

Training for Climbing

by Tommi Paavola (first published on PTontheNET.com in May 2007)

Is climbing the best conditioning for climbing? What should climbers do on the ground level to be better at hanging off the rock?

In any of its forms, rock climbing is a combination of extreme physical ability combined with creativity, freedom of movement and an ability to stay fully focused for an extended period of time. Through the eyes of a movement specialist or a conditioning coach, you can do nothing but marvel at the level of skill and performance climbers demonstrate in mentally demanding conditions.

The rock (indoor climbing wall also) presents movement options that each climber uses differently according to their strengths and movement creativity. Though the connection to the rock is often only with fingers and toes, the body part that allows the climber to move efficiently and with precision is the link between the extremities, the core. One of the secrets of a successful climbing enhancement program is teaching the core musculature to function according to the demands of climbing.

Climbing Conditioning Routine

Good climbing requires great leverage. The lower body has to be able to assist the upper body and vice versa. The better the body parts are connected through the core, the more solid moves can be executed. Even the physiological demands on fingers, shoulders or toes are greatly affected by the function of the core musculature. The stronger the center link of the chain is, the better the extremities can do their job.

A climber's core (i.e., hip, abdominals, back) needs to move in all planes of motion. It has to provide a solid base for movement, but it also needs an ability to move itself when all of the four contact points (the feet and the fingers) are fixed to the rock. For example, if you plan to move your right foot to the next foothold, you often need to shift your center of gravity onto your left foot without moving your hands. This move of the hips requires great control and precision and thus a lot of stabilizing strength as well as deceleration strength in the whole abdominal wall. In other words, the role of the middle body is to enable an optimal sequence and direction of the moves. Flexing, extending, twisting and stabilizing your abs, sides, hip and back creates an opportunity for your foot or hand to make the next move. Climbing is an ultimate demonstration of functional teamwork within the members of the team - your body.

This routine emphasizes functional core strength in combination with some moves required in climbing. The physiological responses of this on-ground program translates well to the climbing performance. This program emphasizes the following goals:

1. The core musculature is challenged in all three planes.
2. Acceleration, deceleration and stabilization strength of the core.
3. Scapular stability and multi-planar strength, endurance and mobility.
4. Balancing the "pulling" pattern of climbing by "pushing."
5. Functional flexibility.

Climbing conditioning programs can also be used as a pre-climbing warm up routine or as an active recovery tool by decreasing the amount of repetitions and emphasizing the mobility and flexibility.

As a conditioning coach or a personal trainer of a rock climber, you should familiarize yourself with a few additional topics that might help you when designing a program for a climber.

1. You are more than likely to hear the statement, "Climbing is the best conditioning for climbing!" Naturally, without getting some quality time with the rock at least two to three times a week, your chances of becoming a better climber are slim. But can you improve your climbing by doing supplemental conditioning, and should it be apart of every climber's program? You bet! The younger the activity is as a sport, the less conditioning wisdom the athletes as well as the coaches have, and our job as professionals is to educate ourselves and the athlete in order to develop the sport, the athlete and ourselves. Rock climbing has a great potential in being one of the most complete forms of physical activity in terms of diversity in physiological benefits, but even climbers need supplemental conditioning in order to take performance to the next level.

2. How is the training different for traditional climbing or for bouldering? You should know the general difference between the climbing styles. There is plenty of information on each climbing style, and they do have significant differences in terms of physiological demands. More importantly, do not get intimidated by the terminology or your lack of knowledge. Guaranteed, you can make a great difference in your client's performance without being an expert in rock climbing yourself but instead by knowing how the body moves in function. All the athletic activities share the same foundation and motor skills. With your knowledge of movement, a simple "needs analysis" of the sport is enough to get started, and you will learn along the way.
3. Sport specific conditioning versus general athletic development. What else can you do with a climber? Should you have your client holding weight plates for forearm and finger strength? Or improve "heel hook" strength with single leg hamstring curls? What about "top off" strength with dips or single arm pull ups? Of course, you should include some inspiring and specific exercises. It is important to keep the client motivated and give exercises to which they can relate, but do not get carried away with the specificity. You should plan approximately 75 percent of the exercises with general athletic development in mind. This does not mean you cannot combine sport specific elements with a general conditioning exercise. This is where your creativity is required and what makes it exciting for you as well.

Routine Variables

Frequency: One to three times a week

Sets: One to three

Repetitions: 10/movement (five each side) 40 reps total in the routine.

Rest: No rest between the movements.

Progressions: More sets/add a weight vest/add plyo push ups in the end.

Key points: Emphasize control and proper execution.

Figures 1 and 2 (below)

Start - Arm reaches to the opposite ankle.

Finish - Arm reaches forward and up.

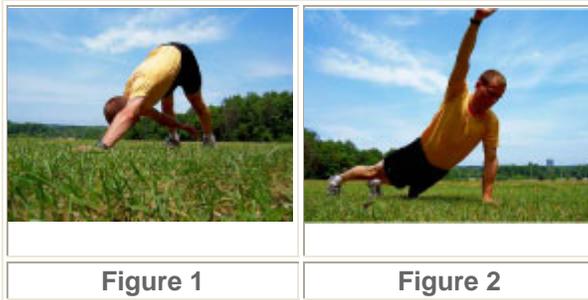


Figure 3 (far left, below)

Start - Push up "up" position.

Finish - Push up "down" position with an ipsilateral knee drive to elbow.

Figure 4 (middle, below)

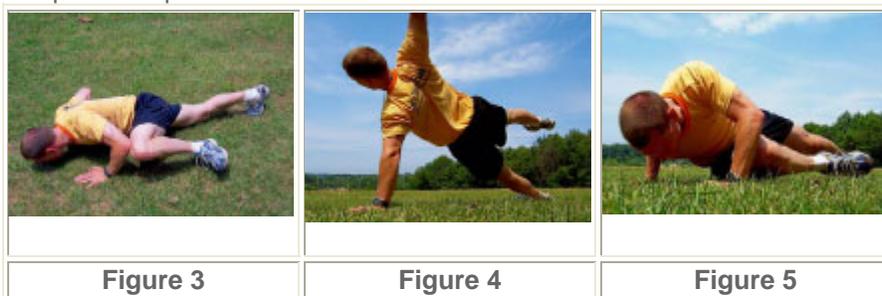
Start - Push up "down" position.

Finish - T-rotation with leg abduction.

Figure 5 (far right, below)

Start - Push up "up" position.

Finish - Push up "down" position with a contralateral knee drive to elbow.



Additional Considerations

1. Active climbers tend to carry around a shortened pair of latissimus dorsi muscles. Combination of passive and active integrated flexibility exercises can save your clients from shoulder injuries and enhance their performance through better reach and more optimal force production.
2. Climbers are obsessed about their grip strength. Different “holds” require a selection of different grips, and training methods for more climbing specific finger strength are diverse. We trainers tend to gravitate to training muscle groups the client is most passionate about. In this case, a lot of caution and patience in progression is needed as finger injury due too intense conditioning can keep your client off the wall for a long time.
3. Don't forget the toes and feet. The most important contact to the rock is through the feet and toes. Barefoot training is excellent for climbers and can be an active component in the training session.

Have fun!