

# **Stairclimbing 101**



**X Gym Stair Climbing Boot Camp**

**Version 1.4**

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Welcome to the special X Gym stairclimbing boot camp! Stair climbing is a very unique sport, and is extremely sport-specific, so regular training has little crossover benefit.



What most people don't realize is that even recreational stair climbing is mostly mental. Among world class tower runners, it's 80% mental or more! The top 20 racers of any race are all in great shape, but the one who wins has the strongest brain!

It is the person who is best able to push past the fatigue, burn, physical pain and muscle failure that is able to win.

To get the gist of the brain thing, here is an example of the mistakes you could make in a climb like this and some of the thoughts you might have without training or receiving any tips on stair climbing:

Starting line: "I'm going to smoke this! I can't wait to fly past all those pansies. I sure hope they move out of my way, or I'm just going to have to mow them over."

Floor 4-9: "This is easy! I'm flying up this even faster than I expected!"

Floor 10: "Hmmm, I'm starting to slow down. What's up with that?"

Floor 12: "OMG! What the heck? I'm single stepping already!"

Floor 13: "Did someone inject lead into my quads?"

Floor 14: "Why is my butt numb?"

Floor 15: "How far to the next water station?"

Floor 16: "I have how many more floors to go?!?!?"

Floor 17: "Why are my lungs burning? Did someone spill gas in here?"

Floor 18: "Where are those little water brats?"

Floor 19: “Who’s crazy idea was this? I’m going to kill him/her!”

Floor 20: “Ahhh! Water! Maybe I can crawl under the table here and catch the next elevator back down...”

And so on, until you (may or may not) reach the top, way slower than you expected, only to find that you can’t stop coughing, are swearing you will never do it again, and are only thinking about slowly choking to death the person who suggested that you do this insane event.

It doesn’t have to be like this! With a few tips and a couple practice sessions, you will make it to the top with such a huge feeling of accomplishment and wonderful sense of contribution to this great cause, that you will be hopelessly addicted to this event every year!

### **Some Facts about Stair Climbing:**

1.) Stair climbing is easier on the joints than walking. The impact is drastically reduced when you climb. Even people with knee problems can do it!

2.) Going down however, creates more impact than running, so try to avoid this by taking an elevator. If you train outside, walk down with different angles instead of the same way every time.

3.) Tower running improves with age. The best tower runners in the nation are in their 30’s and 40’s. Some of the top racers in the world span into their 60’s! This is because of the low impact nature of the sport, and the huge mental aspect involved.

4.) Running (horizontal training) doesn’t have much crossover benefit to tower running (vertical training). Tower running however, does have great crossover benefit to running.

5.) “Track Hack” is the term used when vigorous exercise induces a cough. Middle distance runners (i.e. 800

meter to mile runners) notice it often. Vertical training (VT) athletes also notice it frequently, and some of the mountain runners even have their own term for it: “Hike Hack.”

This cough typically starts within a few minutes of the end of the event, and can last for up to 3 days. It is caused by extreme deep and heavy breathing, combined with an elevated heart rate. The harder you push, the worse it can get, but this gets better with training!

This cough happens because your airway becomes irritated and even eroded from the air passing over it with such increased volume and velocity, and some of the small blood vessels can even burst. Extreme athletes often notice a taste of blood in their mouth after intense exertion. The airway may also produce phlegm to try to protect and coat itself.

This cough is very common in tower running. Most people assume that it is due to poor air quality in the stairwell, or that there is excess dust, but that is not the case. It happens in any air environment, even outside in fresh mountain air. Some people even wear masks when they come back the next year, but this only slows them down because it restricts breathing and oxygen intake. Their cough may be less than before, but that is only because they were not able to breathe as hard or exert themselves as much.

I sometimes get the same effect in my nasal passages, and find myself sneezing for up to 3 days after a race that is more than 80 floors.

The best way to reduce these symptoms is to train with progressive intensity so your airway and heart strengthen with your muscles. With some training like stairclimbing, brisk hiking, or high intensity interval training, you can minimize this drastically.

6.) VT is the fastest way to increase your cardio endurance. A 10 minute VT session is equal to about an hour or more of horizontal steady state running!

7.) VT burns more fat than other type of training (besides X Gym workouts of course). After a few VT sessions, your body learns that it has to adapt to this new activity. If you push hard when you train and don't let up when your legs and lungs tell you to, your body will assume that you have moved to a very hilly area with lots of saber-toothed mountain goats, and you must be running away from them for survival. It therefore adapts by making you lighter. It also realizes that you need stronger muscles for faster escape, so it selectively chooses the fat to burn off since that is a non-contributing tissue when it comes to retreating from the saber-tooth mountain goat attacks.

8.) VT works the legs in a balanced way. Most other forms of exercise over-emphasize the quads and further complicate the imbalance we all have between our naturally stronger quads and weaker hamstrings. VT works the hamstrings very effectively, as well as the butt more than any other cardio! VT (especially stair training) is the best exercise for increasing endurance *and* strength together.

9.) Most commercial buildings have 20 steps per floor. Parking garage floors and residential buildings typically have 16-18 steps per floor.

10.) The climb starts on floor 2 and goes to the 20<sup>th</sup> floor (there is no floor 13), in both stairwells - a total of 36. You can choose one circuit for 36 floors, twice for 72 floors, three times for 108 floors, or four times for a total of 144 floors!

11.) The first "burn" you feel in your legs will pass if you press on. This is "false fatigue" and if you push through it, your endorphins will soon kick in and relieve some of the pain. Your lactate system then gets in the groove about this

time as well, and the burn subsides for a while. When the pain returns a second time is when the real fatigue is happening, and now it's up to your mind to help you through it!

### **Training tips:**

1.) If you use a StairMaster, be sure to utilize the pedal's full range of motion with every step, and train with your hands free, swinging by your sides. The StepMill is a better piece of equipment for tower running, but it's hard to two-step on it, so either do your best or just hustle with single steps.

The best machine to train on for tower running is an incline trainer. This is a treadmill that is designed to go up to 40% grade or higher (like we have at the X Gyms).

2.) Consider using all three of the following training methods: PACE, Tababta, and redline training. PACE training, popularized by Dr. Al Sears ([www.alsearsmd.com](http://www.alsearsmd.com)), involves a warm up phase of 80% full intensity for 2 minutes, then a rest phase for 1 minute, then 90% intensity for 1 minute, then rest for 1 minute, and then 100% intensity for 1 minute and then recover. This takes a total time of 8-10 minutes (or more if you need more recovery time).

Dr. Tabata ([www.tabataprotocol.com](http://www.tabataprotocol.com)) suggests a 5 minute warm up, then 20 seconds at 100% intensity with 10 second rest intervals for 8 cycles (4 minutes). Finish with a cool down for 2 minutes. This workout takes a total time of 11 minutes.

These two techniques increase cardio faster than traditional steady-state training and save a ton of time! Redline training is also very time-efficient, and it teaches your brain how to get tougher. When athletes do redline training, they typically perform a short warm up of 4-5 minutes and then 100% for another 4-5 minutes. The 100%

effort is of course relative, and as they fatigue they slow down, but they are still pushing 100%.

Cycling through these three techniques usually produces the best overall results for VT events. Most people start with 3 sessions a week, using a different technique each time. Elite racers use them 6 days a week and set aside one day for rest and recovery.

3.) Visualize the race in your imagination. See yourself pushing through the hard spots and running the race the way you want to. Picture yourself finishing strong and feel it in the present tense. That way your brain will have already gone there, and it will be easier for your body to follow on race day.

4.) Write down your goal time and post it in multiple places where you will see it often. This will remind you throughout the day about your upcoming climb, and will help you stay more consistent with the right training and nutrition.

5.) When you train on stairs or other VT, you will notice that your time will drop in fairly large chunks each training day. This is due initially, to your nerves getting stronger. After about 6-8 sessions, your time may drop in smaller increments because your muscles are now taking over the improvement rate, and they change slower than nerves. Press on though, because every second counts in races like this!

Your times may be worse on certain days too, so expect this to happen, especially when you start to come out of your initial improvement curve. Don't be discouraged! This is normal. Just keep at it. Even if you are slower on a certain day, you still received amazing health and fitness benefits from that workout, so don't get too wrapped up in your times.

The best strength training is of course at the X Gym, which takes only 20 minutes, twice a week. The [X Gym workout DVD](#) is a close second to the real thing, so check that out too!

6.) Try different rail techniques. There is no best way! Find the one that works best for you. Some people like Jesse Berg (#8 in the world) uses both hands on the rails at once, and pulls together. Mark Trahanovsky (top US climber



in the 50-60 age group) likes to alternate his hand grabs between both rails and sync with his feet. Cindy Harris and Terry Purcell (the most winning US climbers) use the inside rail only and climb it like a rope. Javier (the Mexican national champion) and Michelle Blessing (rated top 10 in the world) use the rails only on the turns, and go hands free on the rest. I like to use all these techniques and change my method every 20 floors, so it

spreads the fatigue around to as many different muscle groups as possible.

7.) Get used to two-stepping. See how many floors you can two-step on, and increase this progressively. If you ever want to be competitive, you must take two steps the whole way up. Use single stepping only for recovering and catching your breath (or if you aren't competitive).

8.) Get used to taking only one step on the landings. This can save you up to ½ a second or more per floor, and keeps your momentum going into the next flight.

9.) When you push to the point of pain, appreciate that this is the place where you are growing and getting

stronger. The longer you stay in that zone, the faster you will improve.

10.) Notice the “high” you feel when you are done!

11.) Believe that this is making you a healthier and better person for yourself and those around you. Focusing on these things can quite literally change an experience from one that is miserable, to one that you become addicted to!

12.) Climbing stairs or hiking up hills will never make you sore. It’s the going back down that will make your muscles sore the next day (and sometimes up to 4 days after). When descending, use different step patterns and angles (i.e. walking sideways, landing heel first, etc.) to spread it around to different muscles and to use the joints in different ways. If you work in a tall building and can use the stairs to train, take the elevator back down!

13.) Pick a pace. What time would you like to finish the climb? You can start with the 15 second floor track and progress faster as you get in better shape. Roby is another top 10 X Gym racer who is also pretty handy with computers, so it just goes to show that not all computer folk are “skinny fat!”

If you are training in a building, climbing with Roby’s click tracks is easy. If you are using an outdoor staircase, figure about 22 steps for a floor. The click tracks are built to click twice per floor (once per landing), so you will hear a click every 11 steps. As mentioned, a normal building is 20 steps per floor, so using 22 steps on a straight outdoor staircase will help account for the landing time.

14.) Get lighter and stronger! VT is the fastest way (besides working out at the X Gym of course) to burn fat and get stronger at the same time. Eating low glycemic load

foods, plenty of protein and lots of water is the best way to lean down and tone up. Go to [www.nutritiondata.com](http://www.nutritiondata.com) to find the best foods to eat. If the food ranks a 5 or less per serving, you're good to go. Look for the strongest anti-inflammatory foods too. Pay attention to the chart that shows you nutrient density as well, so you can find the foods that will give you the highest training benefit.

15.) Do your lunges.

16.) Work your core. Stair climbing is mostly mental, then it's about the lungs, then the legs, then core, and finally arms. Crunches are a great core exercise, so do those for now.

### **Race advice:**

1.) Psych yourself up. Get in a good state and visualize success, perseverance and endurance. This is where all your previous visualization time will pay off. Focus and be ready! Kourtney, X Gym's top tower runner (pictured right), sits by herself, turns on her tunes and gets in the "zone" for about 10 minutes before the start. It obviously works, because she wins every race she enters and holds the course records in the Columbia tower, Bellevue towers and the WaMu tower.



2.) Look out for those who want to pass you. When someone is coming up behind you, move to the outside and let them pass on the inside. Move early enough so they don't have to break their stride. Give them a pat on the back and say something encouraging as they pass you. This attitude will actually help you go faster!

3.) When you need to pass, ask in advance. Say, “Passing on the inside please” and if they don’t hear you (headphones in their ears), they are too tired to think, or they are just being a jerk (it happens - rarely), just shrug it off and work your way around them as best you can. Even if they slow you up, they are just giving you a breather. You can make that up later with a faster pace because of the energy they just saved you. Keep a positive attitude and stay focused. Negative thoughts will suck the energy out of you and slow you down drastically!

4.) Stick with your plan! Don’t try anything new in the race. Experimenting is for practice only. By race day you should know what works for you, so stay with that.

5.) NEVER stop, unless you feel it is medically necessary. The break in momentum – even if you are going slow – is a killer. It’s psychologically tough to get going again too! If you need water, grab it and take a sip while continuing to climb. Even if you have to single step slowly, just keep moving!

6.) Create a mantra and say it to yourself over and over as you climb. Make it a positive and motivational one that will help keep you going. Mine is, “I can do everything through Him who gives me strength.” (Philippians 4:13)

7.) If you find yourself “hitting the wall” or feeling panicky about pushing on, breathe in through your nose and out through your mouth to break that pattern and to put you back into a focused state. Relax your face, exhale fully and chill out in your brain! It’s going to be fine. You only have minutes left to go, and you can handle anything for mere minutes!

A brain technique I have found useful when the burn hits my legs is to visualize the lactic acid as a cold fuel bath, giving my muscles more energy and cooling them down. If you also visualize this bath as blue in color, it will help you

move out of your right brain where the pain pathways are most commonly found. It sounds kooky, but it really does help!

8.) Redline training stimulates your smooth muscles, so either wear Depends, or use the bathroom before you start. Pooping your shorts is a bummer for both you and the person behind you.

9.) What not to wear: sweats, layers, hats, army boots, medieval armor, etc. It's pretty much common sense, but just think light and thin. Even if you are cold at the starting line, you will be hot as the dickens by floor 15 and you will really be glad you wore shorts when you pass floor 30! So what if you have knobby knees, cellulite or varicose veins? No one will remember that tomorrow anyway. Be as comfortable as you can be for goodness sakes!

If you want to get hard-core about it and think you may have a future in this crazy sport, consider light running shoes or track racing shoes. You may also find Vibram's "Five Finger" shoes worth giving a try. Tim Van Orden, Jesse Berg and the Crossman twins all swear by them. Then on the other hand, Henry Wigglesworth, another living legend in the world of stair climbing, wears no shoes at all!

10.) Eat light. Unless you plan on climbing the building 5 times or more, you won't need to "carbo-load." This is not an endurance event. It's a high intensity redline race. The less you have in your stomach, the better. Your carb needs will be minimal for this type of activity, so a protein shake with a banana mixed in will be more than enough energy and carbs for the whole climb.

If you have a big meal, you will have to haul that up with you in your stomach, and your digestive system will be pulling blood from your muscles to work on that food instead of leaving it in the muscles where it's needed for oxygen transport!

11.) Make sure you are properly hydrated before the race. You should start this habit now because it's good for you, but if you don't, you should start a week before the race. Trying to hydrate on race day will be too late.

If you weigh between 100-250 pounds, divide your bodyweight in half, and drink that many ounces per day, spreading it out through the day as much as possible. Muscles are 75% water, and if they are dehydrated even as little as 2%, your performance can be affected by up to 15% or more.

You can taper off your water intake a couple hours before the race, so you don't have to stop to pee during the climb, but if you will be faster than 20 minutes up the building, you shouldn't have to go anyway, because your body will be working hard enough that your kidneys will slow down. Even if you do have to pee, stair climbing is a great "pee pee dance" and you will probably be able to hold it if you keep climbing.

12.) Wash your hands before and after the race. With hundreds or thousands of other people grabbing those rails before and after you, well, I'm sure you get it.

13.) I saved the best piece of advice for last: **PACE YOURSELF FROM THE START!** The biggest mistake rookie climbers make is to go out way too fast in the beginning and then burn out by floor 10. You'll see some of them barfing around floor 15 too. Then it hits them they have 54 left floors to climb!



Pace yourself slower than you think you should, and save the fast stuff for the end. Remember, basic climb is 36 floors (through you can choose up to 144). Think about turning

up the speed at floor 40 a little and then another notch at 55. If you still have a bunch left at 65, then by all means, use that energy and finish strong. It's better to have a little left over at the end of your first race than to burn it out too early!

If you want to know what finishing strong looks like, check out our own Jesse Berg pictured here, winning the WaMu climb in 2009 and setting a new course record. As you can see, he was still accelerating past the finish line, and flew through the final door at the top. There was no burning out early for him!

**It's really about the fundraising:** This bootcamp is free because we want to help climbers be more successful, enjoy the event more, and come back each year stronger and more fired up to participate and support this great cause.

If you find value in this bootcamp, please consider donating to the event. Any amount helps this great organization to fight this dreadful disease – even \$10 makes a difference!

**About the X Gym:** We provide high intensity personal training sessions, using unique exercise methods that require only 20 minutes, twice a week. Our methods were invented by us, and are based on the latest scientific research. We have been producing about twice the results of traditional training in about ¼ the time, for about ½ the price since 1989.

We work with clients on their nutrition as well. This is also based in the latest scientific research, and we utilize our own online food log to fine-tune each member's nutrition plan. We promote healthy eating with real food, and pattern changes through brain training that can be maintained for life.

If you want to get in shape as fast as possible, the X Gym is the best place to do that, and we have the best personal training methods and outdoor boot camps for high intensity events like stairclimbing. That is why we dominate so strongly over all the other gyms every year. The proof is in the results! For those who aren't interested in the X Gym, or don't live or work near enough to one, we have a workout DVD for use at home or on the road with no equipment needed.

It's not your typical exercise DVD though. There are no trainers jumping around screaming motivational buzzwords with happy sweaty people spouting infomercial style testimonials. It's a totally different concept with controlled movements and methods designed for one purpose: to get you fit and strong, as fast and as safely as possible, in the least amount of time. To order, just follow the link on [www.xgym.com](http://www.xgym.com) or go to the DVD site: [www.xgymshop.com](http://www.xgymshop.com).