



BarBend and  
Pro Strongman Michael Gill Present:

**THE**  
**ULTIMATE**  
**GUIDE TO**  
**STRONGMAN**  
**CONDITIONING**

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## 1. INTRODUCTION

**“Don’t let fatigue make a coward of you.”  
-Prefontaine**

Just a few hundred yards from the shores of Lake Erie, 45 athletes battled in the farming town of Dunkirk, NY for the title of Western New York’s Strongest Man. The 200lb class saw two men tied on points going into the the last event; the sled drag. They were to race head to head on grass pulling 400 pounds on a flat bottomed sled. With a stopwatch in my hand I would time the athlete in the right lane.

In these situations, even as a “neutral” judge you can’t help but cheer on the athlete. The strain of the weight on the athlete makes the legs turn weak and the lungs fill with fire; you feel you must give them your energy. While yelling is all you can do, you know it helps drive them deep down.

The two men stayed neck and neck for the first 75 feet. You could see the sleds slowing on both and their feet nearly unable to maintain pace without falling. It was any man’s race, until the athlete in my lane turned his head and made eye contact with me. I upped my tone and screamed:

“Go! Go! It’s yours, 25 feet!”

His eyes told the real story though. When he looked up at me he wasn’t looking for encouragement. He was looking for compassion. Fear had crept in. The full body pain had convinced his mind that it would be over the second he stopped. He was tapping out, and his eyes revealed the mental decision to do so because of the pain.

He stopped and put his hands on his thighs. The other competitor kept moving. The brief break he took snapped him back to reality and he started moving again. It was too late though; he finished a second behind, in second place, beaten by pain and fear.

Now in the Strongman game, that’s the worst way to lose. This athletic contest combines power, strength, endurance, and conditioning into one package. Ignore any of those and you won’t be a champion.

Quite frankly, you don’t deserve to win.

-Michael Gill

## 2. TERMS FOR THIS GUIDE

**Aerobic exercise:** Long duration of sustained activity. For our purposes, we will count anything longer than 90 seconds. A lower heart rate for a long period of time (like a 1 mile run). Oxygen is the primary fuel source.

**Anaerobic exercise:** Short, high intensity movements lasting 90 seconds or less. The body uses both oxygen and glycogen for fuel in high amounts.

**Hypertrophy:** Growth of existing muscle fibers.

**Hyperplasia:** Addition of new muscle tissue.

**Muscle fiber types:** The body contains different types of muscle fibers that support different types of activity. Slow twitch (I) are used for aerobic activity and fast twitch (IIA and IIB) are used in anaerobic exercises.

## 3. THE DEMANDS OF STRONGMAN AS A SPORT

The evolution of Strongman has delivered a dynamic sport with a mix of static and extreme anaerobic endurance events. The athlete must not only have high limit strength, but be capable of movement or repetition of an activity under extreme stress. Many competitors love finding their maximum for a single on a lift, but don't work as hard at testing the upper levels of their endurance. Adjusting your training to become a better conditioned athlete has multiple payoffs and if done correctly can even increase your maximum attempts.

The human body is the most athletically diverse of any animal on the planet. An examination of any species will show how the entire population is specifically adapted to be good at one task any typically poor at most others. Our closest living relative, the chimpanzee, is three or four times stronger than a human of comparable size, but can't swim. They also have much less control over their muscles, limiting their abilities to do certain tasks we find easy. Chimps are basically stuck with the way their muscle operates.

Homosapiens can run, throw, swim, and jump, expertly. These diverse activities require us to learn them, then develop our skill level through training. For simplicity's sake, the more often you do a certain activity the better you become (adaptation). Since you only have a limited amount of time, you must decide how to spend your time in training. Your body responds to this by converting muscle fiber types based on the needs of your activity. This limited ability in Chimps makes us the jack of all trades.

There is a cost to this process, though. Human muscles do not have a serious ability to hyperplasia, but instead undergo a process of hypertrophy. The more we do an aerobic activity, the more our muscles will become specifically adapted to Type I fibers. The more we do anaerobic exercise, the more Type IIA and IIB fibers we develop. Lifters (generally) want as many fast twitch fibers as they can in order to maximize size and strength.

Aerobic exercise is used to increase an athlete's capacity to perform at a low intensity over a long period of time. As a tool for Strongman, it only has an indirect capacity to improve their game. Over-application has potential to wear the body down, impede recovery, and actually shrink muscle fibers. The numbers though, when applied thoughtfully, show a good base of aerobic training can help in the following ways:

- 1. It improves your fitness:** Having a lower resting heart rate and improved blood flow is helpful in recovery. The after effects also help stimulate your need to rest, triggering the recovery response.
- 2. Being in better shape translates to more effective training sessions:** Your recovery time between sets, and overall ability to perform well improves when your Aerobic base has improved. You demonstrate improved cardiorespiratory fitness handling a workload.

The real name of the game, though, is ANAEROBIC training. When pressed, most athletes will want to spend most of their time here in the short-term zone, improving not only lung capacity, but impacting and converting more muscle fibers to Type IIA and IIB. You have a multitude of ways to do this and we will break down a training plan for each. There are a few keys to maximizing your results with this training:

- ➔ There are benefits to a multitude of ways to train anaerobically; choose ones you like best that correlate to your goal.
- ➔ Keep the impact to the body as low as possible. The heavier you are, the more running and jumping take a toll on the body.
- ➔ It pays to get very intense here. If you are going to get in shape you really can't sandbag these workouts. Really investing in being in your top heart rate zone will pay off the most long term.

A subset of anaerobic training we need to discuss is the ability to perform a ton of reps during an event, if necessary. Strongman events can require extreme muscular endurance (EME). A car deadlift for reps may see you doing 20 reps in sixty seconds. Even five reps with a weight near maximum capacity works your endurance, so you won't neglect training those reps ranges either.

## 4. APPLICATION OF CONDITIONING TO SPORT

So how does all of this come together? The simple answer is to do the right ratio of all of it. The difficulty lies in figuring out what that is.

Thankfully we can make some basic assumptions because when dealing with a large sample size we increase our confidence interval. In plain language: things that work for large groups of people tend to work for most people. If you make a commitment to improving your conditioning and start with what works for most athletes to begin with, then make adjustments based on your own personal experience.

**Aerobic:** No matter what benefits are touted, a large portion of athletes will not do aerobic training. The reasons are simple: they fear losing weight, and most importantly, they despise it. There may be an initial weight loss, but the metabolism will respond to this quickly and can be avoided altogether by just off setting the calorie deficit created through nutrition.

*(If you are to burn 400 calories per cardio session you can simply add those calories into your nutrition plan and keep an eye on the scale.)*

I can't help you if you hate it other than by telling you to suck it up and distract yourself through traditional means such as music or TV. People who like aerobic activity tend to do it voluntarily and regularly. You aren't alone if you think this is a psychological disorder but the DSM 5 does not agree with us.

You don't have to get crazy here! Two sessions per week of 45 minutes at 50 to 85% of your maximum heart rate provides plenty of benefits for the athlete. For Strongman I would recommend very low impact activities that won't cause joint soreness or exhaust the legs.

Activities that meet that criteria are:

- ➔ Elliptical
- ➔ Fast walking on a slight incline
- ➔ Jacob's Ladder
- ➔ Rowing
- ➔ Swimming
- ➔ Paddle boarding
- ➔ Dancing (turn a night out into a cardio session)

I would avoid the following types of cardio for regular aerobic conditioning, either due to being high impact or exhausting specific muscle groups:

- ➔ Cycling or spinning
- ➔ Road running
- ➔ Jump rope
- ➔ Boxing

Like I said, though, everyone is different, and these lists are far from absolute or comprehensive! If it works for you, it is much better to do it than nothing at all. At a minimum, work this into contest prep for 8 weeks. Most athletes can handle 50 weeks of this per year though, and your recovery between events will thank you.

The real deal, though, in possessing a solid game is your short term anaerobic state. Having about 90 seconds of ability to perform at near maximum heart rate will give a punch to your game that many athletes need to get to the top of the sport. Well conditioned Strongmen will out-perform stronger, less conditioned athletes every time.

- ➔ **Ability to handle the stress of a high intensity event:** Take two competitors of similar strength and put them head to head on the sandbag carry. Competitor A does little or no conditioning, but competitor B does full year conditioning work. If both athletes train the event for 8 weeks I will guarantee B gets further than A during contest time. Why? The reasons are twofold. Going into the specific training segment, B would have a higher work capacity, allowing him better distance from the start of training.

Since he went further from the get-go, his maximum at the end of eight weeks should be higher. Secondly, the carry will affect his overall training less negatively since the body isn't having to recover the anaerobic system from scratch. It already has a base to work off and make smaller improvements. This affects his regular training much less.

- ➔ **Decreased recovery time between events:** After A and B finish the carry they have one hour until the next event. While A is somewhat smoked B is used to the lactic state and feels good after just a few minutes. It may take A's system 30 minutes to relax and come back to normal. B's blood pressure is lower, stomach is ready to digest and his brain is back on track much more quickly. The same is true during training.

## 5. HOW TO TRAIN CONDITIONING FOR STRONGMAN

### Pure Anaerobic

I've touted the [benefits of sled push and drag work here](#). Those are a solid way to put two days of conditioning into a year round program. Let us go over a few more:

- ➔ **Sprints:** 50, 75, and 100 meter distances are an excellent way to become much more dynamic and powerful while improving your ability to perform under stress without the forces of weights on your body. It's a great tool pre-contest because it's not an additional weight bearing exercise.
- ➔ **The Stationary Bike (Assault AirBike, for example):** The most dreaded tool at my gym was a Schwinn Copper from 1979. Athletes thought it was a joke until they had to do ten, 60 second intervals on it. Great news is you can get it cheap on the internet. Bad news is that it can actually slow your perception of time to a crawl. Consider yourself a beast if you can max the RPM's for the above RX.
- ➔ **Jump rope:** One minute of unbroken jump rope with a one minute rest until you do 1,000 jumps will test your ability to keep it together under pressure. To lower the impact, do them on a rubber mat or on the grass.

## Cardio/Weight Mix

- ➔ Ten Steps of hell squats: 10 sets of 10 reps with your body weight on the bar, for time. Not only will this work your legs' endurance, but your lungs and heart will work like crazy. A great goal is 15 minutes or less.
- ➔ Speed stones: Again I use a stone around body weight here and do a series of 10 loads. It's possible to get 10 in 30 seconds.
- ➔ Group farmers: Lightweight on the bar (100 per hand) and run them 100 feet. The next athlete runs them back, so on and so forth. Four people for 5 rounds.
- ➔ Circus DB cleans: Similar to a KB but helping your Strongman game, do max cleans to shoulder with a lower weight than you press. Alternate shoulders and do 5 sets at 45 seconds of work.

Don't be afraid to get creative here. The goal is to use a weight that is light enough to be a challenge but heavy enough to stimulate muscular endurance. From tire flipping to front carries, you can do anything you would do in contest, but staying shy of the actual weight.

Great results are achieved in year round conditioning with one day from the



pure anaerobic system and one day from the weights plus system. As you get closer to your contest you may feel the need to add in a third day, and I would make it a sprint session. This all assumes you are doing some sort of group work where you are training one high rep or medley event per week as well.

## 6. ONE OF MY PROGRAMMING “SECRETS”

Anyone can share the custom work I write out for them. I list exercises, reps, sets, but I do something fairly unique; I set time for my client’s rest intervals. This is a super sneaky way to up your gas if you don’t want to work in a bunch more conditioning work. Science knows what you need to get the energy back in your muscles after training, so resting much longer indicates your lung recovery is limited (*Gleim, Anaerobic Testing and Evaluation, Med Exerc Nutr Health 1993;2:27-35*). I gradually decrease rest over time from three minutes to as low as 90 seconds. Then I raise it back up when we are in peak phases.

To add this to your game requires actual discipline. You can’t go on endless chats between sets and you remain focused on your task; additional benefits that actually add to your game. It puts you in a constant training mindset. Your time in the gym is directed at the weights, not your social life. A small six week phase would look like this:

1. 3:00 min res per set: Weight training volume (WTV) at base
2. 2:30 min rest per set: WTV + 1 unit increase
3. 2:30 min rest per set: WTV + 1 unit increase
4. 2:00 min rest per set: WTV no increase
5. 2:00 min rest per set: WTV +1 unit increase
6. 3:00 min rest per set: WTV - 2 units decrease Supercompensation mini peek

As you can see, as the workouts get more volume, I am gradually decreasing rest per set. This should be due to increased work capacity. You will feel more fit and actually need less rest between sets. An example of this is elite weightlifters. They only make max attempts on stage. In a situation where they follow themselves, they have only a two minute rest period. A max clean &

jerk can put you at the top heart rate in just a few seconds. They must be conditioned to handle the stress immediately.

Science doesn't indicate a significant ATP change after two minutes. When athletes become used to training at two minute intervals their anaerobic system is really in top shape. This can really be one of the most effective ways to increase your ability to compete well, without much extra work. Most athletes will adjust after a month and begin to notice their poundages beginning to increase.

Gone are the days of being simply strong and training just for a specific contest. Today's Strongman athletes must constantly be improving their overall game and become a better athlete, with great anaerobic fitness being a part of that. Consider your goals, look at your weaknesses, and if your ability to stay in the overload zone is holding you back, it's time to get uncomfortable and get some gas.

## 7. FREQUENTLY ASKED QUESTIONS

### **How long does it take to start losing base and peak conditioning?**

Studies suggests that after not training for three weeks you should expect to lose about 20% of your Vo2 max (your ability to use oxygen). (*Medicine & Science in Sports & Exercise. 14(4):292-296, Jan 1982 A. ELIZABETH READY; H. ARTHUR QUINNEY*)

This loss seems to taper off to a 40% decrease over the course of nine weeks. So in two weeks you lose a significant portion of your adaptation and almost half is gone by two months of your base training.

### **What are some techniques for dealing with the dislike of doing those workouts?**

While most people just dull the pain of aerobic activities with media, it is much harder to do this with full out strongman intervals. Making a game or a contest out of the outcome is a good way to deal with the dread of speed farmer's just around the corner. Assigning points for a certain time will help you push yourself and other members of the crew too. You can also attach

chores to those not putting out a full effort like cleaning up after group training.

You can also have the talk with yourself. The one that goes: “Yep, I hate it. But to be the best I need this. The harder I work it, the better I get”.

Thinking that way should put a smile on your face.

### **Do I need to invest in special clothing and shoes?**

I’m one of those coaches who likes his athletes to squat in squat shoes, deadlift in flats, and do sprints in a running shoe. Your foot is the only thing in contact with the ground most of the time in strongman. The only time it is not, it is going to impact the ground with a significant force compounded by extreme weight being carried by the body. The material and its design are a tool you should use to better that contact and keep the foot safe. Shoes are worth it. As far as clothes go, no. Just wash what you wear, often.

### **What about ladders, cone drills, footwork etc...**

These things are great for making hard cardio feel more fun and athletic but they aren’t going to give you really much advantage on the field. Most well respected strength coaches give them the thumbs down simply because the way these things work don’t really contribute to building speed, but that's not our goal here. If you like doing these more than any other form of conditioning then do them! It is a great way to get moving.

## **8. ABOUT THE AUTHOR**

Mike Gill is a retired 105kg professional strongman and currently a broadcaster for Strongman Corporation. He has a background in all weight disciplines and has competed in Bodybuilding, Powerlifting and Weightlifting with a lifetime best 252 kg total. He can be reached for coaching at Michaelgill100@gmail.com, @prostrongman on Twitter, Snapchat, and Instagram, and on Facebook.

Read more from Michael Gill [here](#).



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