

Training for Trekking Holidays

This guide is for anyone thinking of doing, or has booked onto, a trekking trip with The Adventure Company.



Whether you're looking to summit Kilimanjaro, trek along the Inca Trail, the levedas of Madeira, or through the Himalaya to Everest Base Camp this guide provides basic information on how to physically prepare yourself.

It sets the broad aims and gives suggested exercises on how to achieve this along with some simple dietary advice. As people from all walks of life do our trips it's designed so you can incorporate some or all of the suggestions into your current lifestyle and level of activity. For instance, anyone of good health, who is active, plays sports or goes to the gym can tweak their training accordingly.

The one thing you should be reassured of is our trekking trips are nothing to be fearful of. The itineraries are designed to ensure you have an enjoyable trek; you are given time to acclimatise where necessary, the number of hours walking everyday is considered, and our local Group Leaders are there to assist throughout. Together with the local team of porters they'll take the strain, leaving you free to enjoy the day's treks. You're in the best hands throughout the trip; our guides do the treks regularly; they identify signs of tiredness, altitude sickness and weather changes, instantly.



The Two Objectives to Prepare for a Trekking Trip

1. Increase the capacity and efficiency of your body's respiratory muscles and cardiovascular system This includes your lungs, diaphragm and, importantly, your heart. Improving the performance of these areas enhances the body's ability to transport and utilise oxygen during exercise. The ultimate aim is to reduce your resting heart beat and increase your VO2 Max (your maximum oxygen intake capacity)

2. Improve the endurance of your muscles' fibres Building up their repetitive movement strength, thus allowing you to walk further before feeling physically tired.

It's simple - about half of the endurance required for walking 4-7 hours a day comes from the improved ability of your body to pump blood and oxygen to your muscles. The other half comes from increased efficiency (strength) of the muscles to extract oxygen and convert it to energy.

Suggested Exercise Plan for Trekking Trips

To achieve the first goal you're looking at aerobic exercises – this can be any form of exercise which raises the heart rate to 60-70% of your max, eg running, walking, kayaking, climbing, tennis, football, netball; basically any physical activity.



Being active is a great way to increase your heart rate.

Too prescribed and too much?

If this all looks a little daunting, don't worry; to prepare for most of our trips we simply recommend you get out and do 4-6 walks before your trip, which last around 4-6 hrs each. This helps your heart and muscles prepare for the walking holiday. You don't have to go to any areas with great ascents and descents it's just getting you on your feet for long periods of time, something we don't do much in our daily lives anymore. An ideal complement to this, but not essential, is going to your local swimming baths for a 30 minute swim once a week, this non-abrasive workout is great for your heart and loosening your muscles after a long walk.



Step 1: Work out 60-70% of your maximum heart rate

If you're a member of a gym we suggest you take a fitness test to determine your maximum heart rate per minute. Alternatively, the general formula is take your age off 220 to calculate your maximum heart beat per minute.

Once you have this, determine what figure 60-70% is. This is your **TARGET ZONE** which you should aim to reach during all exercise sessions in the run up to the trip. Training at a level above this is good for sprinters and people who want short, intense bursts of energy. By all means add sprints into your work out but 90% of your aerobic workout should be at 60-70%. Exercising below will only aid weight loss and improve your power to weight ratio, it will not noticeably improve your fitness levels.

How do you know you're there? The simplest options are to use the pulse monitors on the aerobic equipment at the gym or buy a heart rate monitor. You can get these from any running shop or try eBay or Amazon. You should be looking to spend between £20-£30. The more expensive ones include GPS, speedometers and training options. For these you'll be paying £50-£230. Alternatively, do some mild exercise like a fast run for a minute, stop and then count your pulse by placing two fingers on a main artery, such as the wrist or the neck, for 15 seconds then multiply by four. This will give you an idea of what it feels like for your body to be working at 60-70% of your max. Remember how you feel; how your heart is beating, how quickly you're breathing. This will give you a mark on what you are looking to achieve.

Step 2: Determine your VO2 Max

As mentioned before, this is the maximum ability your cardiovascular system can take in oxygen. It's measured at the gym either as part of a fitness test with a qualified instructor or you can normally set the bikes to personal trainer mode to determine your VO2 max.

For our trekking trips you should aim for the following VO2 scores.

Females (values in ml/kg/min)

Age	Fair	Good	Excellent	Superior
13-19	31 – 34.9	35 – 38.9	39 – 41.9	42+
20-29	29 – 32.9	33 – 36.9	37 - 41	41+
30-39	27 – 31.4	31.5 – 35.6	35.7 - 40	40+
40-49	24.5 – 28.9	29 – 32.8	32.9 – 36.9	37+
50-59	22.8 – 26.9	27 - 31.4	31.5 – 35.7	35.6+
60+	20.2 – 24.4	24.5 – 30.2	30.3 – 31.4	31.5+

Males (values in ml/kg/min)

Age	Fair	Good	Excellent	Superior
13-19	38.4 – 45.1	45.2 – 50.9	51 – 55.9	56+
20-29	26.5 – 42.4	42.5 – 46.4	46.5 – 52.4	52.5+
30-39	35.5 – 40.9	41 – 44.9	45 – 49.4	49.5+
40-49	33.6 – 38.9	39 – 43.7	43.8 – 48	48+
50-59	31 – 35.7	35.8 – 40.9	41 – 45.3	45.4+
60+	26.1 – 32.2	32.3 – 36.4	36.5 – 44.2	44.3

If you're not a member of a gym, don't worry, just use Step One (heart rate) for monitoring progress.

Progress Table

Following an aerobic training plan you'd expect to see improvements every 4-6 weeks, so here's a table to track your progress if needed.

Date	Resting Heart Rate	VO2 Max

Step 3: Training Programme for Trekking

Frequency: If you're starting from a base of no exercise you should start at three times a week and ideally build up to five times a week over a month to six weeks; adding another weekly session every week or fortnight. Rest is as important as the exercise. If you're training for the first time, exercise on alternate days, giving your body time to recover.

Intensity: This is related to your oxygen consumption. As mentioned, you're looking to exercise at a heart rate of 60-70% of your max. You should sustain this for 30-50 minute+ sessions. Generally you are looking for lower intensity, longer duration, so your aim is to increase the duration of the exercise by around 10% a week. One suggestion is put a long walk, paddle, swim or cycle ride in for (2-4 hours) once a week to complement your other activities. Lower impact activities like these are preferred to sports helping to prolong training and avoid injury. Short, intense activities can be dropped in to add variation to your programme and this will specifically help to increase your VO2 Max, eg sprints for 20 seconds within your run.



Running on a machine set to a gradient and running outdoors are both great for aerobic and anaerobic exercise.



Adding exercise to your everyday routine, such as climbing the stairs, can help strengthen your hamstrings and calves.



Suggested Aerobic Activities

This can be any form of physical exercise which raises the heart level to your target zone. Within the gym there are a few aerobic machines which are great for improving your cardiovascular and respiratory systems, there's also trained staff to help you and you don't have to rely on the weather, but you don't have to be a member of a gym...

Running

This is a great aerobic and anaerobic exercise; it builds up strength around your ankles and calves in particular, as well as improving your oxygen intake. Running outdoors is great as you can vary where you go and take in hills or go off road.

Running on a machine is good as there's more give so less abrasion for your leg muscles, but it's a semi artificial movement pushing off from ground moving under you. If you use a machine we suggest setting an incline of 1 as the base and use a multi-gradient programme – this is great for building up the strength in the rear of your body too.

Alternatively, set a programme to personal trainer and set 400m or 800m distances and run hard for the distance – controlling the speed as you run. Repeat this six times. This is great for your VO2 Max.

Stair Climbing

This machine is again a great aerobic and anaerobic exercise as it builds the correct muscles - your hamstring and calves. Try five minutes to start with and build up your time on it using the 10% rule. Clearly you don't need to be in a gym for this one.

Rowing Machine

Look to do 10 minutes of rowing on between 5-7 resistance and record the distance. You should see an improvement from the third time of doing it. This is tough as you don't use these muscles in everyday life, but it's a great aerobic and anaerobic exercise. Any paddling on rivers is the equivalent.

Walking

A great complement to all this is some walking. If you can get out into the country at weekends for some 4-6 hour walks prior to departure that's excellent.

Suggested Anaerobic Activities

Strength training

This is using resilience forces, including your own body weight, to increase the stamina of your muscles. Again, this is aided by any form of physical activity such as the ones listed. They will all help improve body tone and shape and help slow the natural increase of fat to lean body mass which occurs with ageing.

However, we have concentrated on the major body areas important for trekking and have created a list of activities which can be done in a gym or your home.



Using a rowing machine is a great aerobic and anaerobic exercise.



Long walks in the countryside are a perfect complement to your training.

Tip

With all these exercises the two things to remember are:

1. Do everything slowly so every fibre of the muscle is being truly worked. This includes the downward action; let the weight/movement drop and you're only doing half the exercise.
2. Control your breathing; breathe in for the contraction movement and exhale for the downward movement.

Frequency: It's recommended you rotate from anaerobic to aerobic exercises and vice versa to give the different muscles time to recover. For all these anaerobic exercises do three sets, with 10-15 repetitions in each set and rest for 30 seconds in between the sets. As you progress increase the number of repetitions in a set – a good benchmark is 10% more weekly.

Squats

The biggest muscles in your body are your quads (top of your thighs). Leaning with your back flat against a wall and your feet between 30-50cm from the wall slowly lower your top half of your body until your legs have a 90 degree bend in them. Hold for a few seconds and then slowly return to the starting position. (1 rep)

Make sure you plant your feet shoulder width apart with your toes always pointing out further than your knees in the seated position. To aid this exercise you can place an inflatable exercise ball between you and the wall. These cost £10-£30 and again eBay is a good place to look or any high street store with a fitness section.

Hamstrings

To balance the new strength in your thighs it's important to work the main rear leg muscles too; the hamstrings. There are various options and one of the simplest is lunges: Keeping the top half of your body straight take a step forward, bending the knee so the leg is at right angles, hold, then return to the start position and repeat on the other leg. It's best to start with no weights and slowly add them in once your balance is good. (1 rep)

Another option is to lie on your stomach on your bed or two chairs leaving your shins overhanging and then, keeping the leg straight, raise one leg as far as it will go, hold, then return to the start position and repeat with the other leg. (1 rep) Again, you can add ankle weights if required.

Calves

Stand on any step with the balls of your feet; leaving two thirds of your feet overhanging the step (your feet are parallel with the step). Then raise yourself as high as you can using both feet, hold and slowly lower to the starting position. (1 rep)

Dorsal Raises

Your lower back will be carrying a day-bag for 4-7 hours a day, not something it's used to doing so it's important to strengthen this area. Lie on the floor, face down, and simply raise your shoulders six inches off the ground and then slowly lower. (1 rep)

You must keep your feet and legs on the floor. Your hands can be resting on your buttocks to start with. To increase intensity bring them level with your shoulders; the further forward they are, the greater the resistance. You can also push your arms forward alternatively on every raise if you wish. It's good to do all floor exercises on an exercise mat which cost £10-£30.

Crunches

As you've worked your back you should also work your stomach, balancing your strength in this region. There are many variations. For the lower stomach we suggest lying with your back flat on the floor, place your hands under the natural arch in your back and your legs and feet together. Slowly raise your legs to 90 degrees from the floor, hold for a few seconds, then slowly lower so they are just above the floor. (1 rep)

For the upper stomach, lie with your back on the floor and raise your thighs off the ground so they are at a right angle and your shins are parallel to the ground. Then, slowly lift your shoulders (not head) to your knees and return to just off the ground. (1 rep)

Variations on this are move one shoulder up and across your body towards the knee on the other side of your body, or, as you drop your shoulders lower and straighten your legs as well and raise them up to the starting position with your shoulders. You're not expected to reach your knees with your shoulder but if you have your hands behind your head you can certainly aim to touch your knees with your elbows.

Side Slides

This is the final exercise for your core area. Standing up straight, feet shoulder width apart, lower one side of your body, running your hands down your hips/pelvis. Hold at the bottom and then return to the standing position and then repeat down the other side of the body. (1 rep)

Your upper body is not going forwards or backwards, you must keep it straight this is just a sideways movement. Ideally you should do this with weights in each hand to help build the muscles.

Stretching

It's often overlooked but it's worth putting in 5-10 minutes of stretches pre and post work out. This warm up and down is important to avoid straining muscles. After any work out your muscles build up lactic acid and tighten. If you keep exercising and not stretching your muscles contract, getting tighter and so are more likely to tear. There are hundreds of stretches, for suggestions visit

www.runnersworld.co.uk/staying-healthy/the-rw-complete-guide-to-stretching/484.html



Stretching is important to avoid straining muscles.



Pasta is ideal for an energy boost when eaten prior to a workout.



Fish and eggs are great to consume post workout as they aid recovery.

Tip

Your holiday is a good goal to keep you motivated, but you may also want to enter a race of some sort, 3-4 weeks prior to add an extra element to your training. Here are some suggested places to look for an event.

<http://www.runnersworld.co.uk>

<http://www.endurancelife.com>

<http://www.britishtriathlon.org>

<http://www.humanrace.co.uk>

What to eat when training for a trekking trip

You must fuel your body while training. Energy can be sourced from the three following food groups: carbohydrates, fats and proteins.

Carbohydrates are the main source of energy for the body - when broken down a glucose supply goes directly to the muscles.

Take in foods high in carbohydrates 30-90 minutes before exercising: foods high in complex carbs release energy slowly, they should be taken 90 minutes prior to exercise. These include dried fruits (great in cereals), breads, pasta, potatoes and carrots. Simple carbohydrates give an instant energy boost ideal 30 mins before exercise. These include sugar, honey, bananas, papaya and chocolate. If carbs are not used immediately they are stored in the body as glycogen or fat.

Protein is the major structural material of our bodies, adequate amounts help our bodies repair and build muscle tissue and it's also a good secondary source of energy. Meats, fish, poultry, eggs and soy products are great to consume post workout to aid the body recovery. It's essential to have protein in all meals, especially breakfast and lunch, helping regulate your blood sugar levels from the carbohydrates.

Fat is a stored source of energy, great for long outdoor excursions. Saturated fat is bad, it's associated with heart disease, but there are essential fatty acids which your body needs; namely omega 3 and 6, found in salmon, sardines and mackerel and pumpkins and walnuts respectively.

Your diet should include a small proportion of fats provided by foods such as cheese, olive oil, butter and peanuts.

To complement this you should keep hydrated; a great tip is to fill a 1 litre bottle of water at the beginning of the day, put on your desk and drink it during the day.

While exercising your body loses fluids at an accelerated rate, broadly 30-60 ounces an hour. To put that in perspective, you'll lose a pound for every 16 ounces of fluid lost. Simply drink regularly when doing any physical exercise.

Tip

When trekking peanuts and almonds are great for long term energy, along with chocolate bars and sugared sweets for instant energy hits. Also keep your water handy and drink regularly, ideally before you feel thirsty.



Keep hydrated: regularly drink water during your day.



Peanuts are a great source of instant energy.



Our trekking guide, given to every passenger, has details on Acute Mountain Sickness.

Training for High Altitude

There are few things you can easily do in this country to train specifically for walking at high altitude, typically over 6,000ft, which is generally when the effects of altitude sickness start to be felt. It affects different people in different ways, it's nothing to do with your fitness and we don't recommend taking aspirin to null any headaches because this could be dulling the first effects of Acute Mountain Sickness. The best solution is to tell the guide how you feel and they'll alter the pace of the walk accordingly. Don't let it dominate your holiday though, you're in safe hands.

Read our trekking guide, given to every passenger before embarking on an Adventure Company trekking trip, for more details on Acute Mountain Sickness. It highlights the signs to look out for and how best to react.

Disclaimer

This guide is written with the best of intentions. However, we always recommend you consult your doctor before undertaking any training programme to identify any potential health issues. We also recommend before attempting any exercises you see a qualified fitness instructor who can help with techniques and tailor a programme to your individual needs.