



YOUR TRAINING

Sample 16-week Mountaineering Training Plan

Training for a high-altitude climb must be as specific as possible. Cardiovascular training such as running and cycling should be included; you should focus on uphill and downhill work. In addition to these activities, the use of a stationary bike, stair climber, rowing machine and/or other gym equipment can be a useful supplement to your fitness regimen. Weight training should also be included, with focus on your back and shoulders, as well as your quadriceps and hamstrings (the important muscles for climbing). We recommend climbing hills, stairs and stadium steps while wearing a backpack, as the ideal training to simulate the exercise of climbing a mountain. Work up gradually to carrying 35 to 50 pounds and exercise up to an hour or more per session. Three to four long training sessions per week are more beneficial than short daily workouts.

Physical training prior to the climb is not a guarantee of success. However, being in excellent physical condition will add tremendously to your enjoyment of the experience. Remember, you cannot over-train for this trip. Be in the best shape of your life!

We have included a sample 16-week training schedule developed by adventX. Following the schedule, there is an explanation of the terms and examples of activities you can do, plus 12 exercises you can do in 12 minutes.

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adventX Sample 16 week Mountaineering Training Schedule

Phases	Weeks To Go	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Pre condition	16	R & R	XT 45 min	Cardio 30 min	Strength 20 min	R & R	XT 1 hr	Hike 1hr w 20lbs
Pre condition	15	R & R	XT 45 min	Cardio 30 min	Strength 20 min	R & R	XT 1 hr	Hike 1 hrs w 25lbs
Base	14	R & R	XT 45 min	Cardio 30 min	Strength 30 min	R & R	XT 1 hr	Hike 2 hrs w 30lbs
Base	13	R & R	XT 45 min	Cardio 30 min	Strength 30 min	R & R	XT 1 hr	Hike 3 hrs w 20lbs
Base	12	R & R	Strength 40 min	Cardio 45 min	Strength 40 min	R & R	XT 2 hr	Hike 4 hrs w 20 lbs
Base	11	R & R	Strength 40 min	Cardio 45 min	Strength 40 min	R & R	XT 2 hr	Hike 3 hrs w 25 lbs
Base	10	R & R	Strength 40 min	Cardio 45 min	Strength 40 min	R & R	XT 2 hr	Hike 2 hrs w 35 lbs
Base	9	R & R	strength 60 min	Cardio 45 min	Strength 60 min	R & R	XT 2 hr	Hike 3 hrs w 35 lbs
Build	8	R & R	XT 60 min	Cardio 1.5 hr	Hike 1.5 hr w 20 lbs	R & R	Cardio	Hike 6 hrs w25 lbs
Build	7	R & R	XT 60 min	Cardio 1.5 hr	Hike 2.0 hr w 35 lbs	R & R	Cardio	Hike 5 hrs w 35 lbs
Build	6	R & R	XT 60 min	Cardio 1.5 hr	Hike 2.0 hr w 45 lbs	R & R	Cardio	Hike 7 hrs w 45 lbs
Build	5	R & R	XT 90 min	Cardio 1 hr	Hike 1.5 hr w 35 lbs	R & R	Hike 3 hrs w 35lbs	Hike 9 hrs w 35 lbs
Peak	4	R & R	XT 90 min	Cardio 2 hr	Hike 1.5 hr w 55 lbs	R & R	Cardio	Hike 8hrs w 55 lbs
Peak	3	R & R	XT 90 min	Cardio 2 hr	Hike 1.5 hr w 50 lbs	R & R	Hike 6hrs w 50lbs	Hike 12hrs w 50 lbs
Peak	2	R & R	XT 90 min	Cardio 2 hr	Hike 1.5 hr w 35 lbs	R & R	Hike 6hrs w 45 lbs	Hike 10hrs w 45 lbs
Taper	1	R & R	XT 45 min	R & R	Hike 1 hour	R & R	Climb	Climb
Transition	0	Climb	Climb	Hike 30 min	R & R	R & R	R & R	XT 45 min
Transition	+ 1	R & R	XT 45 min	R & R	Cardio 1 hr	R & R	Cardio	Hike

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EXPLANATION OF TRAINING TERMS

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Introduction

In order to get the best results and to prevent injury, we recommend that most days of the week you make time for 10 to 15 minutes of calisthenics and exercises to improve flexibility. (See attached 'Daily Dozen' for an example). Also, you should warm up at the beginning of each training session with 10 minutes of light aerobic activity (DD can be used for this) and include stretching as part of your cool down. A simple guideline for stretching is to hold (not bounce) a stretch at the point of tension for 20 seconds and to include all major muscle groups of your body.

A good conditioning program includes a variety of types of training designed to build: aerobic endurance, anaerobic endurance, strength, flexibility, agility, power, coordination, and balance.

In this attached training schedule are the abbreviations: XT, R&R, IT and the headings 'hiking', 'cardio', and 'strength'. Here is an explanation of those terms.

XT: XT stands for Cross Training. Cross training includes activities that are different for many people. It should be something that you enjoy and that is challenging. Some examples: running, cycling, soccer, cross country skiing, outdoor fitness classes, some gym classes, martial arts, yoga & kickboxing.

The purpose of XT is to infuse your training with variety and all-over body strengthening. When choosing an activity, what's important is that you enjoy it and it has benefits to your overall training (i.e. it will add to your strength, endurance, flexibility, coordination). If you are preparing for a technical climb consider indoor or outdoor rock climbing for your XT sessions.

Hiking: Of all the training you could do, hiking and backpacking are the best ways to prepare for mountain climbing. The primary benefit is an increase in aerobic endurance. Aerobic means 'with oxygen' so most of your hiking will be at a pace where you can breathe comfortably. Some hiking, however, will be faster or steeper, causing you to breathe very hard. This is anaerobic training, meaning 'without oxygen'.

IT (Interval Training): Most of your mountain climbing will be accomplished aerobically, yet sometimes you'll be working anaerobically, so it pays to include some interval training (IT). Interval training is shorter bursts of effort interspersed with rest periods. You can do this with a stopwatch or by intuition. A form of interval training called 'fartlek' (literally this means 'speed play') involves varied and arbitrary

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amounts of intensity and duration of efforts; for instance - racing up a hill, speeding up to a fixed point ahead or going as fast as you can for a few minutes.

Cardio (Cardiovascular Endurance): You may be thinking, 'But isn't hiking cardio training?' And you are absolutely correct. However, hiking may not always be convenient or preferred. There are other ways to build cardiovascular endurance for mountain climbing. The following activities are very beneficial: cycling, cross-country skiing, snowshoeing and use of elliptical or Stairmaster machines. The reason that these are good is that they build aerobic endurance and increase anaerobic capacity while also building muscle endurance in your leg and lower core muscles.

R & R: Restoration and recovery days are a very important part of building your strength and endurance. What's important is to do some gentle activity such as a short (30 minutes) walk, swim or some calisthenics. In fact, some muscle activity is crucial to the recovery process because as your muscles contract you stimulate the expulsion of waste products from previous training. Be sure to keep the intensity low. Also on rest days pay close attention to good hydration and nutrition.

Strength: One common definition of strength is "The ability to exert force against resistance." However the strength required to lift a heavy object is different from that needed to jump across a gap, which is different from the strength needed to hike uphill for hours. This implies that there are different types of strength.

Here is a simple guide to different types of strength. Imagine you are standing in front of a large log:

- If you do a standing jump over the log you'll use elastic (explosive) strength.
- If you do step-ups for 15 minutes on the log you are using strength endurance.
- Whether or not you can pick up the log will be an indication of your maximum strength.

Mountain climbing predominantly requires strength endurance; however, we also need good maximum strength. There is a relationship between the two ...endurance athletes who train for maximum strength will experience concurrent gains in muscle endurance and they will certainly gain efficiency as a result of their superior maximum strength. It stands to reason that a climber with a high level of maximum strength will have an easier task of carrying a heavy object such as a backpack.

Climbing: Climbing refers to indoor or outdoor rock climbing.



How do we build strength? It's beneficial to work with a professional instructor to practice weight training to ensure safety and good results.

A muscle will only strengthen when it is worked beyond its normal operation. This is called overloading. This can be achieved by:

- Increasing the resistance (by adding weight).
- Increasing the number of repetitions of an exercise.
- Maintaining muscular tension (as opposed to locking out joints).
- Increasing the number of sets of the exercise.
- Reducing recovery time between sets of exercise.
- Reducing momentum i.e. slowing down the movement speed.

How do we specifically develop each type of strength?

- Maximum strength can be developed by lifting heavier weights with low reps.
- Elastic strength can be developed through weight training, athletic drills, conditioning exercises e.g. power jumps, and bunny hops
- Strength endurance can be developed with hiking (especially uphill while wearing a pack), circuit training, some gym classes, running (especially hills), and cycling.

Summary: The design of a good training program is a combination of science, art, common sense, and a desire to have fun. You'll want to evaluate your strengths and weaknesses and design a plan that builds both. Balance is critical and many of the best plans are ones that are functional and fit with your lifestyle. Effective training requires good discipline and organization for most people. Even with your commitments of family and work you can find creative ways to fit everything in and still have time to relax. Also, you may live in a place where you have limited or no opportunities to hike or climb. We hope this sample training schedule will help you train successfully and give you various options for creating your own unique program. We are available to answer any questions that you may have.

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












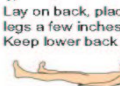


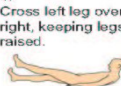
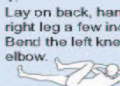

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adventX Daily Dozen

12 exercises in 12 minutes: Do each exercise for 45 seconds, then rest for 15 seconds.

<p>1 STEAM ENGINE Active Stretch: Warms up front and side core muscles, upper back, and hip flexors.</p>	<p>1. Stand with hands behind head.</p> 	<p>2. Left elbow to right knee.</p> 	<p>3. Return to standing.</p> 	<p>4. Right elbow to left knee.</p> 	<p>Repeat.</p>
<p>2 TOE TOUCHER Active Stretch: Warms up the core and hamstrings.</p>	<p>1. Stand with legs apart and arms out to sides.</p> 	<p>2. Bend at hips, touch right hand to left foot.</p> 	<p>3. Return to standing.</p> 	<p>4. Touch left hand to right foot.</p> 	<p>Repeat.</p>
<p>3 TWISTER Works the oblique (side abdominal) muscles and the core.</p>	<p>1. Stand with legs apart and arms straight out to sides.</p> 	<p>2. Keep hips facing forward, twist upper body to the right.</p> 	<p>3. Pulse.</p> 	<p>4. Pulse and turn a little further.</p> 	<p>Repeat to the left.</p>
<p>4 HALF MOON Works the abdominal and side muscle groups.</p>	<p>1. Stand with legs together and arms straight above head, palms together.</p> 	<p>2. Lift and bend upper body to the right, keeping arms straight.</p> 	<p>3. Return to standing.</p> 	<p>4. Lift and bend upper body to the left, keeping arms straight.</p> 	<p>Repeat.</p>
<p>5 3/4 SQUAT Strengthens the quadriceps (front upper leg muscles).</p>	<p>1. Stand with legs together and hands at sides.</p> 	<p>2. Bend knees as if you were sitting in a chair. Sweep arms forward and up above head.</p> 	<p>Repeat.</p>		
<p>6 LUNGES Strengthens and increases flexibility in quadriceps and hamstrings.</p>	<p>1. Stand with legs together and arms on hips.</p> 	<p>2. Step right leg forward bending front and back legs to 90-degree angle. Sweep arms forward.</p> 	<p>3. Return to standing, arms on hips.</p> 	<p>4. Step left leg forward. Sweep arms forward.</p> 	<p>Repeat.</p>
<p>7 PLIÉ Makes your butt tight.</p>	<p>1. Stand with legs apart, feet turned out.</p> 	<p>2. Bend knees out to sides. Sweep arms forward and up.</p> 	<p>Repeat.</p>		
<p>8 PUSH UPS Strengthens core, abs, pectorals (chest), shoulders, and arms.</p>	<p>1. Place arms below shoulders. If necessary lower knees to ground.</p> 	<p>2. Keeping body straight, lower down until chest is 2 inches from ground.</p> 	<p>Repeat.</p>		
<p>9 CROCODILES Strengthens and flattens lower abdominals, strengthens lower back.</p>	<p>1. Lay on back, place hands under buttocks, lift right leg high, lift left leg a few inches, keep lower back pressed in to floor.</p> 	<p>2. Switch position of legs, moving left leg up and right leg down. Keep straight leg lifted off floor.</p> 	<p>Repeat.</p>		
<p>10 SCISSORS Strengthens abs, lower back, and thighs.</p>	<p>1. Lay on back, place hands under buttocks, lift legs a few inches and spread them wide apart. Keep lower back pressed in to floor.</p> 	<p>2. Cross right leg over left, keeping legs raised.</p> 	<p>3. Return legs to straddle, keeping legs raised.</p> 	<p>4. Cross left leg over right, keeping legs raised.</p> 	<p>Repeat.</p>
<p>11 STEAM ENGINES ON BACK Strengthens full range of abdominals.</p>	<p>1. Lay on back, hands behind head. Hold right leg a few inches off the ground. Bend the left knee and touch to the right elbow.</p> 	<p>2. Straighten left knee and bend right knee, touching right knee to left elbow. Keep straight leg a few inches above the ground.</p> 	<p>Repeat.</p>		
<p>12 PLANK The ultimate tummy flattener.</p>	<p>1. Clasp hands together and balance on fore arms and toes. Hold position, keeping body very straight.</p> 