





## BUDDYBOARD™ HANGBOARD WORKOUT GUIDE



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NOTE: Read this program in its entirety before using your new hangboard. Like any exercise program, consult your physician prior to use and always work within your limits. The training material provided here and by Adventure Rock is only a guide. Listen to your body and do not overdo your workouts; failure to do so may lead to injury.

NOTE: Any text in **BLUE** hereafter indicates a hyperlink you can click to follow for a video or more information.

#### INTRODUCTION

The BuddyBoard<sup>™</sup> is a joint development effort between Danger Buddies LLC and Adventure Rock, Wisconsin's premier climbing gym. All training material was developed by the staff of Adventure Rock and designed to help you maximize your workout.

#### **USING YOUR HANGBOARD**

Finger strength is a key contributing factor to climbing well. Stronger hands and fingers mean the ability to use smaller holds, retain a hold, and experience a more extensive climbing session. When approached with patience, detail, and consistency, using a hangboard to supplement your practice is helpful for all ability levels.

#### SAFETY

As with all exercise, listening to your body is important. Listening to your body is not just waiting for an injury to happen and then stopping. Listening is approaching each workout with an attention that informs you how hard you can push yourself, when to push yourself harder, and when to wait before doing another workout BEFORE you become injured. It is sometimes better to wait another day so your training can continue.

Hanging from your fingertips on edges is not a simple task for your hands to adapt to. Through time, consistency, and attention, you will build the strength you need to maximize your hangboard training. In the meantime, approach hangboard workouts with a conservative attitude. As you build strength, you will gradually feel ready for things like maximal hang tests and adding weight.

## DILIGENCE

Hangboard training is a strength-building exercise. This type of training requires a diligence that will ask you to put forth effort up to or near your limit multiple times. Rarely will efforts be longer than 10 seconds. To make this short period of time effective, you will need to be hanging at or near your limit for a given prescribed time. Diligence is developed over time and, combined with listening to your body, will ultimately result in both improved finger strength and maximizing time on the wall.

#### HANGBOARDING IS NOT A REPLACEMENT FOR CLIMBING

As mentioned, finger strength will help maximize your ability to climb. Do not misunderstand this to mean that hangboarding is a replacement for climbing or the sole weak link standing between you and that next level route or boulder. Like many sports, climbing is a skill-based activity. The more you practice the skills involved, the better you will become. Being strong conditions your body to climb longer. The longer you can practice, the better you will become. This synergy of strength and conditioning training is where hangboarding plays a crucial role in your climbing development and progression.

## **TERMS TO KNOW**

**Concentric** – A concentric muscle contraction is the shortening of the muscle that typically causes movement of a limb or joint in which that muscle is attached. In climbing, numerous movements are concentric while we move up or laterally across a wall. While our fingers are isometrically contracted on a hold, our other limbs contract concentrically as we move around that hold. This type of strength is important to focus on alongside your isometric finger training.

**Eccentric** – Eccentric muscle contraction occurs when the total length of the muscle increases as tension is produced. While climbing, we experience eccentric muscle contraction when down climbing, or extending our arms from a bent position to a straight position. Muscles can generate greater forces under an eccentric load. This is often demonstrated in deceleration from a speedy movement, such as braking after a sprint, or the slight lower that happens after campusing up a rung.

**Isometric** – An isometric exercise is a form of exercise involving the static contraction of a muscle without any visible movement in joint angle. Most hangboard training is isometric in nature. Because the joint angle does not move, the strength that is gained while training isometrics is only applicable within a small range outside of the joint angle that is trained. This means that, if all of your training is completed in an open hand grip (a large angle) on the hangboard, the strength your fingers gain in a full crimp position (small angle) will not see the same benefit. It is a good idea to use at least two different grip positions that vary finger joint angle in each training session on the hangboard.

**Power** – Power is the ability to exert a maximal force in as short a time as possible against a type of resistance. Power is proportional to the speed at which you can apply strength. Our ability to express power will always be less than our ability to express strength. Often, we will consider training power at or around 70%-85% of our maximal strength.





**Strength** – Strength is the maximal force one can apply against some type of resistance, be it body weight, weights, or an immovable object. To develop strength, our muscles require a few things: overload, recruitment, recovery, and consistency. Typically, adequate overload occurs at or above about 85% of our maximal ability to express effort with or on that resistance. This is important to consider when exploring the training protocols explored below.

**Strength/Muscular Endurance** – Strength endurance is the ability of a muscle or muscle group to exert sub-maximal force against resistance for an extended period of time. To train our capacity to "hang on longer," we often consider extended duration exercises or reps at approximately 70% of our maximal strength.

#### **TRAINING FREQUENCY**

There are many factors that play into how often a person can train. How they train, their biological age, their genetics, and attitude all play vitals roles. It is a good starting point to not exceed three quality workouts in a week until you know how all of these factors work for you; this includes your climbing sessions at the gym or crag. During a time when climbing is unavailable, training on a hangboard three times per week works well as a format. If climbing is available, additional questions such as what your climbing sessions are like, what training cycle you are in, and what you are training for are all key factors in determining the best way to fit hangboarding into your schedule.

#### **TRAINING AGE**

Training age refers to the longevity of your training for a sport or activity, but it should not be mistaken for skill level. The longer your training age, the more conditioned your body will be to the stimulus that is provided by the activity. Since climbers rely heavily on tendon and hand strength, their ability to overload their tendons with their typically stronger and more conditioned muscles in the first 6 to 12 months is remarkably high. This does not mean beginning climbers should not hangboard. Instead, individuals new to climbing and hangboarding should heed the previous statements regarding safety and approach this training with patience. The suggested training age guidelines below are to remind you that consistency over time will yield greater results than acute intensity. Personal interest, previous training history, pre-existing injuries, and external factors such as hiring a climbing coach are all factors that account for how, when, where, and why to change your training. Ultimately, training age is an additional factor to help you make better decisions about the most appropriate training loads for you so that you can optimize your outcomes.

First 6 to 12 months of climbing = **beginner** 12 months to 18 months of climbing = **novice** 18 months to 24 months of climbing = **intermediate** 24 months of consistent climbing and beyond = **advanced** 

#### **TRAINING PROTOCOLS**

When considering how to use your hangboard, we can become lost in a sea of protocols. The most important thing to remember is that consistency trumps intensity. For most training, our body needs a minimum of 3 to 4 weeks to adapt to the new stimulus. With this in mind, it is often a good idea to stick with a method in blocks of 4 to 6 weeks for adaptation to occur and to maximize results.

Moving from one protocol to the next in these cycles helps maximize the benefits. But for some (especially beginning climbers) keeping with a basic and minimal hangboard routine is beneficial so that most of their time can be spent on additional climbing skills.

While choosing from the myriad methods of hangboarding, factors to consider are:

- Equipment
- ♦ Time
- Specificity
- Training age

Below is an outline of several training ideas, followed by a suggested workout. However, these are simply guidelines; you will have to decide what works best for you or work with a coach to develop a plan that is best suited to your needs.

#### **Recruitment Pulls: Maximal Strength & Development**

Recruitment pulls are a type of high-intensity finger training. In order to reach the correct intensity for this exercise, you will first need to explore different edge sizes by getting underneath them and pulling downward on the board with all of your strength. Do this with one arm at a time and hang or pull for 3-5 seconds. To position your arm correctly, use a large elbow angle in the 120°-150° range, and do not have the elbow in full extension (straight arm).

It is important to understand that it is not necessary to hang from the board, and you should instead pull down vertically with as much force through the hand, arm, and shoulder as possible. The idea is to generate force strong enough such that you intend to lift your body off the ground, even if you cannot. Regardless of if you can pull yourself up or not, pulling with your maximum effort will get the appropriate stimulus you need to effectively use this hangboard method.

Note that you should not engage this movement as quickly as possible. The first 1-2 seconds should be the build up to your maximal effort pull. The remaining 1-3 seconds should then maintain that maximal effort before releasing.

#### Frequency

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Beginners should focus on two workouts per week. Each workout should consist of two positions in a half crimp and an open crimp on an appropriate edge (20mm is suggested). Each arm will pull separately without rest.

- Complete 1 set of 3 reps in each position
  - ♦ 3-5 second pulls
  - ♦ Rest 1-2 minutes between reps
  - ♦ Rest 1-2 minutes between sets
  - ♦ Repeat with the second hold position

More advanced climbers can increase the amount of pulls:

- Complete 2 sets of 4-5 reps in each position
  - ♦ 3-5 second pulls
  - ♦ Rest 1-2 minutes between reps
  - ♦ Rest 1-2 minutes between sets
  - ♦ Repeat with the second hold position





Whether you are hanging or pulling, progress by developing your internal fortitude and/or using smaller edge sizes.

## Density Hangs: Hypertrophy and Strength Endurance

Density hangs are a lower intensity but longer duration hang. The term "density hangs" refers to both tendons and the finger flexor muscle density, which are improved through this type of training. Density hangs are performed with both hands on the hangboard and hanging from an edge for 20-40 seconds. It is best to use a large elbow angle again (120°-150° range) or, unlike the recruitment pulls, density hangs can be performed with a fully extended elbow. Since the goal is to hang, remember to keep your shoulders engaged by pulling them back and down and keeping a tight stomach and core. The edge size should be something that you are able to hang onto for 20-40 seconds but not much longer. Failure on the hold before 40 seconds is okay.

## Frequency

Beginners should focus on two workouts per week. Each workout should consist of two positions in a half crimp and an open crimp on an appropriate edge (25mm is suggested). Both arms will pull (hang) simultaneously.

- Complete 1 set of 2 reps in each position
  - Ang 20-40 seconds or to failure
  - ♦ Rest 3-5 minutes between reps
  - ♦ Rest 3-5 minutes between sets
  - ♦ Repeat in the second hold position

More advanced climbers can increase the number of hangs:

- Complete 2 sets of 3 reps in each position
  - ♦ Hang 20-40 seconds or to failure
  - Rest 3-5 minutes between reps
  - ♦ Rest 3-5 minutes between sets
  - $\diamond$  Repeat in the second hold position

You can progress by increasing the time to failure on the chosen edge size or by choosing a smaller edge size if you are easily hanging past 30 seconds.

## Velocity Pulls: Contact Strength and Power

Velocity pulls are moderate- to high-intensity efforts performed for a short duration. This type of training should come only after you have established a foundation of hangboard training or completed a few weeks of a strength and hypertrophy finger training.

Get started by choosing an edge size on which you are able to pull quickly and forcefully. If you are unsure, starting with a large edge is best. The velocity pulls can be completed with one or both arms on the hangboard. To execute the exercise, stand under the board with your arm at 120°-150° with your fingers slightly engaged on the edge. Then quickly pull down as fast as you can, or jump, hop, or drop yourself onto the board and hold for 1-3 seconds. Similar to the recruitment pulls, you do not need to hang off the ground and should instead measure your intensity by intent and mettle.

When grasping the hold, it is important to start with slight tension on the edge before pulling. This is to help avoid injury and help rev up your finger muscles that are needed to quickly engage. If performing with two arms at a time, quickly lift your feet off the ground and hold on with your fingers at the same time. If you are able, the most advanced method to execute a velocity pull is to hang as quickly as possible from one hand. The most important part of this method is the speed at which we grasp the hold. The quicker, the better. Focus on speed first; the difficulty of the hold or number of arms used is secondary.

### Frequency

Beginners should only work on velocity pulls after completing four to six weeks of both recruitment pulls and density hangs. After completing these, choose two hang positions that are completed with both arms on two holds of relatively easy size (larger than 25mm).

- Complete 1 set of 2-4 reps in two different hold positions
  - ♦ 1-3 seconds starting the hang as quickly as possible
  - 10-20 second rest between reps
  - 3-5 minutes between sets
  - ♦ Repeat in the second hold position

More advanced climbers can increase the amount of pulls:

- Complete 2 sets of 5-8 reps in two different positions
  - ♦ 1-3 seconds starting the hang as quickly as possible
  - 10-20 second rest between reps
  - $\diamond$  3-5 minutes between sets
  - $\diamond$  Repeat in the second hold position

Progress by using smaller edge sizes or incorporating more reps for a one-arm load.

## Repeaters: Strength Endurance

Repeaters are a well-known hangboard protocol for strength endurance and are typically characterized by their 7 seconds of hang time followed by 3 seconds of rest. This is repeated 5 to 7 times to make one "set" of hanging, which is typically followed by 3 minutes of rest.

Choose 3 to 7 different grip positions depending on your training goals, time available to train, and general level of finger fitness. It is recommended to pick an open crimp and another crimp position as necessary training edges. Choose an edge size that you can hold onto for more than 5 seconds but less than 12 seconds. If you can maintain a chosen hand position for longer than 12 seconds, consider a smaller hold or adding weight. If you are unable to hold on for 5 seconds, consider adding a pulley system into your training using the BuddyBoard<sup>™</sup> hangers to reduce the weight.

Choose 1-3 rounds based on your training age, time, and desired goals. 1 round is equal to completing 1 set of each hand position. Below are a few examples of repeater protocols.

#### Beginner

- Complete 1 round of 5 hand positions: large edge open crimp (warm up), medium edge half crimp, sloper, pinch, and medium edge open crimp
  - $\diamond$  7-second hang with 3 seconds rest x6 (1-minute total per position)
  - ♦ Rest 3 minutes between positions



#### Intermediate

- Complete 3 rounds of 5 hand positions: large edge open crimp (warm up), medium edge half crimp, sloper, pinch, and medium edge open crimp
  - $\diamond$  For the first set:
    - 7-second hang with 3 seconds rest x7 (1:10 minute total per position)
    - Rest 3 minutes between positions
    - Rest 3 minutes before starting the second set
  - $\diamond$  For the second set:
    - Add 5-10 pounds
    - 7-second hang with 3 seconds rest x7 (1:00 minute total per position)
    - Rest 3 minutes between positions
    - Rest 3 minutes before starting the third set
  - $\diamond~$  For the third set:
    - Add 5-10 pounds
    - 7-second hang with 3 seconds rest x7 (0:50 minute total per position)
    - Rest 3 minutes between positions

## Advanced

Complete the same protocol as the Intermediate above, but consider more specific hand positions that may require a pulley system on hand. Consider the following positions: two finger pockets (index/middle, middle/ring, or ring/pinkie) and smaller edge sizes.

Lastly, the repeater protocol time can be adjusted to ease the load by doing 6-second hangs with 4 seconds of rest, or 5-second hangs with 5 seconds of rest. Play with the different edges that are available and start with what works for you. As you build experience, you'll be able to advance into more difficult positions and protocols.

### Frequency

Beginners should focus on one workout no more than every 96 hours. One hangboard session per week should suffice if there are climbing sessions during the week as well.

More advanced climbers can increase the amount of work to one workout no more than every 72 hours. One hangboard session per week should suffice if there are climbing sessions during the week as well.

Continue with this hangboard protocol for four to eight weeks.

## Maximal Hangs: Maximal Strength & Development

There are many maximal hang protocols for the hangboard. Some are designed for benchmark testing improvement (testing your improvement over time) while others are focused on maximal strength gains like the recruitment pulls above.

Eva Lopez's Maximal Dead hangs on the minimum edge depth (MED hangs) with no added weight are excellent maximal strength development tools.

This protocol works especially well for those short on time. The goal is to complete 2-5 sets of hangs on an edge that you can hold onto for a maximum of 15 seconds. Taking the time to patiently find the appropriately sized edge for your workout is critical. Once you have selected the correct edge, complete each hang for 5-15 seconds. 8-12 seconds of hanging is ideal. Follow this one hang with 3-5 minutes of rest. Repeat these 2-5 times. Once you can maintain the hang for longer than 15 seconds, move to a smaller edge.

## Frequency

Beginners should only complete two workouts per week. Training sessions can be completed in tandem with climbing sessions and should be completed only after adequately warming up but before the bulk of the climbing begins.

More advanced climbers can increase the amount to three sessions per week and can also incorporate maximal hangs into their climbing routine.

Continue with this hangboard protocol for eight weeks.

## **BUILDING A WORKOUT**

Whether climbing or strength training, a workout should consist of the following components. Each of these pieces can and should vary in length and complexity as the season or training focus changes.

**Warm Up** – General movements that warm the body, brief aerobic exercise, and potentially any corrective or maintenance exercises that you enjoy or need

**Specific Warm Up** – A couple of easy hangs and easy-to-medium movements that correspond or prepare your body for the bulk of the "main workout"

Main Workout – A mixture of hanging from your fingers and doing close to maximal effort movements

**Optional/Accessory Workout** – This is a great time to add additional core work, correctives, and mobility

**Cool Down** – Anything from a 10-minute yoga session to a 30-minute walk

First, choose a hangboard training protocol. Considerations for which method to use should be based on where you are in your training cycle. If you are just starting, a general rule will be Strength, Strength Endurance, then Power. Remember: it is best to start easier than you want to and build exercises in intensity over the course of time. You'll want to be conditioned to those loads before jumping right in!

You can measure hangboard loads by a few metrics. To keep things simple, use time and weight as the variable loads. Total load can be measured in total hang time and weight, and these both are considerations when moving to a new level of difficulty. For instance, if you hang for 10 seconds and then rest for 10 seconds, and do this 5 times with only bodyweight, it is referred to as 10 on/10 off x5reps. One rep is hanging for 10 seconds and resting for 10 seconds with the weight load being your current bodyweight. A set is considered complete when you complete the prescribed number of reps. The total load for that set = 50 on/50 off at bodyweight. This might be followed by additional instructions such as rest 3 minutes and complete the whole set 3 more times. Lastly, you will repeat these rounds for each hold you choose.



#### Warm Up

Your warm up can be anything that literally warms the body and should also help you mentally prepare for the workout to come. Set aside distractions and get in the "zone." This is also a good time to assess your recovery from the last session. If you feel achy or tired, take a moment to explore these feelings and be honest about whether it's best to push training off to the next day.

Your workout should consist of some brief aerobic exercise such as riding a bike, walking on a treadmill, going for a jog, or using the rowing machine for 5-15 minutes or until you're lightly sweating. Follow this with some general movements in all ranges and planes of motion.

If you are at a loss of what to do, consider these warm up routines that the Youth Teams at Adventure Rock Climbing Gym follow (Blue text are hyperlinks you can click to see videos):

Option 1, from our friends at Crux Chiropractic

Option 2, from our youth team coach at Adventure Rock: Coach Jacob's Warm Up

## Specific Warm Up

The specific warm up should consist of relatively easy hangs on something that you can hang onto for at least 20 seconds with good form. Do easy variations of an upper body push, an upper body pull, a lower body hinge, and a lower body squat. Examples of each are outlined below. You do not need to do much; 5-10 reps of each exercise will suffice.

#### A quick example is provided below:

- Hang on an "easy edge" for 15 seconds
- ♦ x5 push up
- x5 inverted ring or TRX rows
- x5 single leg hip thrust per leg
- ♦ x5 lunge per leg
- ♦ 15-30 second plank
- ♦ x3 rounds

## **Main Workout**

First, pick the holds and exercises that align with your training goals. Play to your weaknesses and stick to a few exercises. If you don't know what exercises to use, some great body weight exercises are provided below. If you do more than one workout per week, alternate the exercises into an A and B structure and alternate between the two. Adventure Rock's YouTube channel is another great source for hangboarding workouts!

These are the basic guidelines:

- ♦ 1-5 reps = Strength
- 1-5 reps (explosive) = Power
- ♦ 6-12 reps = Hypertrophy Strength
- ♦ 12-25 reps = Muscular Endurance

Each exercise is progressive and can be used to determine what variation should be used for the training effect you want. As a rule of thumb:

- If you can do 9-10 reps of a variation, move onto the next
- If you can only do 5-7 reps of a variation, this is a good option for Strength and Power Programming. You can then adjust programming from there (e.g., if you want an Endurance effect, choose a variation that is two variations easier than your Strength option)
- For Hypertrophy, use an option that allows for a 10-12 rep failure

There are many additional variables that can be added to any exercise such as weight, number of limbs used, or body angle; these all help with additional progressions and regressions. Be creative and don't feel constrained to the variations in the videos only. Explore the movements for yourself and have fun!

Upper Body Push -Push Up - Dip - Press (not progressed)

Upper Body Pull -Pull Up - Home Pull Up - Row - Banded Row Variations

Lower Body Hinge -Hip Thrust - Windmill - Single Leg Deadlift

Lower Body Squat -Lunge - Squat - "Perch"

Loaded Carry -Cook Drill (you may need to be creative with equipment)

Full Body -Turkish Get Up Rings or TRX (if you have a suspension system)

## Core -

Break-dancers - Hollow Body Rock and Pull - Low Bear to Crab - Hardstyle Plank - Bear Crawl

## **ADVENTURER®CK**

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Armed with the above information, here is an example of a hangboard workout you can do at home with only body weight using the Repeater protocol:

Using 4 Holds: Medium Edge – Pinch – Sloper – Small Crimp

1. Turkish Get Up using a small pack loaded with ~30 pounds – One Arm Push Up – Heavy Step Up with heavy pack – Single Leg Hip Thrust from couch

2. Medium Edge: 7 seconds on/3 seconds off; x6 reps; rest 3 minutes During rest complete:

- x3 Turkish Get Up per side
- Shin Box exercise until rest time is up
- x3 rounds

3. Pinch: 7 seconds on/3 seconds off; x6 reps; rest 3 minutes During rest complete:

- x2 One Arm Push Up
- 20-second Side Plank per side
- x10 Quadruped Thoracic Spine rotations

4. Sloper: 7 seconds on/3 seconds off; x6 reps; rest 3 minutes During rest complete:

- x4 Heavy Step Ups onto 2nd or 3rd stair (4 per leg)
- x10 Low Bear Crawl forward and backward
- x10 Tactical Frog

5. Small Crimp: 7 seconds on/3 seconds off; x6 reps; rest 3 minutes During rest complete:

- x8 Single Leg Hip Thrust from couch per leg
- x8 Windmill with 5 second hold at the bottom per side
- Bird Dogs until rest time is up, alternating every 5 reps

## **Optional/Accessory Workout**

After your workout, you can add a short conditioning cycle on the rowing machine or do a brief aerobic workout for additional calorie burn. Your favorite core routine, corrective exercises assigned by your PT, or a short and fun yoga session are all appropriate too. This section shouldn't be very long (5-15 minutes) and in some ways can be thought of as a "specific cool down." It is also a great time to clean up any poor movement habits that were demonstrated because of fatigue in the main workout. Some sub-maximal "clean" movements might make for better skills practice the next time around.

## **Cool Down**

Take a brief walk, do some static stretches, and mentally wrap up and review your training session.

Finally, rest between sessions, get good sleep, and eat a balanced diet.



## HOW TO USE THE ANCHORS

Warning: Never load the anchors dynamically - max weight rating is a static 250lb per pair.

The anchors can be used for counterweighting yourself - attach exercise bands (not included) to the anchors and form foot loops. Step into the foot loops then complete your exercise - the elastic will give you a variable boost (you will get more boost the more the band is stretched). Always clip your band to a carabiner, then attach the carabiner to the anchors.

For a boost that doesn't vary, you can attach a pulley on a carabiner (not included) to the hangboard, and attach a weight to a cord through the pulley, and clipped by carabiner to your harness belay loop or other attachment point per your harness instructions. The result is a non-variable counterweight equal to the amount of the attached weight. This is a great way to train for one-arm exercises. For two-arm exercises usng this style counterweight, consider using equal counterweights on each side, to avoid any torque on you as you perform your exercise (two counterweights will pull equally on your harness, compared to the offset load of one counterweight pulling on it.

The anchors can also be used for practicing clipping to improve your sport climbing technoque. You can attach a quickdraw to the anchors, and use one hang to hang from the hangboard while the other hand clips with a short section of rope. Keep the rope short, and you can just clip, then pull it through the carabiner, and repeat. Smooth clipping is important to smooth climbing!

Finally, you can use the anchors to help you build a practice anchor to simulate what you might enounter on a wall. Note, to provide adequate hand clearance, these anchors are located further apart than typical anchors you would find outdoors, so you may need a longer cord or cordalette than you would outside, but you can build god fundamentals in the comfot of your own home, so you're ready to do this quickly and efficiently on the wall.

We hope you enjoy your new BuddyBoard<sup>™</sup> and are always curious to hear new ways that you've discovered to train with it to improve your own climbing. Drop us a note on Instagram @dangerbuddiesgear and @adventurerock and share with us how you've improved your climbing using this hangboard! We'd love to hear about it!

Happy training!

