



## WILDERNESS ORIENTATION FITNESS PREPARATION AND HIGH ALTITUDE TIPS

Although no previous backpacking or mountaineering experience is required (or expected) for participation in the CRMS Wilderness Orientation, arriving in good physical shape can make a big difference in your level of comfort and enjoyment of the experience. Often, students are surprised by the significant physical challenges of working and backpacking at high elevation; indeed, some students suffer unnecessarily until they improve their fitness level (usually by the end of the trip). This form is intended to suggest various fitness regimens that we feel will significantly enhance your experience. We have found that one of the best first steps to enjoying your time in the outdoors is to prepare for the physical challenges you will face when undertaking outdoor pursuits; therefore, we offer the following fitness expectations.

### Where to begin?

If you are already in **Average Shape** (undertake regular cardiovascular activity for 30-60 minutes several times a week), you may only need to add greater frequency and duration to your workouts. However, suppose you consider yourself to be in **Poor Shape** (get little or inconsistent cardiovascular exercise). In that case, you may find one or several of the following regimens helpful in attaining enhanced fitness. Your goal should be to attain **Good Physical Shape** by the time you come to CRMS.

Please note the type of exercise is less important than the frequency of exercise. If you are beginning a new exercise regimen, starting with shorter, less vigorous workouts and slowly building up to longer, more sustained efforts is essential. We suggest you start working out 4-6 weeks before arriving at CRMS (sometime in early July). Feel free to follow the regimens suggested below or mix and match your workouts.

Activity	Poor Shape Begin here:	Average Shape Begin Here:	Good Physical Shape Stick with your workouts; mix them up to keep invested
Walking or Jogging	1-2 miles, 3x a week	2-3miles, 3x a week	3-5 miles, 3x a week, (1 of these on a trail)
and/or Swimming	20 minutes, 3x a week	30 minutes, 2x a week	40 minutes, 2x a week
and/or Cycling	4-6 flat miles, 3x a week	5-10 rolling miles, 3x a week	10-15 rolling miles, 3x a week

Many other excellent forms of cardiovascular exercise exist and should be included, especially if you enjoy them.  
It is far easier to undertake exercise that you enjoy.  
Another way to find enjoyment is to encourage someone else to join you.

### **How does CRMS define "good physical shape"?**

While everyone has different base levels of fitness that are a result of genetics, as well as base levels of physical activity, we feel that being in good physical shape is evidenced by being able to accomplish the following activities several times a week in the designated times listed below:

- Walking 5 miles on a trail in ~ 1.25 hours
- Jogging 5 miles in under 1 hour
- Swimming 1.5 miles in ~ 45 minutes
- Cycling 15 miles on rolling terrain in under 1.25 hours

### **What if I am unable, or can't find adequate time to exercise?**

While we are confident your experience will be more enjoyable if you arrive in good shape, don't worry. Any additional exercise that you can undertake will benefit your overall fitness. Your Wilderness Orientation Leaders have planned your trip to accommodate various levels of fitness and ability. The beginning of the trip will involve a service project with the U.S. Forest Service. For the Service Project, groups will hike into a base camp, allowing for acclimatization and learning camp craft skills. While you may find yourself a bit uncomfortable with the physical challenges initially, you will gain strength, fitness, and competence as the week unfolds. You may even surprise yourself with what you can do by the time your Wilderness Orientation adventure ends.

## **COPING WITH A HIGH-ELEVATION ENVIRONMENT**

Wilderness Orientation trips take place between 9,000 and 13,000 feet above sea level. Approximately 15 to 20 percent of people traveling above 8,000-10,000 feet from lower elevations will experience mild Acute Mountain Sickness (AMS). AMS is caused when your body does not get as much oxygen as it is accustomed to. As elevation increases, atmospheric pressure decreases, resulting in less oxygen being inhaled with each breath. Fortunately, the human body can acclimatize to high altitudes; unfortunately, it takes several days for acclimatization to kick in.

The symptoms of AMS are similar to those of the common flu and include fatigue, headache, nausea, vomiting, and difficulty sleeping. While these symptoms are unpleasant, they need not interfere with a student's successful participation in Wilderness Orientation. Generally, symptoms occur within the first 12 to 24 hours at high altitude and subside by the second or third day.

### **Here are some things you can do immediately before Wilderness Orientation to help minimize your chances of getting AMS:**

- If you travel to Carbondale from below 5,000 feet, arrive as early as your schedule will allow. A day or two at 6,200 feet (Carbondale's elevation) or in Denver at 5,280 feet will help you acclimate and avoid the above-mentioned symptoms.
- Acclimatization is often accompanied by fluid loss, so drink lots of fluids (at least 3-4 quarts per day; water is best) to remain adequately hydrated.
- Don't overexert yourself upon arrival at high elevation. During daytime, light activity is better than sleep because respiration decreases during sleep, exacerbating the symptoms.

Acclimatization is inhibited by dehydration, overexertion, tobacco, alcohol, and other depressant drugs. Wilderness Orientation Leaders are trained to recognize AMS and plan the beginning of the trips accordingly; nevertheless, all groups will begin their trips at high-altitude trailheads. To minimize your chances of experiencing AMS, we strongly recommend that students arriving from below 5,000 feet plan on arriving at altitude (above 5,000 feet) at least 24 to 48 hours before the beginning of Wilderness Orientation. An extra night in Denver (5,280 feet) or Carbondale (6180 feet) will assist with acclimatization.

## Sources

Curtis, Rick, Outdoor Action Guide to High Altitude: Acclimatization and Illnesses, Director, Outdoor Action Program <<http://www.princeton.edu/~oa/safety/altitude.html>>

All About Altitude Sickness, National Renewable Resource Energy Laboratory, Golden, CO, <[http://www.nrel.gov/visiting\\_nrel/altitude.html](http://www.nrel.gov/visiting_nrel/altitude.html)>

Wilkerson, James A., Medicine for Mountaineering & Other Wilderness Activities, The Mountaineers, Seattle, WA 1998.

## COPING WITH ASTHMA ON CRMS TRIPS

Sometimes, students arrive at CRMS with some form of asthma; though the overall incidence remains low, the fact remains that asthma is a fact of life for many. Generally, asthma is caused by an allergic reaction, although asthma-like symptoms are often triggered by intense exercise and/or cold temperatures. Regardless of the trigger, asthma attacks typically result in an overproduction of mucus and a constriction of the bronchi leading to the lungs. This leads to difficulty breathing, particularly during exhalation.

### **Here are some things you can do to minimize the possibility of an adverse asthmatic reaction on Wilderness.**

- Consult your doctor. Tell them about CRMS Wilderness Orientation and specifically that you will be undertaking a ten-day backpacking expedition at high altitude in Colorado. Ask your doctor for any additional medications (other than your usual asthma meds) that you may be able to use if you should find yourself experiencing a severe asthma attack. Inquire about contraindications for your medications.
- Staying extra-hydrated may also help minimize asthmatic reactions.
- Arriving at CRMS in good physical shape may also give you a reliable indicator of what you are capable of and how to better manage your asthma condition.

As long as you have prepared yourself for Wilderness session by getting in good shape, staying extra-hydrated, and consulting your doctor, there is little reason for asthma to interfere with your full participation in CRMS Wilderness and other Active Curricular activities. If you have asthma, please communicate with your Leader when you arrive at CRMS regarding medications you may be taking.

### **Source**

Wilkerson, James A., Medicine for Mountaineering & Other Wilderness Activities The Mountaineers, Seattle, WA 1998.