OA Personal Gear List Explained

HIKING BOOTS

Your feet are your wheels. If they aren't comfortable and well-protected, you aren't either. You need boots that are comfortable and well-loved, but also very tough! No matter what kind of boots you buy, you need good ankle support. This means that **your boots must cover your ankles**. Because we will be carrying heavy backpacks over uneven terrain, greatest stress will be put on your ankles. Protect them—do not bring low to mid-top hiking shoes! One Sport, Vasque, Merrell, Asolo, and Raichle make solid, well-constructed boots. Make sure you have **hiking** boots, not **work** boots. Your feet will be crying after one day of hiking if Doc Martens, Timberlands, Caterpillars, or some other work or "hip" type of boots is worn.

Hiking boot uppers come in two different kinds of material. Some swear by traditional leather hiking boots—they give the best ankle support and tend to be more waterproof, and, once they are broken in, they fit your feet like gloves. Others prefer lightweight hiking boots, made of a combination of nylon and leather. They break in more quickly than leather boots and can sometimes be cheaper. While adequate for the backpacking we do, they do provide less ankle support than sturdy leather boots.

Fitting - Proper fitting of boots is essential. You should **try new boots on only in the afternoon** since your feet swell during the day. Select a sock combination of a liner sock and outer sock and try the boots on with what you will actually be wearing. The boots should fit comfortably in the middle range of tension on the laces (so you can tighten or loosen the boots as needed). With your foot flat on the ground, try to lift the heel of your foot up inside the boot. There should be only ¼ - ½ inch of heel lift. Some boots are made in Unisex sizing, others are specifically designed for men's or women's feet dimensions.

Breaking-in - Break in a pair of boots well **before** your trip. Begin with short walks and gradually increase the time you wear them to allow the boots to soften and adjust to your feet. Easy day hikes are a good way to break in boots. Each time you lace your boots, take the time to align the tongue and lace them properly, otherwise the tongue will set into a bad position. If you haven't worn your boots for a while, it is a good idea to wear them for several days before a trip to "re-break" them in.

If you have any further questions about types of boots, brand names, fitting information, or otherwise, please feel free to contact us via email through our website.

FABRICS

In the Valle Vidal, weather conditions can range from mild to severe! You can count on having a shower for an hour or two pretty much every afternoon, some of which last into the evening and maybe even the next day. Wool and synthetic fabrics like fleece will help to keep you warm, even when they are wet. **Wool works just as well as fleece** and can often be found at more reasonable prices (as well as winning you more style points!). Check the tag on these fabrics—some fleece-like items can be cotton blends. **Cotton absorbs water and does not insulate when wet**, making it dangerous in cold environments. Do **not** bring any socks, long underwear, sweaters, or hats that are cotton blends.

Socks are just like any other warm layer. They must be made out of pure wool, synthetic material (such as polyester), or wool/poly blends. Cotton blends will leave you cold and unhappy. Identifying the fabrics that make up your socks can be difficult, but please only bring socks that you are sure are not cotton.

Rain gear needs to keep water out! It must be waterproof or highly water-resistant. Rain gear comes in three general categories, increasing in price:

1. Rubberized, PVC-coated raingear. The cheapest option, you can often find PVC-coated rain pants and rain jackets for $30. PVC-coated rain gear is highly waterproof; its downfall is that it is not breathable. It will, however, keep you as dry as any expensive Gore-Tex jacket will!

2. Coated nylon raingear. Coated nylon is more expensive but can still be found for about $70 for both pants and jacket. More breathable than PVC, nylon-coated raingear is waterproof but not as durable as Gore-Tex.
3. Gore-Tex raingear. Gore-Tex's claim-to-fame is that it is both entirely waterproof and breathable. In reality, it is neither perfectly waterproof nor breathable, but it, of all the options, does the best job of combining those characteristics. Consequently, it is often prohibitively expensive. The good news is that new Gore-Tex-like materials are available that may be less expensive.

Your jacket must have a hood to keep your head dry. Unacceptable raingear includes warm-up jackets, wind-breakers, plain nylon jackets, as well as ponchos designed to fit over backpacks. Any jackets or pants that have a cotton lining are unacceptable.

How do you know if your raingear is really waterproof? Wear it in the shower for two to three minutes (seriously!). If you're still dry after three minutes, your raingear will take good care of you in the wilderness. If you have any questions about raingear you are buying or if you are borrowing from someone and don't know exactly what they are giving you, email us.

Polypropylene is designed to be the fabric closest to your body. It is a polyester fabric that wicks moisture off your skin and onto the outer layer of the fabric, helping keep you warm and dry. EMS carries some good but inexpensive brands, including Bergelene and Lifa, but anything 100% polyester is acceptable.

Fleece is fuzzy warm fabric made from synthetic fibers (sometimes even recycled plastic bottles!). Again, check to make sure that it is **not** a cotton blend. Jackets and pullovers made from this material make excellent insulating layers. Remember, it is your body's metabolism that keeps you warm—clothing acts only to trap air, keeping it near your skin. Additionally, fleece has minimal bulk, weighs almost nothing, and dries particularly fast. Inexpensive fleece jackets can be found at stores such as Kmart.

Wool will keep you just as warm as fleece, and you or your family members may already have wool shirts or sweaters. Wool tends to be heavier and does not dry as quickly as fleece. Wool items can be found at outdoor stores or department stores, and cheaper wool items can be found at second hand and thrift stores.

THE BACKPACK

Excerpted from The Backpacker's Field Manual:

The external frame pack helped to revolutionize backpacking. Suddenly, much larger amounts of weight could be easily and safely carried allowing for longer trips. Advances in pack design offer an incredible range of sizes and options. There are two basic types of frame packs, external frame and internal frame. The purpose of the frame is to transfer most of the weight of your gear onto your hips so that the strong muscles in your legs are carrying the load rather than your shoulders. If you remember trying to carry several Encyclopedias home from school in a daypack, you know what I mean. The ideal distribution is about 80% of the weight on your hips and 20% of the weight on your shoulders. This also lowers your center of gravity making you more stable.

Internal versus External Frame Packs:

External Frame: External Frame packs typically use a ladder-like frame of aluminum or plastic. The hip belt and shoulder straps are attached to the frame (see above). A separate pack bag attaches to the frame usually with clevis pins and split rings. Some external frame packs come in specific sizes based on the length of your spine; others are adjustable to fit almost any adult. Look for good lumbar padding, a conical hip belt, recurved shoulder straps with good padding and a chest compression strap. **Pros:** Good for carrying weight. The External frame allows for some airspace

between your back and the pack bag so your back doesn't sweat as much. Frame extension bars and space for a sleeping bag outside of the pack allow you to strap on lots of gear when you need to make the carrying capacity of the pack more versatile. Less expensive than many internal frame packs. **Cons:** Most external frame packs have little if any flexibility so your pack tends to "wobble" somewhat side to side. This is usually not a problem on a regular backpacking trip, but can throw off you balance if skiing or snowshoeing with a pack. Don't take it on an airplane unless you have boxed it up, that is if you want to see it alive.

Internal Frame: Internal frame packs use a wide variety of materials, aluminum stays, carbon fiber, plastic sheets, and foam to create a rigid "spine" to which the hip belt and shoulder straps are attached (see above). The pack bag runs the full height of the pack, although it may be divided into several compartments. Some internal frame packs come in specific sizes based on the length of your spine; others are adjustable to fit a range of sizes. Look for good lumbar padding, a conical hip belt, recurved shoulder straps with good padding, and a chest compression strap. A removable top pocket and a bivy extension on the pack bag will let you lift the pocket up and store more gear. Also make sure that the pack has side compression straps to squeeze the pack down if you are carrying a smaller load. **Pros:** Good for carrying lots of weight. Conforms to the body better for better balance. Generally more comfortable to wear for long periods. **Cons:** Since the pack bag and frame are directly against you entire back, back perspiration can be more of a problem (plan to bring extra shirts). You can't cram as much on the outside so the overall carrying capacity of the pack is somewhat fixed by its internal volume. Tend to be more expensive than external frame packs.

Pack size is an important factor when selecting a pack. You need to make sure that you can adequately carry all the equipment and food you will need for the length of your trip. Keep in mind that the pack bags of external frame packs are smaller than internal frame packs. This is because there are spaces outside the pack bag to strap large items directly to the frame on an external one. Here are some rough guidelines on pack size and trip length.

Length of Trip	External Frame Pack Bag Volume	Internal Frame Pack Bag Volume
2-4 Days	1,500+ cubic inches (25+ liters)	3,500+ cubic inches (57+ liters)
5-7 Days	2,000+ cubic inches (33+ liters)	4,500+ cubic inches (73+ liters)
8-10 Days	3,000+ cubic inches (39+ liters)	5,500+ cubic inches (90+ liters)

Buying a Pack: When you go to the store and try on a pack, the salesperson will help you adjust it and it will feel great. Then she will give you a few sand bags (25-30 pounds/ 11-13 kilos) to put some weight on. Chances are it will still feel good. The real test is when you get home and try to put 50-70 pounds (22-31 kilos). Make sure that the store will take it back after you have tried it at home if it doesn't feel right. I bought a pack once without doing this test *until* I hit the trail. With 60 pounds in the pack, the hip belt slipped off my butt and I ended up carrying much of the weight on my shoulders. I hiked in pain over four days.

Sizing an External Frame Pack:

It is essential to have a pack that fits properly. Packs vary from company to company so check the manufacturer's specific instructions for both fitting and loading. Here are some general fitting guidelines.

The idea behind an external frame pack is to have the frame transfer most of the weight onto your legs through the hip belt. Therefore, when fitting a pack the place to start is with the hip belt.

- Put the pack on and have the hip belt on your hips; the top of the belt should be just at or slightly below the level of your pelvic arch (which you should be able to feel with your fingertips beneath the skin).

- Cinch the hip belt snugly and make sure that you have enough extra room in the belt that you can tighten up at least an inch or two more. On some packs the position of the hip belt on the frame is adjustable.
- With the hip belt on and properly positioned, tighten the shoulder straps and note their position. The straps should come off the frame about even with the top of your shoulders. If the straps drop down, too much weight will be pulled onto your shoulders (the pack is too small). If the straps go up, too little weight will go onto your shoulders (the pack is too large). Some packs will allow you to adjust the point at which the shoulder straps attach to the frame to fine-tune your fit. Be sure the straps are positioned such that they neither pinch your neck nor slip off your shoulders.

Loading an External Frame Pack:

The major consideration in packing a pack is how best to distribute the weight. There are two basic principles. For trail hiking over generally flat ground the weight of the pack should be high and relatively close to the body. Your heavier items should sit between your shoulder blades. For consistent steep/rough terrain carry the weight lower to give you better balance (helps to avoid falls due to a high center of gravity). In this case, heavier things should be placed more toward the middle of your back. To achieve either arrangement, load the heavier, bulky items into the large, top compartment in the position where you want most of the weight. Then fill this and the remaining compartments with lighter items. Tents and tarps can be lashed to the extender bars at the top of the pack and sleeping bags can usually be lashed to the frame at the bottom of the pack. In either case the horizontal weight distribution should be balanced so that the left side of the pack is in balance with the right (See Figure below). An important consideration to remember is that a woman's center of gravity is generally lower than that of a man. Thus, for women, the heavier items should be placed close to the body but lower in the pack as in the case for rough terrain above. Packs especially designed for women are designed to account for the difference in centers of gravity. Load these packs as described above and then lash sleeping bags and tents or tarps to the extender bars at the top of the packs. (See Figure below).

Sizing an Internal Frame Pack:

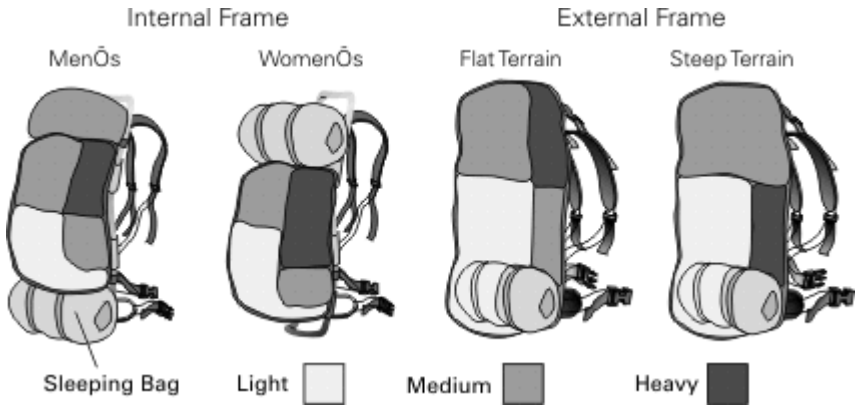
Packs vary from company to company so check the manufacturer's specific instructions for both fitting and loading. Here are some general fitting guidelines.

- First put on the pack and fasten the hip belt to a point where you feel comfortable. The belt is meant to rest on your hip bones to allow your pelvis to carry most of the weight.
- The framestays should extend two to four inches above your shoulders.
- Once fastened, the hip belt should still have room for adjustment so as to accommodate clothes changes.
- The shoulder straps should follow the contour of your shoulders and join the pack approximately two inches below the top of your shoulders. The position of the shoulder harness can usually be adjusted. The lower ends of the straps should run about five inches below your armpits. On the shoulder straps you will find load lifters which connect to the pack at about ear level and meet the shoulder straps in front of your collarbone.
- The sternum strap should cross your chest below your collarbone. If the framestays are shaped correctly and the pack is properly fitted, you can adjust the load lifters and other fine-tuning straps to make the pack hug your back. Also, adjustments can be made while hiking to divert weight to other muscle groups thus making hiking less tiresome.

Loading an Internal Frame Pack:

Your gear will form the structure of support for an internal frame pack. For easy, level hiking, a high center of gravity is best. To achieve this, load bulky, light gear (e.g. sleeping bag) low in the pack and stack heavier gear on top of it. For steeper terrain, a lower center of gravity is best because

it lessens the chance of falls due to a top-heavy pack. In this case, place heavier items a little lower in the pack and closer to your back than normal. Women may prefer this arrangement under all circumstances. (See Figure below)



SLEEPING BAGS

Sleeping bags are the best way to keep your body warm in cold conditions. Please learn about the different options available to you and look at the following helpful information.

Why synthetic and not down-fill on FOP? Although down-filled sleeping bags provide more warmth and more compressibility for less weight, they cannot be brought on FOP. In dry conditions, down sleeping bags are great, however when down becomes wet, it loses its loft and becomes practically useless to warm someone. Because of this, many down sleeping bags are offered with waterproof or water-resistant shells. Synthetic bags do not lose loft when wet. Because your sleeping bags are your last line of defense against the cold, the risk of a wet down bag is too high given the New England weather.

Down: Usually filled with goose-down, down bags have several advantages over synthetics. Down bags provide as much warmth as synthetic bags with less weight and more compressibility. However, down bags are usually more expensive, and if not cared for properly, lose their loft very quickly. They are also difficult to dry and lose insulating power when wet. *Fill power* is a measure of how warm a down bag will be. Higher numbers mean more loft and better quality down. Typically fill power is a number between 550 and 850. All down bags should have a water-repellant or waterproof finish to prevent loss of loft.

Synthetics: Most synthetic bag insulation today is made from one of two material: Polarguard 3D or Primaloft. Of the two, Polarguard 3D is more popular because of it's higher durability. Primaloft offers a lighter and more compressible insulation. All synthetics will dry quickly and are more durable than goose down. Older synthetic materials used in bags such as Hollofil and Quallofil are sufficient, but are heavier and bulkier than newer versions.

What to Look for in a Bag:

Size: Make sure to check out the size of a bag in the store. Most sleeping bags come in regular and long sizes. Those people above 6' tall should check out long sizes. Don't buy a bag that is too big for your body as it will be extra weight to carry and extra space to warm up.
To make sure you have the right size, ask the salesperson if you can sit in the bag you are planning to buy in the store.

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Bag Shape: Bags come in three basic shapes: Mummy, Semi-rectangular, and Rectangular. FOP recommends Mummy bags for our trips because of the greater warmth they provide, althogh Semi-rectangular bags will do if warm enough. Look for a bag with a hood to provide extra warmth.

- *Mummy:* Mummy bags are tapered for fit, wider at the shoulders and narrower at the feet. This allows you to save warmth while you sleep by decreasing the amount of space your body needs to warm up. Most mummy bags have hoods to provide extra warmths
- *Semi-rectangular:* These bags are an in-between shape. More tapered than a rectangular bag, but less tapered than a mummy bag, they provide warmth, but do take longer to warm up. Allows more tossing and turning room.
- *Rectangular:* These bags are the least heat-conserving of all the shapes. They also weigh the most and consume the most pack space.

Temperature Rating: This number is an estimate of the minimum outside temperature at which the bag will keep you warm. Keep your metabolism and other sleep factors in mind when deciding what temperature rating is best for you. FOP requires 20 degree bags, however, if you get cold easily when you sleep, you may consider getting a warmer bag. Temperature ratings are guidelines only: look for a bag 5-10 degrees warmer than the coldest anticipated temperature on your trip.

Compressibility: Check to see how compressible a bag is in the store. Stuff it into it's stuff sack and compare it to other bags when stuffed in their stuff sacks. The less space the bag takes up, the easier it will be to pack, but don't sacrifice warmth for space.

Shell: Many bags have water repellent shells or finishes such as DryLoft, Epic by Nextec, or eVent. All shells should be lightweight materials such as nylon. They should also be durable and windproof.

Zipper tape: a zipper with a tape along it's inside will prevent your bag from catching in the zipper. A useful feature when you are heading to the woods in the middle of the night.

Hood: A hood is one of the best ways to improve the warmth of your bag. It adds tremendous warmth due to the fact that around 40% of body heat is lost through the head. Also, it provides a place to hide when dawn arrives.