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Injury and Opportunity

Smart athletes look at injuries as a chance to put in some extra work on the healthy parts of the body.

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Dave Re/CrossFit Journal

Anyone who trains seriously for any length of time is going to sustain an injury. This is simply a law of nature, and no one, as of yet, has found a way to avoid it.

Even those who do fitness routines and use light weight for higher reps still get dings somewhere along the way. Then there are those injuries that occur outside the weight room: hurting a shoulder when chopping down a tree that had fallen across a driveway, tweaking something while helping a friend move some extremely heavy furniture up three flights of twisting stairs, falling from a ladder while cleaning out the gutters. Injuries are a part of life.

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Lao Tzu, author of "Tao Te Ching," summed the matter up rather profoundly. An older contemporary of Confucius, he wrote the following in the sixth century B.C.: "Accept misfortune as the human condition. Misfortune comes from having a body."

Eternal truth, and what really amazes me is that more people don't get hurt while lifting weights. They don't bother to warm up at all before doing their workouts, overtrain their upper bodies to the extreme, never bother stretching after a session, and do many exercises using very sloppy form. But sooner or later, this neglect of the more important aspects of strength training and bodybuilding catches up with them and they have to deal with an injury.

At the same time, I am well aware that even when an athlete does everything right in terms of preparation and using proper technique, he can still get injured. That's because there are so many variables to deal with when an athlete is striving to improve the top-end numbers on several exercises and also pushing the workload higher and higher. The major variables are rest, nutrition, biorhythms and, perhaps most important of all, mental stress.

The weather also takes its toll. Many athletes get injured when cold weather rolls in and they don't take the time

to thoroughly warm up before training. Extremely hot weather can take its toll, as well. If water-soluble vitamins and minerals, along with plenty of fluid, aren't provided, muscles and attachments can be dinged.

Then there are the old injuries to contend with. Any joint or area of the body that has been hurt previously is more prone to being hurt again later in life. That pulled hamstring you got while playing football in high school is more likely to be hurt again than the one that was not dinged. When I first started adding long runs to my fitness routine, I turned my left ankle at least once a month. It's still my weaker ankle, and if I overwork my ankles doing lunges or squats, that's the ankle that gives way first. Over the many years that I have been weight training, participating in a wide variety of sports, and been through minor and serious accidents of one kind or another, I have probably injured every body part in some manner, which means I have to pay attention and make sure I warm up properly before putting my body under stress, both in and out of the weight room.

Finally, some dings develop over a long period of time and can't be traced to any singular event. Rotator-cuff injuries are often like that, as are problems in the back and hips. These dings don't necessarily mean the athlete used faulty form on the exercises in his routine. It's simply a matter of accumulated workload over the years finally taking its toll. Constant heavy training is not conducive to long-term health. But many strength athletes cannot switch from lifting heavy to a more sensible regimen of higher reps and lower poundage. This is especially true for those who keep pounding away on their upper bodies. That's why the two most abused parts of the body are the elbows and shoulders.

If this sounds as if I'm a doomsayer, I'm not. I'm an advocate of training throughout a lifetime. I'm simply stating a hard and fast truism. Train diligently and you're going to get hurt. The key to being able to continue to train is the ability to deal with any injuries that occur along the way. And unless the injury is a serious one that requires the attention of a medical specialist, I believe the burden of healing that injury falls on the individual himself.

Working Around Injuries

Perhaps my view of managing injuries is a result of my history. I began lifting weights in the mid-'50s, when everyone who wanted to get stronger devised his own routine, and when he got hurt, he also figured out how to deal with the problem.



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Athletes can still train while injured, but they need to be smart.

Back then there were very few doctors who knew anything about rehabilitating injured athletes—even on the professional level. Mickey Mantle was a perfect example. Over and over he hurt his knees. The doctors would stabilize a knee, have him rest and give him pain pills, and after a period of time, they would send him back to the lineup. It's not that the owners or the team doctor didn't care, because they most certainly did. They simply did not know how to get those knees strong enough to withstand further stress. With proper treatment, such as that available today, Mantle might have played another 10 years, and it boggles the mind what he could have accomplished.

In the mid-'60s, when I moved to York and became a member of the York Barbell Club lifting team, I met perhaps the two most knowledgeable men in the entire country on the subject of rehabilitating injured athletes. Dr. Russell Wright was the team physician for all three major sports teams in Detroit, Michigan: the Red Wings, Tigers and Lions. Dr. John Ziegler of Olney, Maryland, was the person who formulated Dianabol, the first anabolic steroid that athletes used to enhance strength. He also invented the Isotron, a machine that could contract the

muscles of bedridden patients. Both physicians specialized in rehabilitation, and both did remarkable things.

When Bob Bednarski dislocated his elbow at the Pan-American Games in Winnipeg, Canada, in '67, he was immediately sent to Detroit to be treated by Wright. Ziegler was the team physician for the U.S. Olympic and World Championship team and treated the York lifters, as well, but at the time he was in disfavor with York owner Bob Hoffman. Bednarski was in good hands. Exactly 100 days after he had blown out his elbow, he set an American record in the clean and jerk with 450 lb. at the Kutzer's Invitation meet in New York.

It was from these two competent men that I developed my philosophy of treating injuries. Instead of backing off and allowing nature to heal the damaged area over an extended period of time, I use the methods Wright and Ziegler recommended: immediately do something to feed blood and nutrients to the injured body part.

The main thing I stress to all of my athletes when they get hurt is to keep training. As could be expected, this goes against the grain of most trainers and team physicians.



Mike Markentin/CrossFit Journal

In consultation with care providers, injured athletes can often find ways to modify movements so they're able to keep moving.

They avoid this proactive approach for good reason. Should an athlete further damage his injury by training, they could be held responsible.

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I'm not worried about this happening because I know it won't if the athlete does what I tell him. In addition, I always insist that the athlete has the final word in any form of rehabbing. He knows his body much better than anyone else. So while sports-medicine specialists list "rest" as a favorite word, "stay active" are my favorites.

Training while injured is beneficial in several ways. It gives the athlete the opportunity to focus on other body parts that are lagging behind. When an athlete exercises, even without resistance, he is flushing blood and healing nutrients throughout his body, and that includes the dinged area. Whenever an athlete stops training completely when he's hurt, he typically also stops paying attention to his diet and taking nutritional supplements. And because he isn't exercising as he did previously, he doesn't bother with getting any extra rest.

But if he continues to train, he also continues the disciplines that greatly aid the healing process. But perhaps the most important reason for an athlete to keep training when he's hurt is that it allows him to be in control of his destiny and not completely dependent on someone else to make him 100 percent again. I really believe this active-involvement approach creates a much more positive attitude on the part of the athlete, which in turn results in a faster recovery.

Shifting Your Focus

Whenever athletes were injured at the University of Hawaii and Johns Hopkins, they were treated by the team trainer or team physician. Then they came to me and asked my opinion. In every case they had been told to rest. No exercising at all. I suggested just the opposite, even for those who would need surgery. The more fit an individual is when he has to have a surgical procedure, the faster he will recover. And there are plenty of exercises anyone can do that don't involve the injured joint, muscle, tendon or ligament.

For example, I advise anyone who is about to have knee surgery, hip replacements or back surgery to work their upper bodies extra hard, especially with dips. By making the shoulders and arms stronger, the patient can deal with using a walker much better than those who do not have strong upper bodies. Even with a bad knee or hip, an athlete can still do dips, seated presses with dumbbells, inclines, curls, triceps movements, lateral and frontal raises, etc.

I instruct these athletes to come to me as soon as they have the surgery. And they do because I explain my reasons. I have had several athletes show up in the weight room on the same day they were released from the hospital after they had knee surgery. I had them do a short, light session for about 15 minutes. I had them perform a couple of sets of bench presses with dumbbells with their legs straight, then seated curls, frontal and lateral raises—short and sweet.

One of the rules I have is that when they're rehabbing any sort of injury, they cannot take any pain medication for four hours before coming to the weight room. This is most important. They must be able to tell if any movement



Dave Re/CrossFit Journal

An injury to the upper body should be viewed as a chance to put some extra work in downstairs.

is irritating the injured area. To override the pain is a big mistake that can set recovery back weeks or even months.

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The main reason I want them to start training right away is it allows them to stay in the habit of training even if the training is rather easy. Once they get back in the pattern of working out, they're on their way to becoming fully healed—again, because they're controlling the process.

Perhaps the very best example of an athlete dedicating himself to train diligently while he was injured was Mike

House, an outstanding offensive lineman who maintained a 4.0 GPA over four years as a pre-med student at Johns Hopkins. He broke an ankle during a game on a Saturday. On Monday, he was in the weight room waiting for me when I arrived and asked me to give him a routine to follow while his ankle healed.

He was in a cast but wasn't the least bit despondent. On the contrary, he saw the task as a challenge. He had come ready to train and hadn't taken any pain pills since the night before. Squats and pulling exercises were out, but he could do a lot of movements for his upper body: flat and incline benches, seated dumbbell presses and dips. He was unable to do standing good mornings, but he could do them while seated. So I made that his primary exercise for his back. For his legs, he did leg extensions, leg curls and adductor work on machines without difficulty.

I told him his goal was to greatly improve his shoulder-girdle and lower-back strength during his rehab. He was willing and determined to do just that. Prior to the injury, he was handling 220 for 8 standing good mornings. Even



Dave Re/CrossFit Journal

When an injured athlete gets right back to some form of training, it helps sustain the momentum built up before the injury.

though the seated version is much easier, I still started him out conservatively with 185 x 5. Quickly, he figured out how to do them without putting any pressure on his injured ankle. He did the seated good mornings three times a week as the first exercise in his program. At each workout I bumped the numbers up just a bit. Baby steps. By the time he got his cast removed he was handling 280 x 10.

As a direct result of the increase in strength in his lumbar, he was squatting as much as he had before his ankle injury within three weeks of recovery. By the fourth week, his power clean also matched his previous best, and all the shoulder-girdle exercises had improved considerably.

Because he had worked hard while his ankle was in a cast, he had made himself stronger overall. Had he followed the regular course of rehabbing, done some physical therapy and rested, he would have lost a considerable amount of strength in that same period of time. He had, in fact, turned a lemon into lemonade. It's all about mindset and desire.



Mike Warkentin/CrossFit Journal

Safety and creativity are key when finding ways to train around injuries.

Smart Rehab

If any athlete is determined to get stronger, he will figure out how to train when he's injured. It will take some time and plenty of trial and error to learn which exercises can be done and which ones cannot, but it is extremely gratifying to know it lies in your power to heal yourself.

Of course, serious injuries have to be dealt with in a manner different than minor ones, although sprains, pulled muscles, tendonitis and sore joints can be as troublesome as broken bones or surgical procedures if they're not handled correctly. Often, most of these physical problems are handled by the athlete without consulting a doctor. In other words, you must learn how to treat yourself.

I have to believe every strength athlete knows the acronym RICE—rest, ice, compression and elevation—in relationship to treating an injury. The acronym helps to remember the four steps, but the order in which they are done is ice, elevation, compression and finally, rest.

The sooner you get ice on an injured area the better. Then elevate it if you can. This isn't always possible for some lower-back and hip injuries, but they can be compressed. Ace bandages work, although those wider, longer wraps that are used in powerlifting are best. It's important to know that you should only apply ice to an injured area for 20 minutes at a time. If ice is left on longer than this, it begins to act like heat, and you do not want this to happen. It will cause blood to rush to the hurt body part and results in more tissue being damaged. Ice as often as you can, but for no longer than 20 minutes at a time. Then rest the hurt area and try not to involve it in any strenuous movements.

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it's critical you understand the
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For most minor dings, such as sprains, strains or pulled muscles, you can start exercising after a couple of days. In the meantime, figure out how to work the rest of your body. Movement facilitates healing. If the injury is in your upper body and prevents you from doing any upper-body exercises along with squats or pulls, just walk. That will

cause blood to circulate through your entire body and will bring healing nutrients to the damaged area. As a bonus, the walking will also produce endorphins, hormones that activate the body's opiate receptors, causing an analgesic effect. In other words, they relieve pain.

I'll use strained biceps for my example. Curls are out, but you might be able to do triceps pushdowns on a lat machine or straight-arm pullovers. And wrist curls and lateral and frontal raises, or maybe even seated presses with dumbbells. No two injuries are alike, so time must be spent trying out various movements. Use very light weight and run the reps up to flush more blood to the damaged area. Try to find movements that hit the muscles directly above and below the ding.

When you're rehabbing an injury, it's critical you understand the difference between a dull ache and a sharp pain. If it's a dull ache, keep going. If it's a sharp pain like a knife, stop. And if it persists for some time, go see a doctor.

If, on the third day after the injury, you find you can do a freehand curl without any pain, it's time to go to work—but first do some experimenting. Try a variety of curling motions to find the one that's the least bothersome to the injury—palms up, reverse curls, hammer curls. In this case, regular curls are best. Do 2 sets of 20 with no weight. No more than that regardless of how easy they are. You want to get feedback before moving forward. That will come later on at night or the next day. If those 2 sets were OK, do 3 sets the next day. You're going to be doing the rehabbing six days a week. Then do 3 sets twice a day, and finally, three times a day. Ice the area after each of these therapy sessions, and wrap it and elevate it.

After three or four days, or when the injury is feeling much better, begin to up the workload by using light dumbbells for the curls. Fives are enough. Stay with higher reps. They bring more healing nutrients to the injury than lower reps. When 3 sets with the 5-lb. dumbbell is easy, start using 7 or 10 lb. And so on and so forth until your biceps no longer bother you.

This is a critical stage in rehabbing. Because pain is absent, it's easy to assume the injury is back to 100 percent. But it may not be. Here's the rule I follow: Even after an injured area is back to full strength, you should act as if it's still hurt. That means spending time warming it up thoroughly and icing, compressing and elevating for another two or three weeks. This precaution will keep you from re-injuring the area, and as everyone knows all too well, when you re-injure a muscle, tendon, ligament or joint, the rehab process is two or three times longer than the first time around.

When you're rehabbing, you absolutely must pay close attention to your diet. Build your meals around protein and take extra supplements. And perhaps most important to the healing process, get lots and lots of rest—at least an hour more than usual every night. Rest is crucial because when you are doing an exercise to rebuild a body part, you must pay strict attention to every single rep. One sloppy rep can set you back weeks and even months. That extreme concentration makes the nervous system work much harder than usual, and it takes longer for the nervous system to recover.

Stay Strong

Injuries are simply just a part of the ongoing process of getting stronger. No strength athlete I know of has ever figured out a way to avoid them. You really have two choices: You can lay off all training and wait until nature and medication help you heal. In that case, you will get a great deal weaker, and it will take a very long time for you to regain your strength. Or you can keep training and use the opportunity to improve strength in a weaker area while you're rebuilding the injured body part.

The bottom line is you can be hurt and stay strong or you can be hurt and become weaker. In my book that's a no-brainer.

Disclaimer: Exercise good judgment and, where appropriate, consult a physician before working through injury. As with all physical activity, it is your responsibility to evaluate your own medical and physical condition, or that of your clients, and to independently determine whether to use or adapt any of the information discussed in this article. This article is not intended to diagnose any medical condition or replace a health-care professional's opinion concerning the scope or extent of an injury.



About the Author

Bill Starr coached at the 1968 Olympics in Mexico City, the 1970 Olympic Weightlifting World Championship in Columbus, Ohio, and the 1975 World Powerlifting Championships in Birmingham, England. He was selected as head coach of the 1969 team that competed in the Tournament of Americas in Mayaguez, Puerto Rico, where the United States won the team title, making him the first active lifter to be head coach of an international Olympic weightlifting team. Starr is the author of the books "The Strongest Shall Survive: Strength Training for Football" and "Defying Gravity," which can be found at [The Aasgaard Company Bookstore](#).