



**Recover From Your Barefoot
Runs like Wolverine From X-Men**

by

Ben Greenfield

Let's make just one **giant** assumption and assume that you know all about Wolverine from X-Men.

You know he possesses animal-keen senses.

You know he competes like a super-human weapon.

You know he has retracting bone claws made from space-age metal.

And, perhaps, most importantly, you know he possesses a special healing factor that allows him to quickly recover from virtually any wound, disease or toxin.

Now, let's make another **huge** assumption.

Assume that Olympic swimming phenom Michael Phelps was built just like Wolverine, and was able to instantly fix any shoulder injuries. Assume that uber-cyclist Lance Armstrong could immediately bounce back from any knee or hip injury, stronger than ever. Assume that every Kenyan marathoner that ever stepped foot onto the hallowed ground of the Boston Marathon could rapidly eliminate stress fractures, inflammation and joint degradation. What would professional sports look like? Pretty powerful, huh?

Now assume that **you** have those same powers. Any time your shoulder starts to ache, your hip sockets begin to burn, or that creeping sensation of discomfort begins to spread throughout your feet, you can force a rapid reversal of the injury and heal your body...

...just like Wolverine from X-Men.

If you think that would be a pretty special power to possess, then keep reading, because the next 17 pages are going to tell you the advanced methods and insider secrets that the world's top athletes, physical therapists, physicians, and athletic trainers use to recover at lightning speed, re-build connective tissue and bounce back from nagging aches and pains, without actually injecting space-age metal into bones.

Prepare your mind to be blown away as you learn these advanced concepts that you aren't going to find anywhere else.

1. Glucosamine Chondroitin

So perhaps you've heard of this before, eh?

Here's just a quick clarification, in case you're not familiar with glucosamine or chondroitin. Glucosamine, an amino sugar, can promote the formation and repair of cartilage. Chondroitin, a carbohydrate, is a cartilage component that can promote water retention and elasticity and also inhibit the enzymes that break down cartilage.

Both compounds are manufactured by the body, and completely necessary for proper joint lubrication and cartilage regeneration.

Now I know what you're thinking...*my Aunt Gertrude used the stuff for two years and said it was a bunch of snake oil.*

You know what? Your Aunt Gertrude was right. Kind of.

Glucosamine and chondroitin all by themselves don't work too well. However, when combined with a cocktail of organic and natural ingredients, including traditional herbal and botanical joint support, collagens and minerals, the stuff gets magnified and works pretty damn well. Here are three vital components you need to look for in a glucosamine-chondroitin blend:

-proteases, like bromelain, papain, amylase, lipase, cellulase and peptidase...

-natural anti-inflammatories, like cherry juice, ginger, turmeric, white willow bark, feverfew or valerian...

-a mineral blend, like calcium, magnesium, silica and l-carnitine...

Once you put all those components together, you'll really feel the enhanced effects of the glucosamine-chondroitin, and fortunately for you, quite a few supplement companies are now including those vital components in their brands.

These are generally in pill form, and you take them orally, in most cases 2-3x/day (and yes, it does work better if you spread it into several daily doses). I personally like the stuff that comes from goats, called CapraFlex, and to learn why I like goats vs. cows, just [go here](#), where I interview a goat farmer scientist guy.

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2. Vitamin C

Yes, the healing properties of vitamin C go beyond simply popping a few Airborne before you get on an airplane or visit your sick relatives.

Back in the 1940's, during World War II, physicians began routinely giving their surgical patients 1000 mg of vitamin C daily for three days before surgery, followed by 100 mg of daily C during recovery. These docs reported in the British Journal of Surgery reported that wound disruption, or failure of wounds to heal properly, decreased by 76 per cent.

They then found a a three- to six-fold increase in wound strength, reported in the New England Journal of Medicine, and then Russian researchers showed that surgical patients who supplement with Vitamin C are discharged from the hospital one to two days earlier, compared to individuals who receive no Vitamin C.

This all makes perfect sense, since Vitamin C plays a critical role in collagen formation, and collagen is the primary component of connective tissue, and is essential for repair and healing.

Vitamin C also increases the activity of enzymes critical to normal metabolism, works as an antioxidant that limits free-radical damage to tissues, and boosts the growth of fibroblasts and chondrocytes, which are cells that produce connective tissue fibers and cartilage.

Sure, your gut might hurt a bit at 1000 mg of Vitamin C per day, but your wounds and injuries could certainly heal faster.

Just do yourself a favor and don't get your C by chugging orange juice, since the OJ is high in acid-producing sugars that can actually retard recovery, which I actually talk about in point number 5 of this manual.

When it comes to Vitamin C, I prefer to blend it with Antioxidants, so I go for [this stuff](#) or [this stuff](#).

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3. Iron

Research at the Center for Sports Medicine in San Francisco examined 101 female high school runners were monitored over the course of a cross-country season, and found that runners who were injured had average ferritin levels that were about 40-per cent lower than those found in non-injured runners.

The runners with the lowest ferritin concentrations had twice as many injuries as the runners with highest ferritin.

What the heck does that have to do with Iron? Simply put, ferritin is your body's critical iron storage protein. The idea is that since iron is a key component of hemoglobin, the compound which carries oxygen to muscles and other tissues, it's possible that athletes with low ferritin have decreased oxygen delivery to tissues, become fatigued more easily during workouts and races, and then end up with exhausted muscles that are less able to stabilize and support the knees and ankles – which were incidentally the two primary sites of injury in the study above.

Furthermore, Medicine and Science in Sports and Exercise suggests that low ferritin might also decrease the rate at which muscles and connective tissues are repaired, allowing minor injuries to mutate into major problems.

Iron-rich foods include meat, poultry, fish, eggs, fortified cereals, and darkly colored vegetables. Remember that each strategy in this manual builds upon other strategies, and one interesting fact is that vitamin C enhances iron absorption. Interestingly, so does cooking with cast-iron frying pans, since some of the iron from the pots winds up in your food.

But be careful. Very high levels of iron may be linked with an increased risk of heart attack., and excess dietary iron can inhibit the absorption of another crucial injury recovery mineral called zinc. Be cautious with increased iron intake, and also consider a ferritin supplement, like ferritin pyrophosphate. If you send them a drop of your blood, a company called [Bioletics](#) can actually test your ferritin levels, along with a wide range of other performance and recovery factors.

Work with a certified nutritionist or physician to make sure you're not overloading your body with too much iron, but definitely consider this supplement as part of your recovery protocol.

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4. Branched Chain Amino Acids

There are three branched chain amino acids: leucine, isoleucine, and valine. To understand how they work, imagine what happens when you're injured.

If you suffered from physical trauma, you need to rapidly manufacture new body tissues, while making sure that any cells not affected by the injury remain healthy and viable. To quickly create the new body tissues, you must utilize amino acids to assemble new proteins, which will be the construction material for rebuilding muscles, tendons, and ligaments.

Branched chain amino acids (BCAA's) provide the building blocks for the proteins, and have a unique capacity more powerful than other amino acids that allows them to boost protein synthesis and inhibit protein breakdown.

Of all the BCAA's, leucine seems to be the most potent, but I personally use a supplement brand called [Wicked Fast Recoverase](#) that contains all three branched chain amino acids, along with a range of other compounds called proteolytic enzymes.

Natural sources of BCAA's include many dairy products, whey protein, and red meats. Isoleucine is found in most food sources and is high in meats, fish, and cheeses; leucine is found in such foods as beans, brewer's yeast, brown rice bran, caseinate, and corn; and food sources of valine include soy flour, cottage cheese, fish, grains, mushrooms and peanuts, meats, and vegetables.

Most whey protein supplements will also provide the BCAA's.

In addition to the BCAA's, methionine, cysteine, and glutamine are three other beneficial amino acids for endurance athletes. The first two can stimulate production of glutathione, a powerful antioxidant that assists in recovery from intense exercise bouts, as well as supporting immune and liver function. Glutamine also helps to preserve and rebuild lean muscle tissue.

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5. The Wolverine Diet

Diet is a key part of inflammation-fighting, and some foods have amazing anti-inflammatory properties. Here's the overview of a Wolverine eating plan:

-Avoid cereals and grains. Among the top culprits are breakfast cereals, non-sprouted bread, and pasta. Instead, choose gluten-free cereals, or whole grains like quinoa, amaranth, and millet.

-Eat dark-skinned fruits and vegetables. Pomegranates, cherries, blueberries, plums, artichokes, spinach and broccoli are excellent.

-Eat cold-water fish. Salmon and mackerel are best.

-Drink green tea. Or take a green tea extract, like Thermofactor.

-Eat nuts. Walnuts, almonds, pecans, pumpkin seeds, and flaxseeds are highly effective anti-inflammatories.

Here is a sample daily meal plan that fights inflammation:

-Breakfast: 1 cup cooked quinoa with handful of blueberries, 1 tablespoon almond butter and dollop of yogurt. Take glucosamine chondroitin prior to breakfast

-Mid-morning snack: Plum, 1 cup unsweetened pomegranate juice, or handful of cherries. Include 1 handful of walnuts, pecans, or pumpkin seeds.

-Lunch: Steamed broccoli with one baked sweet potato and 2 boiled eggs.

-Mid-afternoon snack: One slice sprouted bread with goat cheese and avocado.

-Dinner: Steamed spinach with salmon cooked in olive oil and seasoned with sea salt, cayenne and turmeric.

-Dessert: 1/2 bar dark chocolate dipped in yogurt.

-Post-Workout: take vitamin C, branched chain amino acids, and iron.

It is completely up to you if you really want to be like Wolverine and catch the salmon with your bare hands.

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6. Physical Therapy Secrets

You will likely need a physician's prescription prior to utilizing the physical therapy modalities discussed in this section, but that's sometimes as simple as going to your doc, pointing where it hurts, and telling him you have to heal ultra-quickly and you need physical therapy modalities to do it.

Once you get to the physical therapist, understand that they're trained to put you through a ton of different tests and small, seemingly ineffective exercises, but ultimately, it is probably in your best interest to convince them to pull out the big guns if you have an injury that needs to go bye-bye ASAP.

Here's what I highly recommend, and what has worked like magic for me with many injuries:

For most chronic inflammation or overuse injuries, use a combination of electrical stimulation and ice, at the same time. Once that is done, or at a different time of day, move on to ultrasound, then finish with another icing session.

You will also need to speak with your physical therapist about the individual settings and intensities for ultrasound, electrical stimulus (e-stim) or e-stim combined with compression icing.

If used properly, these modalities can be highly successful at decreasing inflammation and rapidly accelerating healing time.

The ultrasound and e-stim methods can also be used to "warm the muscle" prior to competition or training, as both will improve tissue elasticity. Other electrotherapeutic treatment techniques you may find useful at the physical therapist are TENS and interferential. Some therapists will combine this treatment with hydrocortisone or a similar topical steroid preparation.

You may need 4-6 weeks of these treatments for complete healing, *but I have personally done 3-5 consecutive days of physical therapy and watched injuries completely disappear.* Take home message: don't waste at physical therapy. Get in, get your modalities, and get them often. Call your insurance company or speak with your physician about getting these treatments into your program as soon as possible. And yes, you can be insistent, even though you don't have metal claws.

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7. Water Running

A barefoot running injury can require low-impact or non-weight bearing exercise to maintain fitness and improve blood flow to the injured area for enhanced healing. Sometimes creative, non-traditional methods are necessary to maintain peak aerobic fitness without causing damage to an injury. Research has shown that non-impact water exercise offers this benefit, and this activity is utilized by quite a few pro triathletes and marathoners.

Non-impact water running requires a few different pieces of equipment:

1) Aquatic Shoes (optional). I wear the [AQX Aquatic Training](#) shoe. With strategically placed vents and fins, these shoes allow you to achieve 2-3x the cardiovascular intensity when compared to simply running in your bare feet. Trust me, I also tried wearing an old pair of running shoes and they were soggy, heavy, and very non-fluid. AQX shoes make it so easy to actually get your heart rate up and keep it there, which for me was one of the more frustrating aspects of water jogging before I started wearing them. In bare feet, you have to pump...and pump...and pump the legs at a very high turnover to achieve any type of training effect heart rate. The shoes fix this, and providing resistance, flow impedance, and increased muscular recruitment.

2) Flotation Belt (required). Some pools actually have these available, typically somewhere near to the pull buoys and kickboards. I personally use [the Speedo swim belt](#), which is comfortable and doesn't leave the little rubbing marks and blisters on my stomach like some of the belts at the pool. A belt is a must, since you must ensure that a part of your torso is above the water or you will spend too much energy attempting to stay afloat.

3. Tunes. In my opinion, audio is a must, since there's not much to look at while aqua jogging (although I have been tempted to bring all my aqua jogging gear to a local lake on a sunny day...). Here is what I do:

-take a small sandwich ziplock bag

-drop an mp3 player inside the bag

-thread the headphones out the top of the bag

-seal the bag

-then affix the bag to the side of my head with my goggles strap

This homemade solution works pretty well. Another option is an actual underwater mp3 player. A relatively new one on the market, the [Nu](#)

Technology 2 GB Waterproof MP3 Player is convenient because you can also use it while freestyle swimming, and it doesn't actually mess with the audio quality like some of the other brands.

I would consider Nu Technology the cadillac of underwater mp3 players. But [check out this link for a wide range of other waterproof/underwater mp3 players.](#)

Form will be important. The AQX Aquatic Training shoes include a DVD that teaches proper form for regular deep water running, deep water cross-country skiing, and shallow water plyometrics/running drills.

Here's the basics of proper deep-water running form:

-Lean forward.

-Bring the knees up towards the chest and kick back through full range of motion, exactly as you would when running, but slightly more exaggerated. Imagine you're running up a steep hill.

-Pump the arms vigorously, but leave the fists closed.

-Avoid a straight up-and-down posture with a piston like up-and-down movement of the legs. This is more like bicycling, and won't stimulate the running muscles as much as leaning forward and kicking through the range of motion.

-And yes, for those of you wondering, you can jog in a stationary space, but it is more interesting and beneficial to actually move forward, such as down and back in a lap lane.

Finally, let's look at workouts for water running. Depending on your level of physical activity prior to injury, you should comfortably be able to perform 2-4 water workouts per week. Do not push through pain.

Workout 1 Skills:

This workout offers multiple benefits - it works on running form, intensity, and muscular strength:

5 minute warm-up (i.e. 3 laps running)

1 HARD exaggerated running effort at max capacity for 1 length of the pool, then easy jog back

1 HARD “heel-to-butt” kick effort for 1 length of the pool, then easy jog back

1 HARD “high-knees-running” effort (knees come all the way up to chest), then jog back

1 HARD “cross-country ski” effort (straight legs, straight arms), then jog back

Repeat these HARD efforts as a circuit, going 2, 3, or 4 times through. Workout time will range from 15-30 minutes, depending on how many circuits you perform. Cool-down jog for 5 minutes.

Workout 2: Aerobic

This is a steady-state cardiovascular workout.

Warm-up: 10-minute easy jog

Main Set

2 minutes straight leg kick; driving from the hip with toes pointed down

10-minute steady-state run

2 minutes straight leg kick; driving from the hip with toes pointed down

10-minute steady-state run

2 minutes straight leg kick, driving from the hip with toes pointed down

Cool-down: 10-minute easy jog

Workout 3: Intervals

This is a hard-easy interval style workout.

Warm-up: 10-minute easy jog

Main Set

5x 20 seconds hard, 40 seconds easy

4 to 6x 90 seconds hard, 3-minute easy

Cool-down: 10-minute easy jog

Workout Total: 43-52 minutes

Workout 4: Pyramid

Warm-up: 10-minute easy jog

Main Set

1 minute hard, 1 minute easy

2 minutes hard, 2 minutes easy

3 minutes hard, 3 minutes easy

4 minutes hard, 4 minutes easy

5 minutes hard

Cool-down: 10-minute easy jog

Since water-running is non-impact, if you are pain-free with this type of activity you can perform sessions every day if desired. If water running is 100% pain-free and you want to maintain fitness, find a pool with deep water, get your gear, and begin at least one time per week.

Please do not damage the pool with your claws.

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8. Transdermal Magnesium

To truly get a rich, multi-media experience that explains how transdermal magnesium therapy actually works, you should [click here and listen](#) to a great interview about a shocking compound that pharmaceutical companies would probably prefer you did not know about.

After I interviewed this physician, and actually got my hands on some magnesium oil, I began to use it regularly on my sore limbs.

But the first time I was truly exposed to it's powerful healing properties was when I was recovering two days after a long 2.5 hour run on the concrete, and had excessively sore feet.

Prior to my afternoon swim, I was putting some magnesium oil on my **shoulders**, and accidentally spilled some all over the floor. I thought "What the heck, my feet are sore, why not mop it up with my feet". So I did.

By the time I arrived at the pool twenty minutes later, the soreness in my feet had completely disappeared.

BOOM!

The sad fact is that 75% of athletes are deficient in magnesium and don't even know it. But it can rapidly accelerate healing, and I'd highly recommend it as a topical anti-inflammatory.

I personally use a brand of [magnesium oil developed in Europe and called "Ancient Minerals"](#), and this is the same brand that all my coached athletes utilize.

While you're rubbing magnesium on your joints, you might also want to look into a few other good topical anti-inflammatories that work in different ways than magnesium. Check out Arnica, Wobezymes, and Traumeel. You may be able to find them in your local grocery store.

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9. Get A Wolverine Core

It's highly likely that you've heard about this concept before...

...build up the core musculature so that your hips, knees and feet don't have to take as much of a pounding.

It's totally true. When it comes to recovery, you're going to bounce back faster if your feet and other critical joints don't have to work quite as hard.

Here are my favorite exercises for strengthening not only your core, but also your glutes, hips and thighs, which will all help you to recover faster if you have to run through an injury. Heck, most of these exercises you can do *while injured* just like water running.

-Fire Hydrants – [click here](#)

-[Gymstick](#) Leg Swings

-[Elastic Mini-Band](#) Side Steps

-Side Plank Rotations – [click here](#)

-Mountain Climbers – [click here](#)

-Corkscrews – [click here](#)

-Get-Ups – [click here](#)

To see a core workout in action, check out this complete core workout video that I filmed (get it by [clicking here](#)) and this short, but highly effective workout for butt, chest and core (get it by [clicking here](#)).

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10. Tape

I'll bet you didn't see this one coming.

That's right, there are actually special types of tape and special taping methods out there that can actually stabilize your joint and allow you to run with an injury, and also place that injury in a position where it can heal faster.

Unlike traditional athletic tape which binds and doesn't stretch, certain forms of something called "kinesiology tape" are engineered to mimic human skin, with the ability to stretch to up to 190% of original length but still retain 'snap-back' or recovery.

To achieve this, a weave in the tape will stretch in only one direction and the tension of the weave is engineered to mimic the same elasticity as skin. This means that the tape can lift the skin away from the soft tissue underneath the skin, thus promoting blood flow and lymph drainage.

A kinesiology tape like this can also be used to stabilize muscles and joints that have been sprained or hurt.

Unlike braces and sleeves that constrain and reduce blood flow, tape can provide support and stability while still allowing for increased blood flow, making it well suited to the repair of localized muscle groups.

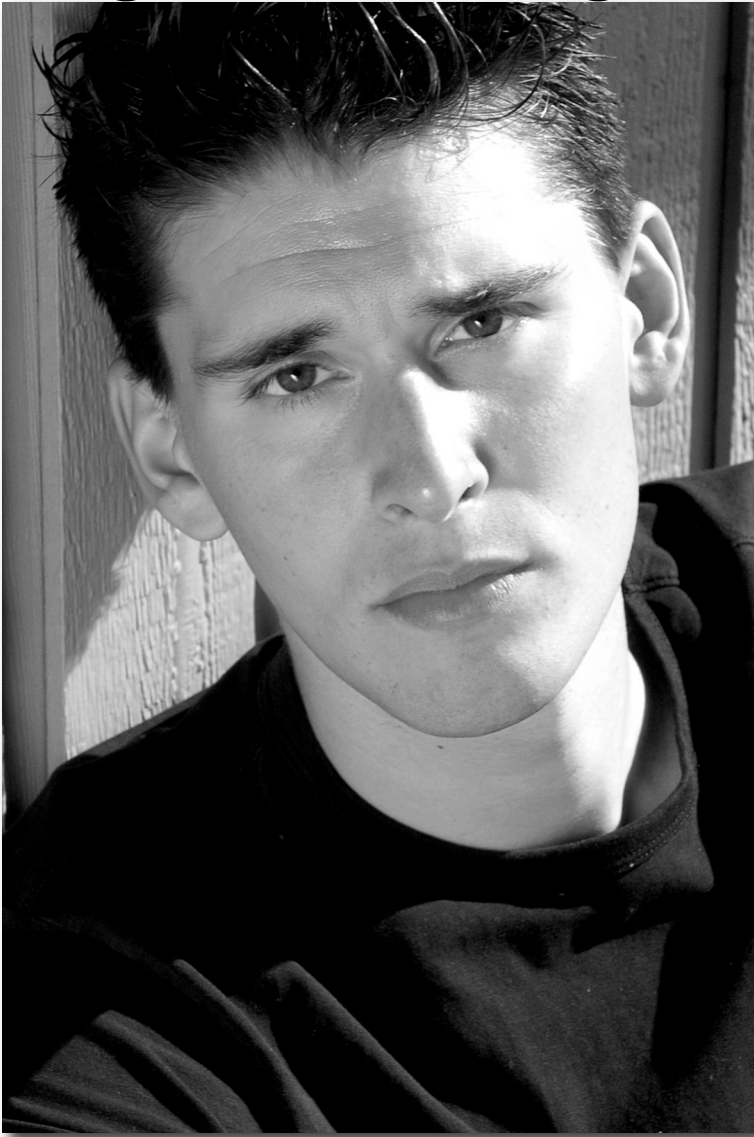
As a matter of fact, I interviewed a guy who developed tape like this on my free health and performance audio podcast, and you can [click here to listen to the interview](#) and check out more information on this type of tape. During the interview, and in the show notes to the interview, there are instructions to get to a video page full of self-taping techniques for a wide range of injuries.

Whew.

You made it. So let's sum everything up in a single paragraph. You're barefoot running, you got injured and you want to bounce back like Wolverine – so here's what to do: grab glucosamine chondroitin, vitamin C, branched chain amino acids, magnesium oil, and ferritin or iron, feed yourself the Wolverine diet, start water running and working your core to maintain fitness, go get shocked under ice at your physical therapist, and throw some tape on the injury.

Action gets results. Manage your injuries properly, just like the pros do. Best of luck!

About The Author



Ben Greenfield is a nationally recognized authority in sports nutrition, endurance sports training, fat loss, wellness and human performance.

Ben offers a free blog and podcast, which you can access by [clicking here](#), and has authored a wide range of highly entertaining and practical books and DVD's about sports performance and nutrition, including Run With No Pain, The Triathlon Dominator, Bulletproof Knee, and much more.

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