AMERICAN ALPINE INSTITUTE LTD
1515 12th Street
Bellingham, WA 98225

PHYSICAL CONDITIONING
Technical Climbing: Rock and Ice

Alpine climbs require good aerobic fitness and strong legs. Technical climbing demands greater strength and endurance in the upper body than hiking and moderate angle snow climbing. The climbing experience will be much more enjoyable if you have put some time into your training. Below you will find training information for both rock and ice climbing .

Begin your training several months in advance for best results. If you haven't been involved in physical activities for a while, consult your physician. If you are unfamiliar with, or uncertain about, the activities suggested talk with trained personnel at a fitness facility or gym.

General Conditioning for Mountaineering:

See the information sheet for mountaineering or expeditions. Aerobic conditioning and leg strength are prererqisite for all alpine climbs.

Strength Training:

Strength training exercises should mirror the movements you will be doing on the mountain. Exercises should be performed in sets of 8-12 for those new to weight lifting. Two or three sets of each exercise is a good starting point. Exercises should be done 1-2 times per week. You should be using enough weight so that you are unable to do another lift somewhere between 8 and 12 lifts. Exercising to the point of failure is the stimulus that causes the muscles to grow stronger. Both machine lifts and free weights are useful. Make sure to get proper instruction in order to avoid injury. Don't forget to warm up and stretch. Below are some recommended lifts with specificity to technical climbing. Remember, 2-3 sets of 8-12 repetitions, 1-2 times per week.

Technical Ice Climbing:

Strength Training:

4. **Pull-Ups**: Best done using your ice tools hooked over a pull-up bar. Be careful.
5. **Bent over rows**: Use dumbells or cable row machine.
6. **Straight Arm Hang**: Hang from ice tools hooked over pull up bar, with or without leashes.
7. **Tricep extension with dumbell**: This exercise closely resembles the movement of placing an ice tool.
8. **Bicep curl**: Use machines, dumbells, or barbell.
9. **Wrist curls**: Dumbells or barbells
10. **Leg Squats**: These can be done using a barbell and a squat rack, or a machine. There are a variety of machines that utilize similar movement patterns such as leg press machines. This is a great exercise for increasing leg strength for carying the backpack.
11. **Standing Calf Raises**: These can be done with dumbells in each hand. There are also a number of calf machines. In additon to sets of 8-12 repetitions, sets of30-50 reps with less weight in hand will promote endurance gains.
12. **Abdominal crunches**: Good core strength is essential for all climbing

Rock Climbing:

Indoor climbing: Climbing gyms are a great resource for those who don't have access to the real thing. Other types of training generally lack specificity to rock climbing. Weight training may make you strong, but you will not develop the movement skills that can be gained from going to the climbing gym 1-2 times per week. If time is limited, choose indoor rock over weight training.

Strength Training:

4. **Pull-Ups/Lat pull downs:** Pull ups on a bar are preferable to pull-downs using a machine.
5. **Standing calf raises**: Can be done standing while holding dumbells in both hands. In additon to sets of 8-12 repetitions, sets of 30-50 reps with less weight in hand will promote endurance gains.
6. **Bicep curl**: Use machines, dumbells, or barbell.
7. **Wrist curls**: Use either dumbells or barbells.
8. **Bent over rows**: Use dumbells or cable row machine.

Warming Up, Cooling Down and Stretching:

Don't forget to warm up and stretch. See the **Physical Conditioning for Mountaineering** sheet

Remember, it's important to set a realistic goal for yourself. Take a break if you are feeling low or exhausted. Avoid overtraining as it may result in injury and a setback to your program. The better condition you come in, the more you'll enjoy your climbing.

Sample Training Schedule:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-2 hours aerobic activity	rest	Strength training	30 minute aerobic activity	Strength training	30 minute aerobic activity	rest

Recommended Resources:

Climbing: Training for Peak Performance. Clyde Soles (2002). Mountaineers Books. Provides a good overview of training.

Ice and Mixed Climbing: Modern Technique. Will Gadd (2003). Mountaineers Books. Specific, detailed info on training for ice.

Extreme Alpinism. Mark Twight: Includes detailed information on training that is useful for the extreme and non-extreme alike. This book is interesting for those with an athletic training background.

Training for Climbing: The Definitive Guide to Improving Your Climbing Performance. Eric Horst (2002). Falcon. Specific info on training for rock.

American College of Sports Medicine. www.acsm.org Good general information on exercise safety.