



This is a very unique event in a very cold environment. Whilst much of what you need is 'standard' cold-weather outdoor and athletic gear, there are some specialist items that you cannot do without and there are some 'comfort' items that we will insist you bring in order that you are protected from the extreme cold. We outline here what 'the event' provides and what you are expected to provide. Then below you will also see the mandatory kit list. This list will be made more detailed as we get nearer to the challenge but for now it gives you a very firm snapshot of what gear you will require for this challenge.

MANDATORY KIT LIST

Note: All items are mandatory, unless it says recommended, where they are, well, recommended!

- A 4 season down sleeping bag with a comfort rating of at least minus 25C
- A foam roll mat will do but the much better choice is a therm-a-rest or other self inflating sleeping mat
- Balaclava (and spare)
- Spiked shoes or spiked/ studded attachments for shoes, like these
- Heavy-duty down jacket
- Good gloves of varying thicknesses
- Waterproof shell outer garments – top and bottoms (must be able to fit over your insulation garments so please try your outer garments for size over this clothing)
- Survival Bag (NOT blanket)

CLOTHING

- Base layer(s)* Multiple base layers for top and bottoms, plus spares
- Mid layer(s)* Multiple mid layers for top and bottoms, plus spares
- Outer layer* Good insulating outer garments for top and bottoms. These do NOT need to be waterproof (in fact, it is better if they are not). Precipitation is negligible in this area, so insulation is king, not waterproofing. For moving on the ice, lightweight down and loft-style outer layers are best. Windstopper-style and soft-shell trousers and tights are recommended for bottoms
- Socks* Minimum of one liner sock and a thicker sock. Plus spares. We highly recommend Mongolia Yak socks, you can purchase them ahead of the event via the store here: <https://ratracestore.com/collections/socks>. These are handmade in Mongolia.
- Liner gloves – fingered**
- Outer gloves – fingered**
- Over mitten or down/ loft mitten**
- Hat (plus spare)*** • Balaclava (plus spare)***
- Neck gaiter, Buff, Ratrag, snood or fleece tube (plus spare)***
- Goggles****
- Sunglasses****
- Underwear: A good pair of wicking underpants or sports knickers/ bra. Plus at least one change of underwear

- Footwear**** with spiked/ studs embedded in the soles OR a spiked/ studded attachment that can be fitted to the shoe or boot, like these.
- Daypack: A small daypack (15 – 30l) to carry spare clothing, med kit and mandatory safety gear plus food/ drink. NB items like gels and energy bars are best kept in pockets close to your person, so they do not freeze. As is water.
- Sleepwear kit: Base layer top and leggings, gloves, hat and socks. This should be kept just for sleeping ensuring you always have a comfortable, warm and dry layer.

*** How many base layers, mid layer, outer layers or pairs of socks shall I wear? And what materials?** The answer to 'how many' is a very personal one. Some people run hotter than others and therefore how many garments you wear in which configuration is not a 'onesize-fits-all' answer. What we will say is that you should plan to dress for your coldest-ever conditions but remember that you are exerting yourself. Which means that you need to wick sweat away from your skin and to the outer layer as efficiently as you can (otherwise it condenses between layers and snow forms inside your clothing). Our recommendation is a minimum of 2 base layers, 1 mid layer and 1 outer layer to be available to be worn at all times whilst out on the ice for your TOP. Plus MORE spare clothing (mid layers are advised) to be available to you in your day bag in case you need to add layers to this system.

For your legs, it's more of the same in terms of choice, although runners may want to stick to tights as much as possible. That's fine, although you will need multiple pairs and softshell/ windstopper outer garments (tights or pants) are advised. Our advice for all participants would be to start with a good next-to-skin leg baselayer tight and then layer with another tight OR looser fitting baselayer leg garment, then your outer leg cover. This may be a tight or a trouser BUT in all cases, you should have a spare outer layer leg garment in your day pack too. So that's 2 baselayers and an outer, with the ability to stick another outer on, on the route, if required.

in terms of materials, this is also somewhat personal in nature, although there are some clear precedents in terms of performance. Synthetic fabrics are good for wicking; merino wool is also good for wicking and has very very good insulation properties, (and doesn't smell) although some people find it a bit itchy for next-to-skin base-layers. Silk is also a good natural fibre for next-to-skin and is extremely comfortable, although requires more baselayers to be added above it as it is very thin. Our advice is to experiment and select the materials that work for you. There is no shortage of good base-layer technology on the market. Socks kind of fall into the same camp as above. There are loads of different technologies and some people wear lots of pairs. Others don't. Our advice would be a minimum of a wicking liner sock and then a good chunky woollen-based trekking sock (Merino wool, or Merino blended with other materials are great. Mongolian Yak wool socks are also fantastic and you can buy them locally at Khatgal). Your shoes or boots need to be loose enough to fit this sock combo, too. The tighter it is inside your shoes, the less the sock layers will trap the warm air between layers. Tight shoes = bad for insulation, therefore.

**** Argh, the great glove debate** Somewhat like the base-layer and mid-layer choice, this is down to personal preference and how cold or hot you run when you are exerting yourself. Some people love a nice lofty down mitt to feel toasty and snug all day long. Of course, you lose dexterity. Some people like a thin merino or silk liner glove and then a fairly lightweight, windproof glove for ultimate dexterity with zips and kit. In all cases, layering is still the key here. Our advice is unequivocally to start with a very good 'liner glove' (a glove in its own right; not a built-in liner glove to a bigger glove, if that makes sense). Something like this Merino number works very well. Then layer up with a 'standard' winter fingered glove: This can be a single or twin skin glove at whatever thickness suits you, although we'd advise having a 'thin' one and a 'thick' one ready so you can chop and change depending on comfort and conditions. Then over all of these, have a mitt ready to go that you can deploy over the top of everything if the wind-chill goes sky-high and/ or if the temperature plummets. It's a lot of gloves, we know, but the ability to vary the system is key.

***** What sort of hat do I wear and what else do I put over my face?** Full face cover is a good idea. This means eyes, nose, ears, mouth, head and neck. You won't always need that level of

cover but you frequently will, especially if a little bit of wind comes our way. The tools for the job are listed in the mandatory kit list but by and large they are a hat, a balaclava and some sort of cloth or fleece tube that goes around your neck. All of these items come in different shapes and sizes. Choice is part of the solution but there are some good general rules here:

Balaclava and neck tube: These come with noses, without noses, breathable mouth holes, fully encased neoprene numbers, fleece-lined, windstopper materials, etc. You then augment the balaclava with a Buff or necktube that can be pulled up over your mouth and/ or nose for added protection. This combination is a very good one as it's flexible and the neck tube can be lowered or raised accordingly. It is mandatory to have spares of both of these garments. This is because, due to breath and other perspiration in the facial area, over the course of a day these garments will totally freeze up. So you do need spares to change these out when they get too stiff and to allow the other pair to dry out overnight. Our clear advice would be to look for windstopper fabrics in at least one of your balaclavas, as this is very very good at keeping wind-chill off the face and back of the head, plus ears.

Hats: The age-old saying is 'if your feet are cold, put on a hat.' The insulating properties of the hat are demonstrated in no greater way than in this environment. And it's pretty much a key to instant warmth. There are lots of them. A good old-fashioned woolly hat is ideal and insulates well. As do shell-based mountaineering hats with fleecy linings. By far the warmest hat available to you however is a fox fur Mongolian hat. There is more info on local dress within the 'location' page but our clear advice would be to 'wear the fox hat.' We understand some folk will view that advice with some trepidation or distaste. But it is not a vanity thing or a fashion show out here; it is simply the finest insulating headpiece known to Man and the Mongolians worked that out 1000s of years ago. They are available readily in the area and cost around \$35 for a very good one. We'd advise you to buy one locally and support local trade.

**** **Eye protection** Another area where perspiration causes a bit of an issue is with goggles steaming up on the inside. Our clear advice is ONLY to bring very good goggles with you (which does unfortunately mean expensive), which have clear anti-fog coatings and technologies. They make a huge difference. Unlike when in a ski resort and whistling down a slope at speed may well clear a steamed-up goggle, here the steam instantly freezes and you cannot clear it. Sunglasses are a good 'second solution' for if your goggles do steam up, although they do tend to steam up quickly themselves. They are however a bit easier to clear than a big set of goggles. Simply put, wear goggles and if they steam up and you can't clear them due to freezing-up steam, revert to sunnies.

***** **Footwear** Clearly this is a very personal choice. You have some defined options however. If you are running, you will want something lightweight, with good grip, either with ice studs built into the sole (of which there is plenty of choice) OR that you can attach a detachable ice stud or spike device to. It is personal choice. If hiking only, a sturdier and warmer boot is advisable but again, it must be compatible with detachable ice studs. Most are. Your choice as a skater is limited to those boots that you can fit a detachable skate to (more on this in the skating kit section, below) but you must also be able to fit detachable ice studs to the boot, for those sections where you cannot skate and must walk/ run instead. For bikers, it's up to you but again, the shoe must be capable of being able to travel over rough ground and be able to take the ice studs. More on this in the biking section, below.

CAMPLIFE

- A 4 season down sleeping bag with a comfort rating of at least minus 25C
- A foam roll mat will do but the much better choice is a therm-a-rest or other self inflating sleeping mat
- Head-torch with spare batteries
- Thick down jacket for use in camp (separate to outer layers used on the route)
- 2 x Water bottles – preferably with insulation
- Knife, fork, spoon set
- Plastic plate and bowl

- Expedition meals*
- Personal toiletries and medications**
- Antibacterial wet wipes (baby wipes are best)***
- Roll of toilet paper***
- Anti-bacterial handwash***
- Suncream
- Blister kit/ adhesive blister patches
- Holdall (to put all of your spare kit and overnight kit that you won't be carrying in your daypack Other recommended personal items (not mandatory)
- Pee bottle*
- Books
- Playing cards
- Face, nose and hand moisturiser – very good for weathered skin from the cold
- Lip balm – good for those cracked lips
- If you can play, a mouth organ or Ukelele (!) may go down well around the fire!
- Music devices**
- Phone**
- Camera**

***WHAT IS THIS?!** Once you have crawled out of your sleeping bag, pulled on your boots and some clothes and gone to the toilet in the middle of the night, you'll know....! A pee bottle prevents you having to leave the comfort of your ger and is simply a bottle to pee in, at night. You then empty it in the morning down the toilet (If it's not frozen!).

SAFETY AND SPECIALIST ICE EQUIPMENT

- Personal med kit. (Spec to follow but will include bandages, gauze, steri strips, antiseptic (spray or cream), plasters and rubber gloves)

MANDATORY KIT FOR CYCLISTS

- Fatbike with spiked tyres*
- Flat pedals (no cleats whatsoever, as you may need to cover some ground on foot whilst on the route and we require you to have the ability to attach ice studs to regular boots or shoes) • Bike box for transport of bike to/ from event (NOT cardboard box or soft bag; it does need to be a proper hardshell bike box)**
- Tools, spare inner tubes, pump
- Helmet
- Shoes***
- Gloves/ overmitts****

* Fat bikes are the only bike of choice for this adventure as the wide tyres at low pressures give a large contact patch with plenty of grip. They're a specialist and pricey bit of kit but they work superbly and make the challenge super enjoyable. 45NORTH Dillinger tyres are the go to tyre for fat bikes and Schwalbe offer a range for different wheel sizes and widths. You should choose the widest that will fit your bike if you're not on a fat bike.

** It is a fairly expensive business bringing a bike with ice tyres to Mongolia due to the size and shape of the box and the need for specialist ice tyres. Which shouldn't put you off if you have the gear or if you want to obtain it. It is just something we want to flag up-front.

*** You will need a system here that keeps your feet toasty while on the bike. Flat pedals means you can wear what you like, but note that keeping feet warm on the bike is a challenge given the extreme cold, so think carefully about shoes and overshoes, gaiters and the like. We are not making anything mandatory here as it's a personal choice. But you need to plan to keep those feet warm at all costs or it could end your event quickly

**** As above, hands on the bike will get cold quickly if you don't have the right gear. The glove advice for all participants still applies for cyclists, but we are going one stage further and insisting on overmitts or pogie as mandatory, for obvious reasons.

MANDATORY KIT FOR SKATERS

- Detachable back-country skates*
- Back-country x-country ski/ skate touring boot*
- Poles (with either skating poles or x-country skiing poles). No basket is required
- Helmet – rated for snowsports (multisport helmets are also fine)

*This is a very particular type of event for a skater. There is no real known comparison. The terrain varies from glistening smooth black ice that you will glide across serenely (sometimes!) to crust, snow-covered sections, seams and other different surfaces, that are impossible to skate. The ability therefore to detach skates and switch to standard boots with ice stud or spike attachment for traversing the 'lumpy' stuff on foot is key. The skates must therefore ONLY be detachable touring-style kit. No figure-skating gear or hockey boots please! The choice is narrow (which makes it easy to select kit!) but there are absolute clear contenders for the job. We recommend Lundhags T-skates with Rottefella binding which will be on sale at a competitive price nearer to the event date. These fits most x-country touring boots due to the Rottefella binding. Email us to find out more.

For boots, a x-country touring boot is what you need. The key is absolutely that it must have the Rottefella binding if using it with our recommended skates. It's a very straightforward and interchangeable system. It's just that the kit is quite specialist so there is not much choice in the market. These boots are however widely available in Scandinavia (and of course online via various retailers) so we would suggest you identify some boots and then purchase the skates from ourselves when you are ready to do so.