Best Foot Forward: What You Need; What to Look For, What to Buy in Footwear for Snowshoeing.

This article is intended for basic snowshoe course students, who may be buying boots and other gear for snowshoeing for the first time. Some information may be of interest to experienced outdoorspeople who are thinking of trying a different type of boot. The dizzying array of different boots touting various attributes can very quickly be narrowed down, once we consider the purposes the boot must serve, and the qualities needed for that. These notes are based on many years of experience, using a variety of types of boots, mostly hiking in clubs with other members with a shared interest in comparing and evaluating equipment. There is some variability among individuals in tolerance for cold, a feeling of whether a boot is too stiff or does not give enough support, and other matters of personal preference. Prices mentioned are based on retail prices currently (2024) listed on retailers' and manufacturer's websites. Sales and discounts may often be found. As most of these items are imported, prices may be affected by changes in tariffs. The equipment discussed below, based on descriptions of the manufacturers and distributors and in some cases personal experience with it, is believed to be suitable for snowshoeing day trips of the sort listed on The Mountaineers schedule as beginner and basic snowshoe trips, and for the field trip in the Basic Snowshoe course. More difficult or more technical trips and terrain may require different equipment. Unsuitable or bad equipment increases chances of injury or death, but good equipment is not absolute protection against bad choices, bad weather, bad luck, etc. You can get killed wearing the best and most expensive gear.

Snowshoeing is a winter activity, usually done in below-freezing temperatures, with one's feet plunging in and out of crystalized water (snow). It would seem obvious, but it is worth stating: summer hiking boots and trail shoes are not suitable for snowshoeing. Boots for snowshoeing must be insulated and waterproof. Even with insulation, some snow may melt on the boot, so it must be waterproof. Also, there may be an occasional stream crossing resulting in a dunked boot. If the boot is not waterproof, the consequences may be more severe than in summer hiking.

Your boots must be thick and sturdy enough to handle snowshoe binding straps. You don't want the straps to compress the boot and your foot, impairing circulation and increasing danger of cold injury. You don't want the boot and sole to have so much "give" that it will flex its way out of the binding and straps. Summer hiking boots will likely not meet these requirements.

In western Washington, there may be times of year and places where one has to hike some distance from the trailhead, probably uphill, on bare ground or frozen crust, to find enough snow to use snowshoes. A good hiking sole, such as Vibram, is desirable for this, as well as for wearing the boots for other activities besides snowshoeing.

Here is a brief but good discussion of what to look for in boots for snowshoeing. This is reproduced, by permission, from the Rochester Winter Mountaineering Society's *THE WINTER MOUNTAINEERING NEWS* 2020 trip schedule:

Boots must be very well insulated, comfortable, and waterproof. Plastic mountaineering boots, leather pac boots, and insulated leather boots can be used. Make sure they fit in the bindings of your snowshoes. Temperature ratings for boots are not always accurate. Boots rated at -40 F or below should keep you warm. Boots rated at -25F are more common but many find them to not be warm enough. Warmth requirements vary greatly from person to person. Purchase boots a little large to give room for thick socks. Look for boots with excellent ankle flexibility and stiff soles. Most winter boots are too tall and somewhat inflexible which may bother your shins or ankles on steep hills. The ideal boot height for snowshoeing is about 6 to 7.5 inches but warm boots are difficult to find that low. Snowshoes put extra stress on the ball of your foot which is better handled by stiff soled boots. Keep in mind the total weight of boots and snowshoes. Note that breathability is not important but waterproofness is important.

Gaiters are important for keeping snow out of your boots. Highly breathable ones that are not waterproof are best. Outdoor Research is the most popular brand for gaiters. Some mountaineering pants have built in gaiters that can work very well if they fit your boots.

The note about gaiters is worth further comment. Once snow gets inside your boot, your feet will get cold and wet, and vulnerable to cold injury, even if the boots are waterproof. You can expect to be in loose snow up to your knees or deeper. You will want gaiters that have a strap under your instep, and go above the calf and can be cinched at the top to keep out snow. They should open and close in the front. Typical price range is about \$30-60. You can spend more for Gore-tex, or much more for insulated super-gaiters, but it is not necessary. If you break through on a stream crossing, well-fitted gaiters will probably keep water out of your boot for a few seconds, probably long enough to get your boot out of the water. They should keep snow out all day.

Plastic mountaineering boots have a hard plastic shell and a removable lace-up insulating inner boot. The shell and sole are very stiff, and designed for use with full (front-point) crampons as well as snowshoes. They are a bit beyond introductory-level gear choices and would not be a good first boot purchase. Prices range from about \$240 (sale price; regular about \$360) to well over \$1,000.

Leather pac boots have leather uppers stitched to waterproof bottoms, usually rubber, with a sole designed for traction on snow. Some of the better ones have Vibram soles cemented to the rubber part. They have a removeable insulating liner, usually 8 or 9mm thick, which may be wool felt, synthetic, or a blend, and can be taken out for drying overnight. Kamik and Sorel are two of the better-known brands. Sorels are now mostly made in China and Vietnam. Kamiks are now mostly made in New Hampshire and Canada. I have a pair of Kamik pacs which are great for very cold weather. Before that, I had Canadian-made Sorels, which lasted many years. Pac boots are a good all-around choice. Both Kamik and Sorel also make leather boots with rubber

bottoms, with insulation sandwiched inside the uppers and bottoms (rather than removable), which are suitable for snowshoeing. Prices are in the \$110 to \$220 range. Lace-up boots will be much more stable than pull-ons, especially carrying a winter day pack on irregular terrain, and less likely to come off by accident. Waterproofing usually relies on Gore-tex or other waterproof vapor-permeable membrane between the outer and inner layers of the boot. Leather may also be water-proofed and maintained with Sno-Seal (mostly beeswax) and similar commercial products. Use saddle soap, warm water and a rag or a brush to clean leather before applying Sno-seal. An old toothbrush is good for seams and stitching. A hair dryer or a heat gun on "low" are good for warming the leather to melt the wax in.

Leather mountaineering boots and composite leather boots with molded plastic bottoms and Vibram soles have sufficient insulation, and are stiff enough to use with full crampons, as well as good for snowshoeing. I have a pair of Kayland mountaineering boots which I have used with snowshoes and with full crampons, with which I am satisfied. Kayland is an Italian company (Italy has great traditions of boot-making and mountaineering), which apparently still makes their boots in Italy or elsewhere in Europe. Expect to pay in the \$200 to \$400 range, or more if you wish.

Socks are a very important part of your footwear. They provide an insulation layer which can removed and replaced with a dry one by changing socks, unlike the insulation sandwiched in the construction of the boot. Wool or mostly wool and synthetic blend (polyester and spandex) are all-around best for winter wear. Wool insulates even when wet, although dry feet are more comfortable and stay warmer longer. A thick woolen sock over a thin silk or silk-like synthetic liner sock is a good combination. If friction occurs, it is between the inner sock and the outer sock instead of between the skin and the sock, reducing likelihood of blisters. Avoid cotton socks for cold weather use.

Gore-tex and other proprietary vapor-permeable liners provide the built-in waterproofing in most hiking and snowshoeing boots. It is usually very effective when new. Many people experience wet feet after using the boots for a while. Here is a link to an Appalachian Mountain Club article on this subject: https://www.outdoors.org/resources/amc-outdoors/outdoor-resources/why-do-gore-tex-boots-get-wet-inside/ The reason is usually not the Gore-tex; however, I do suspect the taped seams may be the weak point in construction after they have flexed with a few hundred thousand steps. Gore-tex and similar socks and boot liners are available from Cabelas. I have seen some advertised on Amazon but have no knowledge of their quality or effectiveness. Gore-tex and similar socks or liners might be worth a try if your "waterproof" boots are no longer waterproof. Wear them outside your regular socks.

You may hear mention of vapor barrier liners (VBLs). Your skin emits moisture as perspiration. The idea is to contain the moisture next to the skin, instead of allowing outer layers to absorb it, and compromise the insulation. VBLs are frequently used in sleeping bags in arctic temperatures, but not for clothing worn during heavy activity, when you really need to transport moisture away from your skin. Some people like VBL socks, and others don't like the feeling of wet feet. If you try them, wear them next to your skin or over a thin liner sock (which will get wet), but under your woolen socks, to keep moisture from your feet out of the insulation. You could try a couple of bread bags to get an idea of how they would feel and work for you.

Below is a link to a recent article from REI with recommendations for winter boots. Certainly, REI is in a position to collect a lot of data on customer satisfaction or complaints. I think most people who work there part-time are there for the gear discounts for their own pursuits, and are thus another good source of user feedback. REI recommends at least 200 grams but not more than 400 grams of insulation in boots for vigorous activity. Here is the link:

https://www.rei.com/learn/expert-advice/best-winter-boots.html?cm_mmc=email_com_gm-_20241111_MNL_MemberNewsletterNovember-_-111124-_CTA1_NP_Expert_Advice_24_03383&ev36=30705083&rmid=20241111_MNL_MemberNewsletterNovember&rrid=243544675&ev11=1&redirect-pup=false

REI's "best overall" boot recommendations look pretty good to me:

Best Overall Winter Boots for Men: The North Face Chilkat V 400 Waterproof Boots – Men's

Best Overall Winter Boots for Women: Sorel Tivoli V Waterproof Boots – Women's

REI's experts also like the Salomon X Ultra Snowpilot Waterproof Hiking Boots. Those look very light-weight to me, good for taking the kids sledding at Hyak Sno-Park. But if there is any chance of a planned or unplanned overnight above 6,000 feet, I would want something more substantial. These would be acceptable for the Basic Snowshoeing field trip if worn with gaiters. Summer hiking boots, trail shoes, etc. will not be acceptable on the field trip.

Plastic shell mountaineering boots would be overkill for the Basic field trip, and would probably feel too stiff and clunky. If you ever consider buying them, rent and try them out for a few trips before buying. They can be rented from Whittaker's in Ashford. The other boots described above can be bought from the usual outdoor retail sources, including REI, and online retailers such as steepandcheap.com, sierra.com. Ebay may be a good source of used boots, often only worn once or twice. Most Mountaineers branches and some ski and outdoor clubs have used gear sales at least once a year. Thrift stores such as Goodwill and Value Village would be a long shot, very hit or miss. Second-hand and consignment outdoors stores such as Olympia Gear Exchange, 108 4th Ave W, Olympia, WA 98501; WONDERLAND GEAR EXCHANGE, 122 NW 36th St, (Fremont) Seattle, WA 98107, or Ascent Outdoors, 2201 15th Ave W (Interbay), Seattle, WA 98119, may have good used gear at reasonable prices.

Regardless of what you buy, wear them indoors on carpeted floors for a bit, so you can return them if they are not a good fit. Wear them for a few miles of walking around town or short walks, to break them in a bit, and to find out if there are any high friction areas, which may require putting tape or moleskin on your foot to prevent blisters. That is easier to do in your bedroom at home than during a snack and hydration break at altitude in cold and snow.

For additional information, see: *Mountaineering: The Freedom of the Hills*, 10th Ed. Ch. 2, "Clothing and Equipment", Pages 30-33; Ch. 17, "Technical Snow and Ice Climbing", p. 383.