

Preparing for a Successful DofE Expedition

Equipment List E...Essential R...Recommended L... Luxury

The following list is a standard equipment list for DofE Expeditions at all levels; it is not designed to take into account specific conditions that may be encountered in some environments and should be considered a base level list. Please read the attached advice sheet

Clothing.

Where there are two items of clothing it assumes you will be wearing one and carrying the other in your rucksack. Spare clothing carried in your rucksack must be adequately waterproofed.

- Boots (E)
- Fleece light weight (E) x 2
- Warmer fleece (E)
- Trekking trousers x 2 (E) lightweight quick drying synthetic material **NOT DENIM/COTTON/CANVAS**
- Base layers (E)
 - ✓ Synthetic material wicking tee shirts x 2 one of which should be long sleeved
 - ✓ Thermal tee shirt (R) (long sleeved) (good for sleeping in)
 - ✓ Pair of thermal long johns (R) (good for sleeping in)
- Underwear (E) x 3 sets
- Trekking Socks (E) x 2/3 pairs
- Liner socks (R) x 2/3 pairs
- Warm Hat and gloves x 2 (E)
- Waterproofs (E) trousers and jacket
- Sunhat (E)

Camping Equipment.

- Rucksack 60 litres capacity (E)
- Sleeping bag (E)
- Roll matt (E)
- Bowl/mess tin (E)
- Mug (E)
- Spoon/spork (E)
- Towel and washing kit (L)
- Water Bottle/s capacity to carry 2 litres of water (E)
- Head-torch and spare batteries (E)
- Personal first aid kit (E)
 - ✓ Personal medications
 - ✓ compeed
- Waterproofing for kit (E) (read the section on waterproofing personal kit on page 3)
 - Dry sacs (E) 3/4 assorted sizes to waterproof sleeping bag, spare clothes
 - Rucksack cover
 - Rucksack liner

Group kit:

The following items of kit will be divided between members of the group to ensure that loads are equally distributed.

- Tent 2/3 persons (E)
- Tent repair kit (E)
- Stoves per 2/3 persons (E)
- Fuel as appropriate (E)
- Matches/lighter (E)

- Wash up kit (E)
- Compass 2 per group (E)
- Map of the area 2 per group (E)
- Map case for paper maps (E)
- Route cards ~ laminated
- Group shelter (R)
- Sun cream (factor 30 min) (E) seasonal
- Antiseptic hand gel ~ 1 per tent team
- Toilet paper and trowel (one per group) (E) make sure you can keep toilet roll dry
- Camera, notebook/laminated paper and indelible marker pen (R)/(E) on qualifying for aim.

Group first aid kit medications (supplied by group) (E)

- ✓ Ibuprofen/nurofen
- ✓ paracetamol
- ✓ strepsils
- ✓ Hydration sachets
- ✓ Imodium
- ✓ Water purification tablets
- ✓ Mobile phones (2/3 different networks if possible charged, switched off and sealed)

Group first aid kit (supplied by the school) (E)

- ✓ Antiseptic wipes
- ✓ Disposable latex gloves
- ✓ Assorted plasters
- ✓ Scissors
- ✓ Stretch bandages 2 x wide
- ✓ Triangular bandage x 2
- ✓ Adhesive dressings assorted sizes
- ✓ Field dressing
- ✓ Gauze bandages x 2
- ✓ Incident Management Plan (WCC laminated copy supplied by supervisor on expedition)
- ✓ First aid guidelines (laminated copy)
- ✓ Eye wash
- ✓ Syringe
- ✓ Tick remover or fine nosed tweezers and small mirror to check for ticks
- ✓ Whistle
- ✓ Laminated blank cards and indelible marker pen

Food

1 kg of food per person per day ~ containing 3000~4000 calories. See attached information on expedition food. The group should plan the food as a group and cook in tent teams ~ not as individuals. Pack each days main meals (breakfast and dinner) for 2/3 persons, depending on how many are sharing a tent, into medium sized freezer bags for convenience and treat these packages as group kit to be divided amongst the tent team. Individuals may carry their own snacks for the duration of the expedition, although items such as packs of biscuits and sweets can be treated as a group snack and can save time at checkpoints.

Boots: These should be good quality leather or heavy-duty fabric with a Gortex lining to ensure waterproofness. The most important issue around boots is that they should fit well, be comfortable (well worn in) and that you are capable of wearing them for the duration of your expedition. The performance of boots will vary, as when you are carrying a heavy sack your posture changes. Ideally, we recommend that new boots are worn for at least three months prior to the expedition and that you have walked at least 50 miles in them in varying terrain sometimes carrying a heavy rucksack. Many expedition participants drop out due to blisters or painful toes.

Socks: Thick trekking socks should not be scrimped on especially at Gold Level, Bridgedale Summit socks for example are more expensive (£12~£15 a pair) but worth every penny. Liner socks are an added comfort because they wick sweat away from feet

Waterproofs (E) Waterproof, breathable (Gortex) jacket and trousers, with taped seams. Getting wet through is very uncomfortable and potentially dangerous. Sports kit brands are not advised as they are generally not robust enough to cope with the demands of wet weather on expedition in wild country.

Rucksack (60 litre) (E) Like boots the most important issue is that it fits and it is properly adjusted to your body. There are many different types ranging from around £100. If you are buying one get it properly fitted by a reputable retailer. See separate hand out on rucksack fitting and packing

Clothing: the layering system: Lightweight synthetic base layer to wick sweat away from the body, thermal under layer to trap heat in cold conditions also wicks sweat; thermal mid-layer light weight fleece to trap heat; windproof/waterproof layer to protect and prevent heat loss. A heavier jacket style fleece, gillet or a synthetic down jacket ~ if you can afford it ~ will stop you from chilling in camp during the evenings when it can become a little chilly. DO NOT bring any real down kit which loses its thermal qualities if wet, unless you have top of the range waterproofing to keep it absolutely dry)

Cotton is not recommended because it is does not retain heat when wet, becomes heavy to carry and takes a long time to dry.

Sleeping bag (E) what type depends upon how warm you want to be and what time of the year you are going out on expedition. Down bags are not recommended for UK expeditions because we have a wet climate and they lose their insulating properties if they become wet or damp. It is best to stick to synthetic 2/3 season bags (depending on the season)

Roll matt (E) Thermarests are a luxury, they are much smaller than traditional roll mats, they are however much more expensive. Roll mats are good for DofE, they don't weigh and can be easily strapped to the outside of your rucksack. Check that they are made from non-absorbent foam, which will not need waterproofing. They can make it awkward to fit a waterproof cover over the outside of your rucksack, so best to check that this won't be a problem.

Eating equipment (E) Spoon (will do the same job as a fork and knife), plate or mess tin and mug

Water Bottle (E) Sigg bottles are ideal as they are unbreakable, but they can be expensive as much as £10 for a litre size) most Nalgene bottles are a useful alternative at half the price. Empty mineral water bottles are cheap and effective for the short term. A platypus hydration system is also good but has advantages and disadvantages: you cannot tell how much water you have left, they can burst, freeze in the cold and they can be unhygienic. A combination of these options can allow you to drink whilst on the move and fill up from your water bottle during breaks. Both Sigg and Nalgene bootles make excellent hot water bottles inside a pair of socks to keep you warm at night. Make sure they don't leak!!! The water inside is still warm in the morning.

Towel and washing kit (L) Small is best, not everyone chooses or gets the opportunity to wash during the course of an expedition. Absolutely no point in taking separate shampoo, conditioner, shower gel etc when a small bottle of general purpose soap will do all of those things and wash your dishes too. A packet of wet wipes will take care of personal hygiene in the absence of shower facilities. Do not forget your own toothbrush but toothpaste can be shared within the group.

Sunhat (E) If the expedition is taking place in summer then a sun hat is a prerequisite, after feet issues more people suffer from sunburn and heat exhaustion than anything else. A buff is excellent as it has a multitude of uses.

Waterproofing for personal kit:

This is absolutely crucial to prevent your expedition becoming a miserable experience. Your essential kit (sleeping bag and spare clothes) must not get wet; if they do it may become necessary to remove you from the expedition for health and safety reasons.

Ideally three barriers of protection will work best:

- ✓ Rucksack liner (R): heavy duty rubble sack obtainable from DIY store is a cheap option (check size)
- ✓ Individual waterproofing on important kit (E) (for sleeping bag and spare clothes)
- ✓ Rucksack cover (R)~ will prevent your rucksack becoming waterlogged and heavy to carry, but it will not keep the inside of your pack dry because water will run down your back and seep into your kit from there.

If you are using a good durable rucksack liner and a water proof rucksack cover, you can probably get away with using heavy duty, hole-free shop carrier bags doubled bagged, to waterproof your kit inside.

If you are not using a rucksack liner then you need to make sure your kit is going to stay dry.

Expedition dry sacks are guaranteed to keep your kit absolutely dry, they come in assorted sizes. Prices range from £3 upwards.

If you experience wet weather conditions when you are on your expedition, then having your sleeping bag, set of dry clothes, and other items you need to take into the tent with you organized in 3 or 4 separate units, means you can pass these in to your tent partner who has removed their waterproofs and boots and is organizing the inside of the tent. Dry sacks are absolutely ideal for this and they will not easily tear

Fitting and Packing a Rucksack

Ensuring proper fit is the most important step when you select a pack. It's hard to enjoy your expedition if your pack leaves you hunched over or racked in pain. Pack size and suspension systems are the key considerations in fitting a backpack. As with boots, proper fit is important with a backpack. The weight of a pack is secondary, since a well-designed, heavier backpack may give you a more comfort than a much lighter pack carrying the same load. Although weight may be secondary, it is nonetheless very important. When buying a rucksack always load the pack to determine the fit. If you only fit the pack when it is empty you will not get an accurate idea of how comfortable it is. Most outdoor retailers will be happy to let you fill the pack with a selection of expedition items from their stock, if they are not then take your business elsewhere.

Know your torso length.

Lack of this knowledge often causes an uncomfortable realization, after the fact that the pack doesn't fit correctly. The reason you must measure your torso, rather than guess what size pack you should have, based on your ability or size, can be illustrated as follows: a large, tall person can have a short torso (and long legs) thus requiring a smaller pack. A shorter, smaller person can have a longer torso (and shorter legs) and require a larger pack. All pack makers design their packs with your torso in mind. Thus, measure your torso, preferably before purchasing.

To determine your torso size, measure along your back from the seventh vertebrae - the largest bump on the back of your neck, with your head forward--to a point on your lower back which is horizontal with the top of your hipbones. If you find that your torso is on the border between two sizes, go with the larger size. The hip belt should wrap around your hips, not your waist (or stomach) and the lumbar pad should be centered properly into your lumbar area. You want a significant amount of the pack's weight on your hips. A good way to do that is to make sure your hipbone is centered under your belt (and the lumbar pad centered and pressing firmly into your lower back). Get a shoulder harness that doesn't get in the way when you swing your arms or have buckles that pinch your skin.

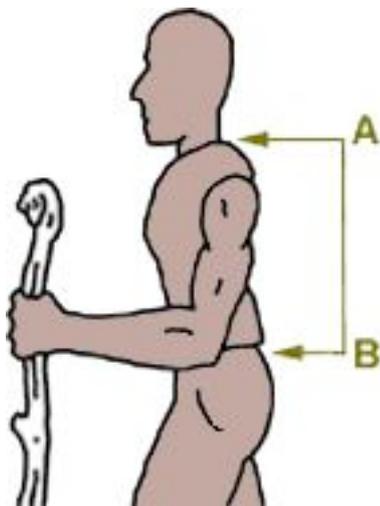
Adjusting your pack

Wearing a loaded pack should feel as though your body has become somewhat heavier, not as though you're shouldering a sumo wrestler. If the suspension system is doing what it's supposed to, most of the packs weight will be comfortably transferred to your hips.

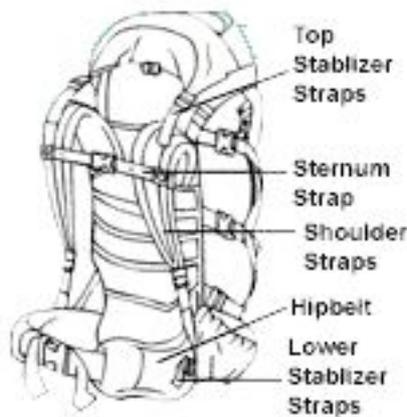
First, loosen the straps on the packs harness, and then try it out:

- Load the pack up with 10 to 15 kg (22 to 33lb).
- Put the pack on, bend forward and place the hip belt directly over your hipbones, fasten the buckle, and tighten the hip belt. The padding should wrap right around your hipbones.
- Pull in the shoulder straps. They should be far enough apart that they don't squeeze your neck. The strap ends should be no more than 10 cm (4 inches) from your armpits.
- Adjust the top stabilizer straps to a comfortable position, about a 45-degree angle
- Fasten the chest strap and adjust the lower stabilizing straps until comfortable

Finally, walk around and play with the adjustments to fine-tune the fit. A pack that fits correctly should feel like an extension of your own body. Remember that if the pack doesn't feel right now, it certainly won't feel right after hours on the trail.



Suspension System



Packing your Rucksack

For health and safety reasons your rucksack weight, when fully packed with everything that you will carry on the expedition should not exceed 25% of your body weight.

Weight of food and water and your share of the group kit should be taken into consideration when deciding what to pack. You can trim excess weight by sharing items and packing exact amounts of foods.

It is crucial to waterproof your rucksack with a liner and also put items into smaller dry sacks within this liner. Make sure all items that are important to stay dry and intact are packed inside your rucksack.

Ideally the only things packed outside will be your water bottles and roll mat.

Consider items you may need quickly during the day and pack these accessibly, in the top or side pockets

- Waterproofs,
- Water,
- Daily snack food,
- Head torch,
- Map and compass,
- Hat and gloves
- Personal medical kit

Your tent, stove and fuel and food for that evening's meal should be accessible for when you reach camp.

Large items (sleeping bag, spare dry clothes and thermarest, if using, are given priority and smaller items (expedition food packs, washing up kit etc..) are slid into any spaces around them.

If using meths it should be stored in an appropriate expedition fuel bottle and packed in a side pocket away from foodstuffs in case it leaks.

The zip off compartment on the bottom of your pack can be reserved for the material parts of the tent and the poles and pegs can be slid in down the inside of your pack. Or reserve space down one side of the pack, but on the outside of the rucksack liner, if you are using one, as the tent will be wet and you want to keep it away from the rest of your kit that needs to stay dry. If you are not using a rucksack liner and wish to store your tent this way then a heavy-duty bin liner for your tent will stop it from wetting the rest of your kit.

The stove and food for that evening's meal can be packed inside the top of your pack as they are then accessible for when you reach camp, and they are usually the last things ready to go into the pack when breaking camp anyway.

Food should be planned as a group and main meals can be broken down into tent teams and packed into ration packs for each day, so that weight can be distributed fairly amongst the team. Snacks are personal and for convenience can be organized into daily rations

Fitness and Physical Training for Walking

What level of health and fitness is required and how can this be achieved

A clean bill of health: a healthy, balanced **diet, exercise** (outdoors wherever possible) and getting enough **quality rest** is very important; and a good basic level of cardio-vascular fitness

It is **very important** to spend time walking in the outdoors to **get used to carrying heavier loads** and to **break in your walking boots**

You may already be involved in team sports or individual sports so you will have a good basic core of fitness. However there is a big difference between the length of time that is spent exercising during team sports and an average walking day on expedition.

During **team sports** you will probably spend on **average 60 to 90 minutes with periods of rest**. Depending on the level you are undertaking you will be **walking for six, seven or eight hours minimum each day on your expedition carrying a rucksack** that weighs around 14 kgs. Your **skeletal and muscular systems** will cope well if you have **trained them gradually** to get used to carrying **heavy loads**.

The best way to do this is to include some **regular periods of walking over rough ground carrying a pack** in your training schedule. You should **increase time/distance** and **weights** carried gradually and build up your **stamina and strength steadily** to **avoid injury**. Cramming this kind of training too close to the expedition is not wise, so start **well in advance of the expedition (at least 12 weeks is advisable)**.

Muscular endurance or cardiovascular fitness can be achieved through exercise: running, cycling, dancing, racquet sports, swimming are all effective, However, remember what you are training for and make sure they are combined with walking long distances carrying a lightweight 10 kg rucksack.

Top tips for success

Choose an activity that you enjoy

Get together with other motivated individuals to plan an exercise program

Set goals individual and as a team

Keep a record of your training so that you will be encouraged by your progress

Plan some rewards along the way to keep motivation levels high

The biggest reward you will attain is a level of fitness that will make the expedition an enjoyable experience.

Food

Food and drink are two of the most important factors on expedition: food is essential for producing enough energy for the body to function and water intake controls the body's temperature.

Different people have different energy requirements dependent on age, sex, weight of rucksack etc. As a guide you should aim to consume a minimum of 3000-4000 calories a day, as well as four litres of fluid per day. It is a good idea to try and eat and drink little and often throughout the day on expedition to avoid dehydration and decreased energy levels. When walking uphill carrying a full pack an average person burns 9kcal per minute.

Things to consider when planning your menu for your Duke of Edinburgh expedition are:

- High energy, low weight foods, such as dehydrated pasta, cereals bars and dried fruit.
- Weight ~ you should aim to carry around one kilogram of food per person per day
- Size of items ~ bulky food takes up more space, so remove packaging and decant foods into sealed bags
- Expiry dates, fresh foods and foods usually requiring refrigeration ~ use dried equivalents where possible
- Quickest possible cooking times to cut down on the fuel required to be carried
- Any special dietary requirements ~ vegetarians, food allergies, diabetics etc

Some food suggestions:

Slow release energy foods like pasta are ideal, oat biscuits cakes and dried fruit, flapjacks, bread. Some protein can be obtained from cheese for instance and dried expedition main meal packs. Also good are nuts and sweets, which you can have in your pocket and nibble as you walk.

Work amongst your group in teams of two or three according to whom you are sharing a tent and stove with and establish what everyone likes to eat then fill in menu plans and compile a shopping list. Try to pair up with similar tastes to simplify your organisation. Consider what items you may be able to buy for the group as a whole to share, this will usually be cheaper but can take more organisation. Pack your food into separate meals and treat as group kit to share out the load.

Blank menu planners

If you are arriving the night before your expedition remember to bring extra food for that evening

Day of expedition:		
Meal	Food item	Calories (kcal)
Breakfast		
Lunch/snacks		
Dinner		
Total calories		

Day of expedition:		
Meal	Food item	Calories (kcal)
Breakfast		
Lunch/snacks		
Dinner		
Total calories		

Day of expedition:		
Meal	Food item	Calories (kcal)
Breakfast		
Lunch/snacks		
Dinner		
Total calories		

Day of expedition:		
Meal	Food item	Calories (kcal)
Breakfast		
Lunch/snacks		
Emergency Rations		
Total calories		

SHOPPING LIST