

# **OPTIMAL DISCHARGE OPTIONS**

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## **A New Model in Healthcare Emerging**

There are two approaches to discharge options: traditional and optimal. With the traditional approach, patients are discharged from care post-rehab to resume or initiate an exercise program on their own. As a result, many if not most, do neither. Today, however, a new model in healthcare is emerging – that of a continuum between the medical community and the fitness community. For example, increasingly physical therapy centers are offering personal training for clients as an extension or continuation of their post-therapy care. Some health insurance companies are even covering personal training in their healthcare plans. Aquatic therapy and aquatic fitness centers are also combining forces to make the transition for clients as smooth as possible. Some YMCAS, for example, offer both private and group aquatic therapy services as well as aquatic fitness classes, enabling them to retain patients by converting them into fitness members post-rehab.

Using this model, this course will cover a variety of aquatic discharge options post-rehab. Techniques demonstrated will be progressive in nature and include: retro training, lateral training, shallow and deep training, sport-specific conditioning, interval training and a new training technique utilizing nose breathing exclusively. Also included will be case studies of patients who have successfully transitioned from therapy to fitness. Whether you'd like to continue with your patients into a private pay practice or you already work in post-rehab, this course will give you exciting ideas for helping them heal, improve their fitness and prevent future injuries.

This optimal discharge model allows us to look beyond rehab to utilizing the pool with our clients as a cross-training tool; for sports-specific training; for facilitating clients' recovery from competition or just "overdoing it"; and for ongoing injury prevention conditioning – not unlike the horses in Northern Virginia. Each

week at the Northern Virginia Animal Swim Center more than 100 horses receive a water workout. While there are a few other horse-only pools around the country, most offer only aquatic rehab for injured racehorses, whereas the majority of the horses at the Northern Virginia receive a continuum of care – from aquatic rehab to aquatic conditioning. The facility recognizes the value in continuing to train the horses in the pool for both injury prevention and performance post-rehab. Like the horses – if we can keep our clients coming back to the water – we may just convince them to stay there!

### **Two Main Goals: Healing and Fitness**

So within this optimal discharge model, there are two main goals:

1. Facilitating healing of the injury
2. Maintaining and even increasing overall fitness as healing progresses.

This second goal requires convincing clients to continue aquatic fitness conditioning post-rehab to both enhance their physical and mental well being and prevent future injuries.

Aquatic training addresses every major and minor component of fitness: endurance, strength, speed, aerobic and anaerobic conditioning, flexibility, reaction time, agility and balance. Moreover, specific sports skills can be duplicated in the water, making the work more transferable to land-based activity. The pool is also an ideal transitional environment. Different depths of the pool can be used to gradually transition a client back to land activities; working first in the deep end with no impact and then in the shallow water with half the impact of land training.

The key is to demonstrate to your clients that the pool is both a post-rehab safety net and a challenging, effective fitness-training tool. Also important is to help clients see that this aquatic continuum between rehab and fitness is fluid – that as they heal, aquatic sessions become progressively fitness-oriented, but also may regress to being more therapeutic when necessary. I'm always amused when my former aquatic rehab (now aquatic fitness) clients call me to ask whether they should come to our session after they've strained their back for example. I have to remind them that their back was what brought them to me in the first place and that

we can certainly make the session therapeutic. They've moved so far beyond aquatic rehab that they've forgotten that's what initially led them to the water.

Depending on the intensity at which you apply them, many aquatic techniques can be concurrently therapeutic and challenging. Altering intensity with ROM and speed of movement and using progressively challenging (and when appropriate sports-specific) equipment allows us to: increase the workload and metabolic demand, keep clients engaged and tailor exercises to their specific physical activities.

Some of the aquatic training techniques we will cover include: aquatic running (four different running styles); retro training (taking it backwards to bring fitness forward); lateral training (critical for knee stability); shallow-to-deep-to-shallow training (using whole length of the pool); "poolometrics" (pool plyometrics); interval training (tethered, untethered and "super-tethered"); and nose breathing (for cardiovascular fitness and a host of mind/body health benefits).

### **Aquatic Injury Prevention**

To perform well in any sport or physical activity, clients must train for its specific demands. Unfortunately, there is a limit to the body's ability to withstand the stress and pounding of land training before breaking down. By taking the same training principles into the water, however, clients can run, jump, kick and swing again and again- improving skills and conditioning levels without risking injury and, in fact, prevent injury. For, in addition to the healing power of water as part of a rehabilitation program, aquatic training can also help prevent future injuries by increasing ROM of the joints and balancing the strength and flexibility of opposing muscle groups.

The mistake most commonly made in land training is to work on strengthening only those muscles needed for a specific sport or physical activity. An optimal aquatic program, on the other hand, should aim to create muscle balance in all major and minor muscles groups, where agonist and antagonist muscles are trained equally. Flexibility is too often ignored, even though its importance in injury prevention has been well documented. Warm water is an ideal environment for

facilitating ROM because it relaxes the muscles and increases circulation.

### **My Personal Success with this Aquatic Rehab-to-Fitness Continuum**

I entered the field of aquatic therapy largely because of the personal success I experienced with the aquatic rehab-to-fitness continuum. Growing up I was not a “water person”. In fact, I was the only kid on the block who wasn’t on the swim team. I almost drowned twice before the age of two so I was somewhat of an “aquaphobe” rather than the “aquaphile” I am now. What led to that change? I discovered that the water was the best place for me not only to rehab initially (and post-competition) for my sport but also condition for it with great results. Despite musculoskeletal challenges stemming from a congenital scoliosis and leg length discrepancy and a history of frequent injuries, thanks to my aquatic training I became a faster, more resilient runner, eventually qualifying for and competing in the Olympic Marathon Trials. I truly believe my aquatic training gave me an edge over my frequently injured competitors. It not only improved my fitness, it helped me prevent injury by avoiding the excess pounding of land training and by balancing the strength and flexibility of my opposing muscle groups.

Today at 49, while I no longer compete, I’m still running most days pain-free thanks to the work I do as an aquatic therapy specialist/exercise physiologist. I was personally re-reminded of the power of the aquatic rehab-to-fitness continuum two years ago when on a trail run I tripped on a rock and landed directly on another rock on my left elbow, fracturing my olecranon, which required an ORIF surgery. My orthopedist and PT were amazed that I not only healed as fast as I did but that I regained all of my extension in my elbow – something that rarely happens with this injury.

It was because of my own success with this fluid continuum that I went on to study aquatic rehab and combined it with my education and experience as an exercise physiologist to create two successful practices with clients first in Arizona and now in northern California. Over the past 20 years I’ve not only seen this aquatic continuum work for myself, but for many, many clients of all ages. I

encourage you to consider this optimal discharge model to help your clients not only heal, but also regain and even improve their fitness and health.