

NICROS H.I.T. STRIP™ TRAINING SYSTEM

by ERIC J. HÖRST



Tools Needed

Drill with #3 Phillips Drive Bit
Tape Measure and Pencil
Level (Optional)

Materials Included in Classic H.I.T. Strip™ System

(5) H.I.T. STRIPS
(8) PINCHES
(16) 3" SPAX® Woodscrews
(20) 2" SPAX® Woodscrews

Materials Included in H.I.T. Strip™ System

(4) H.I.T. STRIPS
(6) PINCHES
(12) 3" SPAX® Woodscrews
(16) 2" SPAX® Woodscrews

Nicros recently changed the attachment screws for the H.I.T. Strips™ to SPAX® Wood Screws. SPAX® tests their products. SPAX® screws tested 33.2% stronger than equivalent wood screws. In addition to the higher pullout strength, one does not need to predrill pilot holes unlike with the previously provided lag screws. However, predrilling may make it easier to install. If you predrill, do not make the holes too large in diameter. (less than 1/16")

PLEASE NOTE: It is important to securely mount this H.I.T. Strip System™ onto a solid structure. This surface should be strong enough to support at least double your body weight.

Use an overhanging bouldering wall of ¾" plywood at an angle of 45 to 55 degrees past vertical. H.I.T. workouts on a 55 degree (past vertical) wall are significantly harder than the common 45 degree wall. If you are building a wall for H.I.T. Workouts, a compromised angle of 50 degrees works well. Wall angles overhanging less than 45 degrees are not suggested for H.I.T. Workouts, as they require excessive (and dangerous) amounts of added weight to produce the desired training results.

Step One: Sitting on the floor under the wall, set the base of the first H.I.T. Strip™ at head height on the wall. Simply screw it into the plywood using a 2" SPAX® Woodscrew* in either the furthest left hole or the furthest right hole. Once that is tacked in place, pivot the other side into place and screw that side in as well. Use a level to orient the H.I.T. Strip™.

Step Two: Mark the base of the next strip at 18-inches above the first strip. Screw this in using the same method as in the previous step. Repeat this process until all the other strips are mounted. Add 2" SPAX® Woodscrews to the center two holes of each H.I.T. Strip™.

Step Three: Now mount two pinch holds between each H.I.T. Strip™ at roughly shoulder width apart. To mount the Pinches, carefully position the pinch holds so the top of each is turned inward about 10 degrees -- this will make the pinch grip feel most natural. Use the drill to screw them in using the outer two holes and the 3" SPAX® Woodscrews.

Step Four: Tighten securely. Do not overtighten, holes may become stripped.



Be careful, over-tightening may strip the screw in the wood.
*For safety reasons, it is important to use a longer length screw if ones provided are too short. Doublecheck mounting hardware periodically to ensure H.I.T. Strips™ remain secure.
PLEASE READ THE ENCLOSED SAFETY WARNING.





H.I.T. WORKOUT

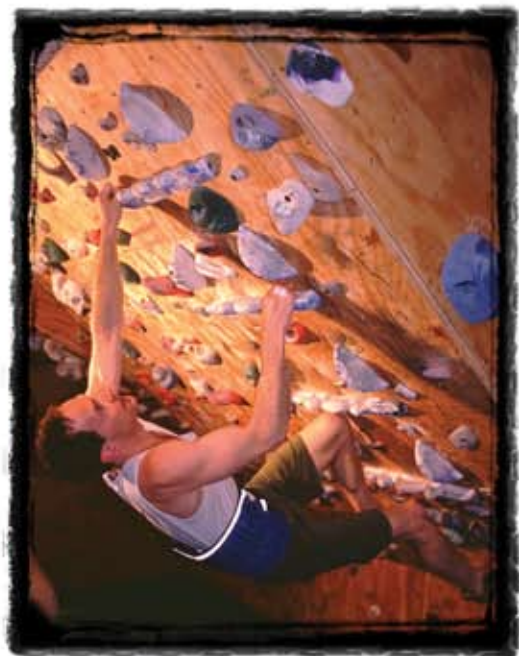
A Training-For-Climbing Revolution! by Eric Hörst

Climbers have long experimented with weighted training – the results have been mixed and enthusiasm so-so. Hypergravity Isolation Training (H.I.T.)™ is a very refined, new and exciting method of weighted climbing which I have developed over the last decade. H.I.T. Workouts™ meet all four of the requirements for a true maximum grip strength workout and produce almost immediate, quite noticeable gains in finger strength! H.I.T.™ involves high-intensity (adding weight simulates "hypergravity") climbing on identical H.I.T. Strips™ mounted on a 45-55 degree over hanging wall. The returns on its effectiveness have been an enthusiastic thumbs up. (We look forward to your feedback!)

Four Requirements for an Effective Maximum Finger Strength Training Exercise for Climbing

1. It must be high intensity throughout the entire set.
2. It must produce rapid muscular failure (5-12 total reps).
3. It must be specific to climbing positions and movements.
4. It must focus on a single grip for an entire set (until it's fried!).

Just as exciting is the fact that H.I.T. Workouts™ (unlike Campus Training) can be performed by all but beginner, injured, and severely out-of-shape climbers. Still, you must proceed carefully. This training method simulates hypergravity – greater than gravity's normal resistance to climbing – and, thus, is more stressful than normal climbing. H.I.T. Workouts™ are part of a great overall training program and are best performed during Phase 2 of the ten-week training cycle.



Eric Hörst training on the H.I.T. Strip System™

Wall Setup

Use an overhanging bouldering wall or 3/4 inch plywood at an angle of 45 to 55 degrees past vertical. H.I.T. workouts™ on a 55 degree (past vertical) wall are significantly harder than the common 45 degree wall. If you are building a wall for H.I.T. Workouts™, Nicros advises a compromised angle of 50 degrees. Wall angles overhanging less than 45 degrees are not suggested for H.I.T. Workouts™, as they require excessive (and dangerous) amounts of added weight to produce timely failure.

Where to Mount Strips

As a general rule, sit on the floor under the wall and mount the first H.I.T. Strip™ at top-of-head height. The other strips will follow at 18-inch intervals above the first strip. Each pair of pinch holds should go between the H.I.T. Strips™ at roughly shoulder width apart. Carefully position the pinch holds so the top of each is turned inward about 10 degrees – this will make the pinch grip feel most natural. Please refer to the mounting instructions for details on how to attach the system to your wall.

"4-3-2-1" Ten-Week Strength Training Cycle

Phase 1: Four Weeks Endurance Training – Climb for volume on routes at or just below your onsight level. Indoors, do lots o' laps! Climb four days/week.

Phase 2: Three Weeks Maximum Strength Training – Defined by high intensity, low volume workouts. This is where H.I.T.™ rules! Also, log some bouldering sessions, possibly some Campus Training and heavy finger rolls. A mix of all the above is ideal. Keep the workouts short. Follow with two rest days.

Phase 3: Two weeks Anaerobic Endurance – Perform non-stop, moderately high intensity training "rounds" lasting two to five minutes each. Could be performed on H.I.T. Strips with a "light" weight, or work long, pumping boulder problems. Working a steep, severe crag "project" works anaerobic endurance.

Phase 4: One Week of Complete Rest – Critical! For the training cycle to work (making you stronger!), you must take a full week off with no climbing/training.

The Workout

Start with a 30 minute warm up consisting of stretching, self massage of your fingers/forearms and bouldering. Gradually increase the intensity of the bouldering during the warm-up period. Take a five to ten minute rest before beginning the H.I.T. Workout™.

Six hand positions will be trained: crimp grip, pinch grip, the three "teams" of two-finger grips, and the open-hand grip. Perform three sets for the crimp grip, and two sets of the others. Start with the crimp grip. And always use a stop watch to time your sets and rests.

Sitting below the first H.I.T. Strip™, place one hand (say right) on the right hand crimp edge on the strip. Start the stop watch, then pull with your right hand and grab the left crimp edge of the second H.I.T. Strip™. Continue climbing toward the fifth strip – right hand on third, left on fourth, right on fifth, then left hand on fifth. Begin descending immediately with the right grabbing fourth, left on third, right on second, left on first, then right on first. That's eleven total hand movements, but keep going and continue using only the crimp grip! Move your left hand up to the second strip, right to the third, and continue on in the same fashion until the grip fails. Now that's how you fry a grip and increase its maximum strength!

"Novice" and "Expert" H.I.T. Workouts™

Grip To Work	Novice Weight to Add	Expert Weight to Add	Reps and Rest Interval
crimp (set 1)	10 lbs.	24 lbs.	< 24 & 3 mins.
crimp (set 2)	10 lbs.	24 lbs.	< 24 & 3 mins.
crimp (set 3)	10 lbs.	24 lbs.	< 24 & 3 mins.
pinch (set 1)	none	10 lbs.	< 24 & 3 mins.
pinch (set 2)	none	10 lbs.	< 24 & 3 mins.
2-F "3rd team" (set 1)	none	10 lbs.	< 24 & 3 mins.
2-F "3rd team" (set 2)	none	10 lbs.	< 24 & 3 mins.
2-F "2nd team" (set 1)	6 lbs.	24 lbs.	< 24 & 3 mins.
2-F "2nd team" (set 2)	6 lbs.	24 lbs.	< 24 & 3 mins.
2-F "1st team" (set 1)	8 lbs.	24 lbs.	< 24 & 3 mins.
2-F "1st team" (set 2)	8 lbs.	24 lbs.	< 24 & 3 mins.
open hand (set 1)	10 lbs.	30 lbs.	< 24 & 3 mins.
open hand (set 2)	10 lbs.	30 lbs.	< 24 & 3 mins.

If you do more than 24 reps, you must then add weight for all future sets working that grip. If you failed at just over 24 reps, add two or four pounds (a little weight makes a big difference). If you sent 30 or more reps, then add ten pounds for your next set. Although you can add weights to a climbing harness, I suggest adding two-pound diver's weights into a fanny pack or diver's belt (see your local dive shop). This makes adding or subtracting two pound weights quite easy – important, since you'll likely be using different amounts of weight for every grip position.

After your three-minute rest, proceed immediately with a second crimp-grip set, again, climbing to failure. This should take place in under 24 reps; if not, add more weight. Rest exactly three minutes, crank out the final crimp set, and take another three minute rest before moving onto the pinch-grip position.

Perform the two pinch grip sets in the exact manner described above, except only perform two sets. Also, since pinch grip position are more difficult, don't be surprised if initially you do not need to add any weight in order to force failure by 24 reps.

The two-finger pocket "teams" are next. Do two sets of each beginning with the "third team". This is the weakest grip comprised of the pinky and ring finger. As with the pinch grip, beginners often need not add any weight at first. But this will change in just a few weeks – you will not believe how fast this often ignored grip will strengthen!

Next is the "second team" two-finger combo of the index and middle finger. Do two sets of these, then two sets with the strongman "first team" of middle fingers. Rests between all sets remain exactly three minutes.

Conclude your H.I.T. Workout™ by hammering the open-hand grip with two sets to failure. Do no further climbing except for ten minutes of light cool-down bouldering, and, as always, finish your workout with three sets of reverse wrist curls (use a 10 or 15 lb dumbbell). Now all you need is two to three days of quality rest and a few good meals, and your grip strength will rebound far stronger than ever before!

Workout Tips

1. Each set must be maximum intensity and produce failure in 24 total hand movements or less (12 reps per hand). Add weight if you achieve more than 24 reps on any hold or set. Lower weight or stop training at the first sign of tendon or joint pain.
2. No stopping or chalking during a set. Climb briskly and without hesitation. If necessary get a spotter, but keep moving until the grip fails. Time yourself with a stopwatch – no set should ever take more than 60 seconds.
3. Try to climb through the reps with normal foot movements and body turns. Smaller footholds are better, but too much thought on foot-work will slow you down. As long as it feels like climbing, you are doing it right!
4. Rest breaks between sets must be exactly three minutes. Use a stopwatch and stick to the planned order and schedule of exercises. This way, at long last, you can quantify and track your finger strength! If you're sloppy on the length of rests, the numbers (weight added and reps) will lose meaning.
5. Keep a training book where you can log each set, weight added and reps performed. This way you'll always know what weight you need for a given set and you can easily track your gains (weight and rep increases) from workout to workout.
6. Always do your H.I.T. Workout™ in the same order and never increase the number of sets! There will be no added stimuli, and you'll only dig yourself a deeper hole from which to recover.
7. Train with a partner for added energy and discipline. He/she can do their set during your three minute rest interval and encourage you to "crank one more rep" during your set.
8. Tape your fingers. This is imperative when added weight exceeds 10% of bodyweight. Use the "x" method to protect all skin contacting the holds. Or sand down the texture if it's more than you like.
9. H.I.T. Workouts™ are intense. Do no other climbing on H.I.T. Workout™ days. Always warm-up/cool-down properly, and consider soaking your hands in ice water for several minutes after the workout. To speed recovery, consume a sports drink and whey protein immediately afterwards. Consult the book *How to Climb 5.12* or *Training For Climbing* for more information.
10. Drop an email or note detailing your H.I.T. Workout™ strength gains! Email: eric@nicros.com or visit the Nicros Training Center by clicking on "Training Center" at www.nicros.com.