

'Just Add Water'



Beyond injury rehabilitation, aquatic therapy may improve athletic performance as well

By Brian W. Ferrie

Most athletes train relentlessly to master their craft. Whether their sport of choice requires hours in the gym, on the field, court or track, attaining excellence requires significant practice. Perhaps they could benefit from spending some time in the water as well. Aquatic therapy is certainly well regarded for athletic injury rehabilitation, but can it also help healthy athletes

improve performance?

Marion Kregeloh, PT, CFP, founded Marin Movement Center (MMC), Larkspur, CA, in 2002. From its inception, MMC has offered aquatic therapy as a service to patients. Located inside a health and racquet club, the clinic rents a lane of the club's indoor pool. MMC treats primarily orthopedic patients with diagnoses related to the back, shoulder, arm, knee and hip. Kregeloh estimated

30 to 40 percent of her patient population is comprised of athletes, including high school, college and pro.

"Some of the common athletes we treat are runners, who frequently present with ankle sprains and knee injuries; tennis players, which could be back and shoulder/arm injuries; and occasionally high school students on basketball or football teams. We also have worked with golfers who benefited greatly from the aquatic program."

Pull of the Pool

About 50 percent of the athletic population at MMC receives some type of aquatic therapy.

"Often we see patients who were referred to us for regular physical therapy, but know we have an aquatic program and want to learn more about it," she told *ADVANCE*. "When I believe it is appropriate for them, I contact their physician. Unless it's all private pay, in which case I discuss it with clients and they often choose to have aquatic therapy in addition to land-based therapy or transfer entirely to it."

What factors would make Kregeloh feel aquatic therapy is appropriate for a given patient?

"A very big factor is when the loading effect is too difficult and pain keeps the client from progressing to the next level," she said. "Another piece is if they feel frustrated about not being able to do their regular workouts. So they are more tired and don't have cardiovascular stamina. That's a great indication to get them in the water, which most of the time allows the inclusion of some aerobic cardiovascular workout."

Among athletic injuries that can be helped by aquatic therapy, Kregeloh emphasized the back and weight-bearing joints such as knees and ankles.

"Any of them can greatly benefit because of the unloading and natural traction effects of the water. Patients have the opportunity to move their entire body and do some low-level impact without the physical aggravation they get on land. For any knee injuries from ACL to meniscus, I've seen that at least adding an aquatic component helps speed recovery."

Sessions

Aquatic therapy sessions at MMC are scheduled to last an hour, with approximately 50 minutes actually spent in the water.

"Occasionally we'll do half a session on



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land and half in the water," related Kregeloh. "But most of the time when a patient is also interested in adding that cardio component, 50 minutes is a great amount of time for them to be in the water."

Typically, Kregeloh has patients warm up with some water-walking exercises. "Because often when it's a lower-extremity injury, there is some guarding or limping involved."

The walking will range from 5 to 10 minutes, focusing on whatever the patient's greatest weakness is. "For example, if it's ankle movement or a certain limp, because limping is greatly reduced in the water," she explained. "Water-walking gives the nervous system the information of more balanced movement again."

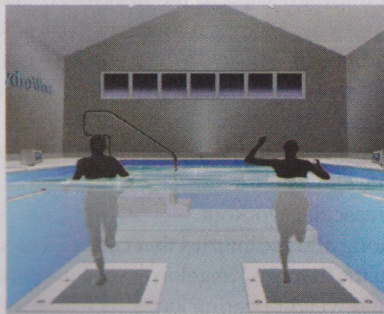
Afterward, depending on the injury site, Kregeloh asks patients to perform targeted movements.

"If strengthening is the key issue, we work on building toward more vigorous movements, isolating the joints. If it's flexibility and range of motion, we work on more gentle, rhythmic, repetitive movements. Then I always have them do deep-water exercise, where their feet are off the floor and they're either running or jogging with a buoyancy belt."

According to Kregeloh, this not only has an unloading effect on the lower extremities and spine but also works on key postural muscles, adding a component of core strengthening.

"Depending how much we want to build it into a cardiovascular program, we also include some element of stretching. Most of the time, that comes after the deep-water workouts. In addition, there

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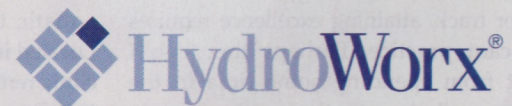
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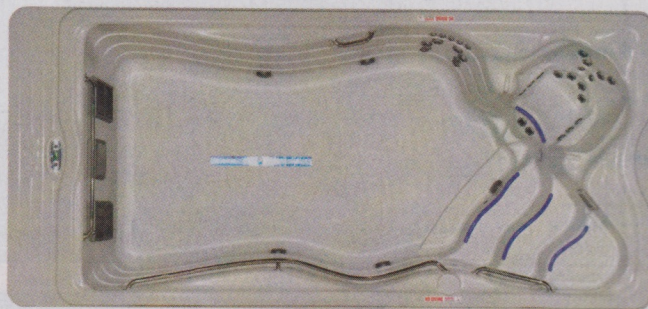
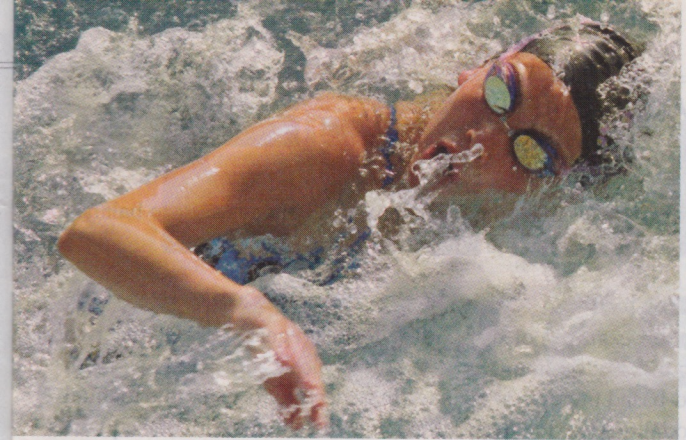
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is a component of movement reeducation. I always seek to balance movement throughout the whole body."

Meniscal Tear

Taking the example of a meniscal tear, Kregeloh noted that two aquatic therapy sessions per week are typical. "But if we see them for land-based therapy as well, we may need to focus on the manual and modalities we do on land, then introduce them with one aquatic therapy session a week."

Depending how patients progress, MMC may also provide passes to use the pool on their own for water-walking.

"If we believe they would greatly benefit from a combination of complex physical therapy in the water, which includes hands-on stretching and an active exercise program, we generally see them twice a week. We always begin them on land and gradually include or move into water only. Most of them want to be seen twice a week because they can see it provides more benefits."

An ideal aquatic therapy regimen for a meniscal tear lasts approximately six to eight weeks, Kregeloh added. "The 84-degree pool temperature here is perfect for the athletic and orthopedic populations we work with. The cooler water actually dissipates the heat they produce as they exercise and therefore creates less fatigue. There is also a hot tub next to the pool that some clients use after a workout if that's indicated."

Rick McAvoy, PT, DPT, CSCS, works 30 hours a week as a staff therapist at Rehab Three Center for Aquatics at Marshbrook in Somersworth, NH. He also runs a consulting company called McAvoy Aquatic & Sports Therapy (MAST).

"At Rehab Three, I do a lot of rehab from a physical therapy standpoint and then if an athlete has a doctor's order for a strength and conditioning program, I'll incorporate aquatics into that," he told *ADVANCE*. The emphasis at Rehab Three is orthopedics and sports medicine. Dr. McAvoy estimated about 40 percent of his patient population is comprised of athletes.

Spreading the Word

"Through MAST, I consult with PT clinics, college athletic training programs and even professional teams in the NHL, MLB and NFL. Depending on what those teams want from me, I either work with the trainers and therapists to show them how to incorporate aquatic techniques with their athletes or I actually work with the athletes to get them in shape while integrating an aquatic medium."

Dr. McAvoy has had great success using aquatic therapy to help rehabilitate injuries. He believes the medium is substantially underutilized, however, as a performance-enhancer.

"That belief is what brought me into a consulting role," he stated. "I was doing a lot of aquatic therapy for total knees, total hips and other conditions for the geriatric population. Anybody can benefit from the water, don't get me wrong—but bringing this into the athletic arena to a greater extent is the missing link."

There is a prevalent perspective among athletic trainers, conditioning specialists and physical therapy professionals that the value of aquatic therapy is limited to rehabilitation, Dr. McAvoy continued.

"You can get athletes in the weight room, squatting 400 pounds or benching 300 pounds, and that's OK. But when you don't balance the body, front and back, side to side, you're more prone to injury. I think

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in the water you get more comprehensive balance. Water can be 800 times more supportive than air but also 15 times more resistant. And it's a three-dimensional medium, so you're getting resistance and support in every direction you move."

The result is a more functional and holistic approach to rehab and athletic training, he said. "When you're an athlete, no matter if it's high school, college or professional, you're dominant in the movement pattern of your chosen sport. We rely so much on gravity and momentum in sports on land. But in the water, gravity and momentum are significantly reduced, so the body has to learn how to function in a different way. When athletes have imbalances in their musculoskeletal systems, which most do, you can target more comprehensive movement through an aquatic medium."

Furthermore, taking advantage of the unique properties of buoyancy, pressure, viscosity and density can provide an excellent conditioning workout.

Continuum of Conditioning

"I think a lot of people believe when athletes can't do something on land because they're injured, that's when you get them in the water. They don't really understand by incorporating water into the whole continuum of conditioning and athletic programs, you can make your athlete a lot less prone to injury as well as improve performance." In fact, the MAST slogan is "For improved performance, just add water."

"Aquatic therapy is not the end-all, be-all, but it is a really nice adjunct to land therapy," Dr. McAvoy concluded. "I always say it's like peanut butter and jelly. They're good separately but awesome together. My main goal is for a greater number of people to do better aquatics. I look at injury reports in sports and think how much shorter they could be if some water was incorporated into strength and conditioning programs. A lot of teams may do that already, but more need to." ■

Brian W. Ferrie is managing editor of ADVANCE and can be reached at bferrie@advanceweb.com



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