

PHILMONT PHYSICAL TRAINING

*"No one ever wrote home about the views from Base Camp" - found
on the wall of a latrine at Miner's Park*

Physical Training

Philmont is physically demanding, especially for adults. It is absolutely amazing how many advisors go to Philmont expecting that it will be just like another summer camp. What a surprise when they have to come off the trail because they cannot handle Philmont's physical demands. This problem occurs so frequently that one of the responsibilities of your Philmont Ranger is to evaluate the physical conditioning of both you and your crew to determine whether you are able to make the entire trek. Rangers that we talked to say that, based on their experience, *80% of the adult advisors coming to Philmont are not adequately prepared* for the physical demands of the backcountry and **that 50% of the adult advisors had not exercised at all** prior to their arrival at Philmont. Consider this. Studies have shown that the typical adult is 10 to 20 pounds over his or her recommended weight. Would you willingly add 10 to 20 pounds of rocks to your backpack? Moreover, your heart and lungs now have to oxygenate this extra body mass making you less efficient. The bottom line is that most adults coming to Philmont are already disadvantaged when compared to their Scouts and will need to train even harder for Philmont.

We believe that a three-part physical training program is required to fully prepare for Philmont. The first part is an aerobic program to build up your cardiovascular system. The second part is a strength program to tone those muscle groups that will be used most often. The third part is a series of pre-trek hikes to get your feet used to hiking with boots. However, before starting your exercise program, get a copy of Philmont's medical form and bring it when you get your physical examination. At that time, review your exercise plan with your doctor.

The first rule in any physical training program is to start slowly and build up your exercise routine. This is hard to do because we remember what we were capable of doing when we were younger and in much better shape. The second rule is to immediately stop exercising if you experience any pain. Philmont suggests that you begin an exercise program at least six months before arrival. We agree, but recommend that you increase your level of training intensity during the last three months. During the last month before you leave for Philmont, you should try to exercise every day. If your body is only used to exercising every other day, it will begin to anticipate a day to recover. At Philmont, every day is another day on the trail. While it may be easy to hike that first tough day at Philmont, on the very next day, the body seems let down, thinking that it is supposed to get a day off! Usually by day six, you have worked through the soreness and are used to the physical exercise, but the first five days can be rather difficult.

The objective of the aerobic exercise program is to condition your heart so that it pumps more efficiently. In one minute, with 45 to 50 beats, the heart of a well-conditioned person pumps the same amount of blood as an inactive person's heart pumps in 70 to 75 beats. Compared to a well-conditioned heart, the heart of an inactive person pumps up to 36,000 more times per day! To condition your heart and lungs, the American Heart Association (AHA) recommends that you exercise vigorously for at least 30 minutes, three or four times a week, at more than 50 percent of your maximum heart rate. Your estimated maximum heart rate is 220 minus your age. Exercising above 75 percent of your maximum heart rate may be too strenuous unless you have been training for several months. Exercising below 50 percent gives your heart and lungs little conditioning. Therefore, the best activity level, better known as your target heart zone, is 50 to 75 percent of your maximum heart rate.

To monitor your heart rate, learn how to take your pulse when you exercise and while you are on the trail at Philmont. Place two fingers on the carotid artery in the groove on either side of the Adam's apple. Count for 6 seconds and multiply the result by 10 giving your heart rate per minute. Should you find that your pulse is too high, slow down to keep within your target heart zone.

When you begin your exercise program, aim for the lower part of your target zone (50 percent) within the first few months. As you get into better shape, gradually build up to the higher part of your target zone (75 percent). After 6 months, we encourage that you exercise at 85 percent of your target zone. For example, a 40 year old adult advisor should have an estimated maximum heart rate of $220 - 40 = 180$. If this advisor has just begun his physical training program, his training heart rate should be 90 ($180 \times .50$). If he is in excellent physical condition, he should exercise at a training heart rate of 153 ($180 \times .85$). It is interesting to note that the training heart rate for your average, long legged 16-year-old crewmember ranges from 143 to 173! No wonder why it usually is an adult who is getting a cardiovascular workout while on the trail.

There are lots of aerobic training programs that you can choose from such as running, biking, or swimming. You should plan to aerobically exercise at least three times a week. Any less and you are actually hurting your body. It is also important that you try to exercise for a minimum of twenty to thirty minutes, at your training heart rate. You should note that your estimated maximum heart rate and training zone values are only predicted averages that may differ 10 to 15 percent higher or lower depending on your actual fitness level, maximum heart rate and resting heart rate. Your training zone and maximum heart rate should be items of discussion when you visit your doctor prior to beginning your physical training program. And if you are planning on taking a more strenuous trek, we believe that you should be working out consistently at the higher end of the training zone. Don't be fooled by Philmont's *Guidebook to Adventure* that says to train at the 75% level. We think you will need train at the 85% level to get ready for Philmont's steep climbs. For more information, go to the AHA's Fitness Center at website at www.justmove.org, which includes a personal exercise diary, fitness resources, and frequently asked questions, and suggested fitness plans.

The objective of the strength exercise program is to build or tone muscles so that you will not be sore at Philmont. Leg muscles need to be strong for climbing hills. Muscles around your knees need to be strong for going down hills. Shoulders and chest need to be toned because the backpack straps rest along those muscle groups. Consider a weight program doing squats,

military presses, and calf raises. Joe Flaig suggests one exercise you can do at home by getting a 50-pound bag of sand, dividing it up into smaller bags so it fits better into your backpack. Then go up and down the basement stairs, two at a time. This is very close to going up and down a very steep hill.

The objective of the hiking program is to get your feet used to hiking long distances in boots. One of the questions recently asked on the TV game show, Family Feud, was "What was the most number of miles you have walked in one day?" The number one response was just two miles! A common ailment of advisors is "Hiker's Ache". The constant pounding that your feet take at Philmont, as a result of back-to-back daily hikes of over 10 miles, can add up and create significant soreness throughout the body the next day. This is especially true for those advisors who selected some form of cardiovascular exercise other than running for their Philmont physical training program. In 1996, Wally was sore all over after his first shakedown hike. Three weeks later, after his second shakedown hike, Wally was sore again. He was able to eliminate some of this soreness by taking a series of weekly la-mile hikes during the final four to six weeks prior to departure. Just like your physical training program, you should also build up your hiking endurance. Spend time in your boots and hiking socks. Cut the lawn in your boots. Walk around the block each night in your boots. Find out where your feet hurt and where you can expect blisters.

When Coop goes to Philmont, he always takes along a supply of Vitamin I (better known as ibuprofen or "I-B Hurtin"). Taking ibuprofen with breakfast in the morning before each hike and an additional amount with supper at the end of the day helps eliminate some of the soreness. The idea is to get the ibuprofen in your system before you hit the trail each day. Stretching exercises done for five to ten minutes at the end of the day and again in the morning before you go out is important to help lessen the soreness and get the body ready to go again. They can also help prevent or reduce injuries to muscles not properly warmed up.

Wally's program consists of a 2.5-mile hike with 52 pounds loaded in his daypack, stationary bike and push-ups and leg lifts. Every other day, he adds weight work for strength. He tries to exercise 4 to 6 days a week. If he has to miss a day, he will resume with the aerobic portion of the program and defer the strength until the next day. If he has to miss more than two days, he does the sit-ups, pushups, and leg lifts. Wally favors stationary bicycling for an aerobic exercise program because it is a low impact activity and does not stress his knee and ankle joints. It also builds his leg strength, which is what is needed at Philmont. Local garage sales have low mileage bikes for very reasonable prices. Some people hate to use the bike because it is boring. Wally found a way to keep his motivation up while riding. He wrote the word "Philmont" on a large piece of paper and taped it to the front of his bike. As he exercises while watching TV, he glances down at the "Philmont" sign to remind him of why he is doing it.

Coop's aerobic training program consists of runs, three to five miles in length, three to four days a week. He tries to vary his runs, adding hills or changing his pace and distance so that it makes them more enjoyable. On the days when Coop does not run, he does weight work for strength, concentrating on exercises to strengthen his back, chest and legs. A month before leaving for Philmont, Coop changes his program to focus on hike preparation. He loads his pack with 40 pounds of phone books and walks for an hour each day in his hiking boots. This helps get his back muscles and feet used to the amount of weight that he will be carrying on the trail.

If you are a smoker, getting ready for Philmont provides a great opportunity to make the move to quit. As a result of the recent dry summers, the entire backcountry of Philmont has been declared a no smoking area and smokers have to go cold turkey for ten days on the trail. However, if you are still smoking by the time you arrive at Philmont, the odds are that you will soon have a revelation of biblical proportions. Climbing Mount Phillips or Baldy Mountain can be a significant emotional experience for a smoker. For most, the climb is a rugged challenge, culminating with the reward of panoramic vistas and untold beauty. The heavy smoker however, will spend the majority of the time just trying to catch his breath.

At Appendix A, we have included a copy of Philmont's suggested six-month physical preparation program. The physical training portion of this program pretty much follows the guidelines that we have outlined above and it makes a good handout when you first meet with your crew. A final word on physical training. From a practical standpoint, it is probably impossible to overtrain for Philmont, provided that you do not injure yourself in the process. Adults will, in most cases, need more physical preparation than crewmembers will. If you keep finding reasons for not exercising on a regular basis, do yourself and your crew a favor; rent a beach house and DON'T GO to Philmont. You will become your crew's weakest link and could ruin the Philmont experience for the rest of the crew.

Diet and Weight

In 1992, Philmont had to medivac an extremely overweight advisor out by helicopter from Shaefer's Pass because the search and rescue team simply could not carry him out on a litter. A similar incident took place in 1995, requiring extreme rescue measures to bring in another overweight advisor. In 1996 and 1998, we arrived at Philmont the day that an advisor tragically collapsed and died while on the trail. As a result of incidents like these, Philmont's medical staff has intensified its already very thorough screening process for overweight advisors and crewmembers. Advisors and crewmembers that appear to be overweight (DESPITE what weight is shown on their medical examination forms) will be weighed in as part of the medical check process at the Health Lodge. Advisors that are over Philmont's maximum acceptance weight (shown below) **will not** be allowed on the trail. **The Philmont physicians will use their best professional judgment in determining participation in a trek by individuals less than 21 years of age who exceed the maximum acceptable weight. Participants under 21 years of age are strongly encouraged to meet the weight limits for their height and exceptions are not made automatically. The maximum allowable youth exception will be 20 pounds. Discussion in advance with Philmont regarding any exception to the weight limits for persons under 21 is required. During the summer of 2002, 21 advisors and 7 youth participants were not allowed on the trail because they did not meet the height/weight requirements and were sent home without ever making it out on the trail! In 2003, a total of 8 youth and advisors were sent home for not meeting Philmont's height/weight requirements.** Please review the height/weight requirements with each crewmember early in your crew formation and training process.

If you know that an advisor or one of your crewmembers does not meet the height/weight guidelines, have him put a plan in place to lose the extra weight. He should consult his doctor prior to beginning any diet. If he exercises each day, he will begin to lose weight, even if he does not change his diet. Most hikers who are just ten to twenty pounds overweight will begin to lose weight just by increasing their physical activity through exercise, even if they do not change their

diet. The reason is simple. Excess calories are burned up. The weight loss may only be one or two pounds per month, but weight loss will occur.

However, some hikers must diet to lose the extra weight. Below are the steps that we recommend that have produced results:

1. Create a food plan based upon calories. Multiply your current weight by 10. This will give the total daily calories required to lose a half-pound to a pound a week (weight loss faster than this recommended limit is unhealthy). The food plan should be based upon the 3-0-1 concept of eating - three meals a day, zero snacks, and take it one day at a time.
2. Review your food plan with your doctor or nutritionist.
3. Weigh and measure all food. Do not measure by the eye. Wally actually uses measuring cups or a scale.
4. Drink 64 ounces of water per day to flush the body of waste products.

If these four steps are too difficult, you may be a compulsive overeater. The next step is to eliminate sugar from the food plan. Many people are addicted to sugar, which may trigger a compulsion in the mind, causing overeating. It will take three to five days for the affects of the sugar to be flushed from your system; you will notice that while sugar is still craved, you will be much less hungry. If eliminating sugar from your diet does not work, create a food plan for a day and review and commit to it daily with a fellow Scouter. Then, only eat what is on the food plan. This way, if someone in your office has made a batch of oatmeal raisin cookies and they are not on your food plan, you will not be tempted to eat just one which usually leads toward eating ten. If the final two tips do not work, professional help is needed. If a low fat diet was part of your physical training program, you may want to slowly increase your daily fat intake just prior to leaving for Philmont. Wally had a problem one year trying to adapt to the typically high fat meals served while traveling to and on the trails at Philmont. You don't need to be battling your stomach while hiking at 10,000 feet elevation.

Philmont uses the revised Dietary Guidelines for Americans from the U.S. Department of Agriculture and the Department of Health and Human Services (shown below) as their weight guidelines for crewmembers and adult advisors. We believe that the maximum acceptance weight is very generous, but we encourage advisors and crewmembers to aim for a weight within the recommended zone.

PHILMONT WEIGHT LIMITS FOR BACKPACKING (lbs.)

HEIGHT ACCEPTANCE	RECOMMENDED WEIGHT	MAXIMUM
5' 0"	97 - 138	166
5' 1"	101 - 143	172
5' 2"	104 - 148	178
5' 3"	107-152	183
5' 4"	111-157	189
5' 5"	114 - 162	195
5' 6"	118 - 167	201
5' 7"	121 -172	207
5' 8"	125-178	214
5' 9"	129-185	220
5' 10"	132-188	226
5' 11"	136 - 194	233
6' 0"	140 - 199	239
6' 1"	144 - 205	246
6' 2"	148 - 210	252
6' 3"	152 - 216	260
6' 4"	156 - 222	267
6' 5"	160 - 228	274
6' 6"	164 - 234	281
6' 7"& over	170 - 240	295

PHYSICAL PREPARATION FOR A PHILMONT TREK

To enjoy the Philmont experience, participants must be physically prepared to carry a 35-50 pound pack over steep, rocky trails at elevations ranging from 6,500 feet to 12,500 feet. A regular program of physical conditioning for at least three to six months prior to taking a trek is essential. A longer period is required for those who are unaccustomed to physical exercise.

The first step is to get a physical examination from your physician. Use the forms provided by Philmont that will be mailed in December. Complete the health history on page 3 and schedule a physical exam.

Staff physicians at Philmont reserve the right to deny access to the trails to any adult or youth on the basis of the physical recheck at Philmont. All medical evaluation forms will be checked by Philmont medical staff. Areas of concern include, but are not limited to: heart disease, seizure disorder, sickle cell anemia and hemophilia. Blood pressure without medication must be less than 150/95 for any participant to be permitted to hike on Philmont. Adults or youth participants who are more than 25 pounds overweight should begin a program of exercise and dieting at least six months prior to a Philmont trek. If there are any doubts after the individual has had a physical examination, contact Philmont.

A program of regular aerobic exercise is highly recommended to become physically conditioned for Philmont. Plan to exercise for 30 to 60 minutes, 3 to 5 times a week.

Jogging, running uphill or long flights of stairs and hiking with a full pack are excellent preparation. How fast you run or how far you go is not nearly as important as regular exercise. Other aerobic exercise such as swimming, bicycling, stationary cycling and aerobic exercise classes can supplement your training. Start slowly and gradually increase the duration and intensity of your exercise. Start a journal to record your progress. If anyone has questions, contact the family physician.

Backpacking is the best way to prepare for a Philmont trek. It is highly recommended that everyone in a Philmont crew fulfill the requirements for Backpacking Merit Badge. These include three 15 mile treks with two overnights each and one 5 day backpacking trek covering at least 30 miles. Fulfilling these requirements will enable you to enjoy a Philmont trek. Be prepared!

Select a hilly area for your training. Start with a short hike and a light pack. Increase the mileage and your pack weight as your training progresses. It is important to hike often enough while carrying a pack and wearing the boots which you will use at Philmont to toughen your feet and to break in your boots.

Ninety percent of the crews that participated in 2001 indicated on their evaluation forms that ~ additional physical training by all members of their crew would have been helpful.

SUGGESTED CONDITIONING PROGRAM

DECEMBER/JANUARY - Complete health history on individual medical form and get parental approval (signature).

Be examined by a physician or osteopath. Call attention of the physician to the note on the medical form that describes the rigors of a Philmont trek and to the box that indicates areas of medical concern. Ask the physician about any special medical needs or areas of concern. If overweight, get physician's recommendation on how to lose weight through dieting and/or exercise.

Walk, jog in place, swim or pedal exercise bike indoors for 20 minutes or more at least 3-5 times a week. Gradually increase the length and intensity of exercises.

Purchase a pair of quality hiking boots. A pair of boots 6 to 8 inches high with sturdy soles is recommended. Lightweight hiking/running footwear is excellent for dry, rocky trails that are prevalent at Philmont. They are not recommended for people with weak ankles who need heavier leather boots. Wear your boots to school or work and when walking anywhere to break them in and to condition yourself.

FEBRUARY/MARCH -When weather permits jog, run or walk outdoors. Start with 20 minute sessions and gradually increase the length and the incline or speed.

APRIL - Continue exercising. Schedule a couple of 5-10 mile day hikes. Carry a full backpack on the second hike.

MAY - Continue exercising. Schedule at least two overnight backpacking treks of 10-20 miles. Plan the second trek to cover more rugged terrain or increase the mileage. Consider meeting the requirements for Backpacking Merit Badge that includes 3-three day backpacking treks of at least 15 miles each and I-five day trek covering at least 30 miles.

JUNE/JULY - Continue exercising right up to the day you depart for Philmont. Come to Philmont in top physical and mental condition ready for backpacking a 35 to 50 pound pack over steep, rugged trails at high elevations (6,500 to 12,500 feet).