** While most people with joint injuries do well with land based exercise therapy, the benefits of warm water may make the transition to land based exercise much less painful. The natural warmth and buoyancy of the water allows the muscles to relax and the limbs or trunk to move in a more supportive environment. This is also true for those post surgical candidates who are very sore following surgery.

**Obesity:** While much of the population is not morbidly obese, many of us are not happy with the amount of body fat that we carry. The benefits of aquatherapy are enormous for adults who want to lose pounds. The pool is also a great benefit to the school-age, overweight child. Especially now, the rate of obesity in school age children is rising. The warm water pool (while providing many of the benefits mentioned at the beginning) is one way to encourage school age children to exercise. This age is particularly hard to get to exercise; however the pool provides an environment that is fun and many of the games played in the pool can be directed to fitness.

## COMMON QUESTIONS AND ANSWERS

**My doctor told me just to swim. Is that enough?**

While swimming is an excellent exercise for rehabilitation, the benefits of specific muscle training in the water are also equally valuable. Many patients with shoulder injuries cannot swim correctly. Those with low back pain may experience pain while doing certain strokes that emphasize movements that irritate the joints. Also, without proper instruction, repetitive swimming with improper mechanics may create pinching of

the tendons, causing inflammation and, therefore, more pain. Performing specific exercises in the water allows you to rehabilitate movement into functional patterns that you use during the day.



### **I have high blood pressure. Should I consider warm water pool therapy?**

Water exercises are excellent for rehabilitating cardiovascular fitness; however those with any known cardiac disease should not be exercising in water over 85-90 degrees. If you do go into a warmer pool, it is advised for you to take your pulse periodically during your exercise program. One easy way to take your pulse is to find your carotid artery by measuring four fingers along the clavicle (collarbone) from the center "V" notch and lightly press the index and middle fingers on the top of the bone to feel the pulse.

### **Where can I find a pool where I can exercise safely?**

Kern & Associates Physical Therapy have one of the only warm water therapy pools on the Westside of Los Angeles. You will find our professional staff are well trained and highly qualified to address specific pathology. In a pool setting with physical therapists you can feel secure in beginning your exercise program. Medical use and private pools may also be an option once you have established your routine with a physical therapist.

### **What questions should I ask when selecting a pool?**

First check to see if the therapy is supervised by registered physical therapists that have specialized in aquatic therapy. Second be sure to ask about the temper-

ature of the water for your particular condition. Third ask about the safety of the pool environment. If your skin is sensitive you may want to check what chemicals are used in the pool. You may also need to ask if the pool has a lift that can put you in without having to use the steps. If you have a medical condition, you may want to check to see if your insurance will cover aquatic therapy. We at Kern & Associates Physical Therapy provide pool classes and physical therapy to patients of all ages.

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Nora BarZiv, PT began her study of Kinesiology and physical therapy at the Wingate Institute in Israel. She received her Bachelor of Science degree from the Ben Gurion University in 1979. Having worked at Soroka Hospital in orthopedics, she went on to direct the Urim Physical Therapy Clinic for Orthopedics and Sports Injuries. She has been a staff member at Kern & Associates for the past sixteen years.



Nora's special interests include posture and ergonomics as related to back and neck care and aquatic therapy. She is available to speak to your community group regarding pool physical therapy and other topics at Kern & Associates Physical Therapy. Please contact her at (310) 315-9711 ext. 34 or visit our web site at [www.kernpt.com](http://www.kernpt.com).

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## **AQUATIC WORKOUTS**

### **Enjoy exercising in our warm water pool!**

- Relieve pain & stiffness while having FUN!
- 6-Sessions for \$90 or \$15 eash appointment.
- Choose to do a pre-established program or newer exercises
- Call Lindsay at (310) 315-9711 to sign up.

#### **Schedule Options**

**Mondays:** 8:00 - 9:00am, 11:00 - 12:00pm

**Tuesdays:** 8:00 - 9:00am, 9:30 - 10:30am 10:30 - 11:30am , 11:30 - 12:30pm

**Wednesdays:** 8:00 - 9:00am, 9:00 - 10:00am

**Thursdays:** 8:00 - 9:00am, 9:30 - 10:30am , 10:30 - 11:30am, 11:30 - 12:30pm

**Fridays:** 8:00 - 9:00am, 9:00 - 10:00am, 12:00 - 1:00am

Kern & Associates



Physical Therapy

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