



Foundation for Glacier and Environmental Research *Juneau Icefield Research Program*

Pre-Season Fitness Training for JIRP

The absolute best way to set yourself up for success at JIRP is to train well and thoroughly this spring. Mountaineers become fit by doing rigorous cardiovascular training, rigorous strength training, and rigorous flexibility training. **Individuals who are very fit are far less likely to require evacuation. Please protect your investment in this summer's expedition by taking your responsibility to be fit seriously.**

This information is to help you get in shape for the JIRP field season. It is written for people who have little or no experience training for a backcountry trip. If you have trained for a similar trip, you should augment all this with your personal experience.

Goal: The day after the hike from Juneau to Camp 17

Training is easiest when you have a goal to work toward. Our goal is the morning after the hike from Juneau to Camp 17 (our first camp). We want to train for the day after the hike because that's the day your time on the Icefield starts. If the hike up to Camp 17 is a struggle, you'll be tired and sore the next day. If you're physically fit for the hike up to Camp 17, the next days and weeks will be far more fun and less exhausting.

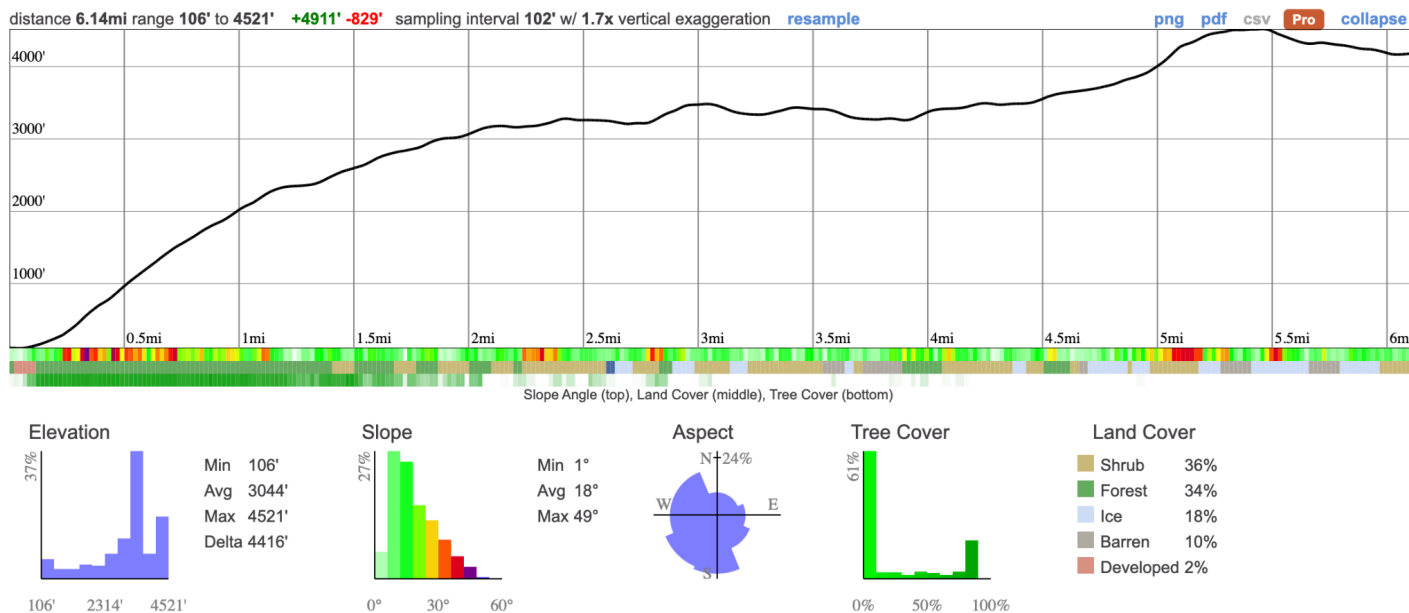
The hike itself

The hike to Camp 17 is on the Blackerby Ridge trail. If you look up the trail on Alltrails, Gaia, or other hiking apps, the elevation and length ARE NOT ACCURATE, as they do not account for the additional distance from the ridge to Camp 17.

There are many factors that make the hike up to Camp 17 challenging; some you can train for, some you probably can't (ex. weather).

Trainable:

- **Distance:** 6.14 miles/9.88 kilometers
- **Total elevation gain:** 4911 ft./ 1496 meters
- **Pack weight:** 30-50% of body weight
- **Time:** 7 -12 hours



Here is the elevation profile for the Blackerby Ridge hike. Notice that the first mile is particularly steep, and includes half the elevation gain for the entire hike. We highly recommend you train by adding elevation into your workouts, be they on mountains, a stairmaster at a gym, or stairs at a college stadium. More tips can be found below.

You should work up to doing at least one day hike that fits the parameters of the Blackerby Ridge hike before arriving at JIRP.

You want to train yourself, mentally and physically, to be ready for a trip that fits these parameters. Even for experienced and fit backpackers this is a big day. We'll be doing this trip the sixth day after you arrive at JIRP, so you should basically be ready when you arrive.

Not trainable:

- **Weather:** variable, but likely cold and rainy.
- **Jet lag:** if you're traveling from far east or west of Juneau, you will likely be jet lagged.
- **Unfamiliar route:** makes the long day for mentally taxing for many people.
- **Unexpected events:** weather, wildlife, injuries, etc.

Because we can't train for these challenges, our best strategy is to be fit enough that we have surplus energy to compensate.

Other Icefield activities

Without mechanized support, we rely on people-power for many everyday tasks. You should be in generally good shape so you can carry water, groceries, and research equipment; tow sleds of research equipment on your skis; lift boxes; climb ropes during crevasse rescue practice; shovel snow for the water supplies; and get everywhere you want to go either on foot or on skis.

Background fitness

The first step is to get your body in good working order. If you haven't gotten a complete physical in the past year, we require students to do that. We recommend, but do not require, a physical for staff and faculty. We also recommend you take stock of your body and see any specialists you need to see including (but not limited to) a physical therapist for any chronic injuries, a mental health therapist, a dentist, an eye doctor, etc.

Mountaineering-specific cardio

Mountaineering requires an above average level of fitness in three key areas: cardiovascular fitness, strength, and flexibility. For cardiovascular fitness specifically, we strongly recommend you train going uphill and downhill. This works your body in a different way than training on flat ground. The best cardio options for training are to hike or trail run in the mountains, to run or walk stairs, and to use a treadmill to go uphill.

If you don't live near mountains, running stairs is a classic and effective training tool. Many people find it less mentally dull than a treadmill (although perhaps not exactly engaging). Running stairs is cardiovascularly challenging as well as working many of the same muscles as hiking uphill. This combination makes it one of the best flatland training substitutes. Starting for one or two runs a week, run laps of the stairs for 15-20 minutes. Work up from there to longer and more frequent sessions. If you're on/near a university campus, check out the stadium for some good outdoor stairs!

If you can't workout going uphill, the second-best option is to run/bike/swim/row on flat ground. If you go with this option, pay extra attention to strength training to compensate.

We include a possible training plan further down that recommends interval training. Interval training is a cardio workout where you alternate 2 minutes of hard effort with 2-3 minutes of easy effort (jogging, biking, rowing, or swimming). This style of workout builds up your lung power.

Mountaineering-specific strength

Focus strength training on your legs and your core. Some great, classic body weight exercises for core strength are crunches and planks. For legs, we recommend lunges, squats, and step-ups.

Note: Proper form is exceptionally important with strength training to avoid injury. If you are new to this, we strongly suggest you find a class or a trainer to learn the basics.

Many university recreation centers offer good options.

REI put together [this guide to mountaineering-specific training](#). They go through much of the same cardio training guidance as we do above and below. In addition, they walk through strength training exercises you can do at home with minimal equipment. They include videos and instructions for jumping squats, step-ups, planks, and others. We highly recommend these exercises.

Expedition-specific flexibility

Injuries can be surprisingly difficult to heal in the field because we are always on our feet and because your body is under extra stress living in a cold and damp environment. Because of these two mitigating factors, we recommend you build up your flexibility to avoid injury. Stretch often and after every workout. Additionally, focus on the muscles you're building in your legs and core, and on any chronic injury sites.

REI put together [this guide to leg stretches for trail running](#). All of these tools apply equally well to hiking and mountaineering. They go over dynamic warm up stretches for before your workout. They also go through post-workout static stretches to increase flexibility in your calves, hamstrings, quads, hip flexors, glutes, and IT bands.

Training Plan

This is an optional training plan. Many experienced JIRPers don't like to use a training plan, but it can be a very helpful place to start if you're new to mountaineering or looking for some structure. This is a weekly plan. We suggest you follow it for 8-12 weeks before the program starts, increasing the difficulty and time every week.

It's important to start where you are right now. That may seem obvious, but it's easy to hurt yourself when you're just starting a workout routine. If you haven't been active this winter, start with 20 minutes of cardio the first week. By early June everyone should have worked their way up to at least 60 minutes of running 3-4 times a week.

	<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>	<u>Saturday</u>	<u>Sunday</u>
Cardio	Cardio Start: 20-30 min Goal: 60-90 min	Intervals Start: 15-20 min Goal: 35-45 min	Cardio Start: 20-30 min Goal: 60-90 min	Intervals Start: 15-20 min Goal: 35-45 min	Cardio Start: 20-30 min Goal: 60-90 min	Day hike Focus on pack weight and gaining elevation	Rest Day
Strength	None	2-3 sets in circuit. Focus on core and leg muscle exercises (crunches, squats, push-ups, etc.)	None	2-3 sets in circuit. Focus on core and leg muscle exercises (crunches, squats, push-ups, etc.)	None	None	None
Flexibility	Full body stretches	Full body stretches	Full body stretches	Full body stretches	Full body stretches	Full body stretches	Full body stretches

Nutrition and Sleep

Training is hard on your body; make sure you're taking care of yourself. There are tons of nutrition plans, diets, and expensive specialized workout food/supplements/drinks out there that promise to make you faster and stronger. If you know that one of these plans works for you, go for it. Otherwise we recommend ignoring them and following these guidelines:

- Balance carbohydrates, proteins, and fats in your diet; most people do best with all three.
- Aim for whole foods (minimal processed) and plenty of fruits and vegetables.
- Drink lots of water.
- Cut back on alcohol and smoking.
- Get 7-9 hours of sleep every night.

No one is perfect, and we don't expect everyone to overhaul their lifestyle this spring just to get in shape for JIRP. Every step you can take on these guidelines helps your body. A little bit is better than nothing!

Timing

JIRP may feel far away, but now is the time to start training. The more time you can give yourself, the better. Some parts of your body (especially your tendons and ligaments) may take many weeks or months to get used to a heavier exercise regime. Start now, give your body time to adapt.

Remember, start where you are and work up. A 20-minute jog is far better than doing nothing at all.

Tips and Tricks

- Make this fun! You're more likely to stick with it. Try going to the climbing gym to build up your strength, or sign up for a new fitness or dance class at your university. If you hate running, you won't stick with a running plan; figure out something you enjoy.
- Make a pump up playlist. Ask your friends for suggestions.
- Keep yourself accountable. Especially when you're busy with school and work, it's easy to put things off for a day, then another day, then a week. Commit to working out with a friend or make yourself a calendar and mark off every day you work out.
- Get outside. The real world is far more exciting in terms of weather and terrain than the treadmill. Explore new trails or nearby neighborhoods.

Miscellaneous

- JIRP is too low for altitude sickness. Healthy adults generally do not get altitude sickness below 5,000 ft/1,500 m, and the majority of healthy adults don't get altitude sickness below 10,000 ft/3,000 m. The highest we're getting this summer is 6,000 ft./1,800 m.
- Break in your hiking boots. Wear them early and wear them often. Wear them around town, wear them in the woods, wear them around your house. This is one of the least energy-intensive things you can do to set yourself up for success at JIRP, but also one of the most important.

- You do not need to break in your ski boots. Wearing ski boots around when you're not skiing is not an effective way to break in your ski boots. Do not worry about breaking in your ski boots.

Parting thoughts

JIRP is a training program for field science students, and one of the things we teach is how to get in shape for a mountaineering expedition. If this is new for you, that's ok. Let us know when you have questions.