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HIMALAYA MEDICAL EXPEDITION

INFORMATION PACKET

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INTRODUCTION

THE TREK

The Manaslu circuit trek is an epic walk centered around Mt. Manaslu, the 8th highest mountain in the world. The trek is a good alternative to the classic Annapurna Circuit Trek which has become extremely crowded and developed. The remoteness of the region surrounding Manaslu, as well as its classification as a restricted trekking region, means that the area is not commonly visited by foreigners. It also means that the region needs medical assistance. Village life in this area bordering Tibet has changed very little over the last several hundred years. With extensive wilderness in the lower elevation and great mountain views in the higher. This moderately strenuous trek passes through a variety of geographically spectacular and culturally fascinating areas reaching an elevation of 5,213m (17,125ft) at the Larkya La Pass. Larkya La is considered one of the most dramatic pass crossings in the Himalayas providing superb views of Himal Himlung Himal (7,125m), Cheo Himal (6,820m), Kang Guru (6,981m), Annapurna II (7,939m), and Manaslu (8163m). During this trek, you will experience both Hindu and Buddhist culture, protected wildlife, rhododendrons and wild flowers, raging rivers, precarious bridges and stunning mountain scenery.

CLINIC

Per the United Nations, Nepal ranks 138th in the world in overall human development, behind such countries as India and Bangladesh and one of the least developed countries in Asia. About one-half of the Nepalese people live in poverty. They endure the typical problems of impoverished people around the world, such as high rates of malnourishment, childhood mortality and illiteracy.

Poverty in Nepal is concentrated in rural villages and among lower castes and ethnic minorities. These villages are often located in remote, mountain villages that are geographically isolated and far from basic services. Subsistence agriculture is the rule, leaving villagers little opportunity to improve their welfare. These rural Sherpa areas have seen little of the modest economic growth that has benefited larger cities in Nepal. Rural healthcare services are at best rudimentary, with government health posts often going unstaffed and undersupplied for years. Nutrition is inadequate; vaccination rates are poor. The only way to reach these areas is by foot.

ITINERARY

Please note, International Medical relief strives to reach those that are most in need and that have little access to medical care. The Manaslu region was severely impacted by the 2015 Earthquake. The region is very remote and rarely visited by doctors. It is for these reasons that International Medical Relief chose this location. Due to the isolation of this region and the remoteness of its villages, a substantial amount of time is required to travel from each location. There are no short cuts, the villages can only be reached by foot. Accordingly, we have a limited number of medical clinics on this trip and the clinics are often conducted after having already trekked for hours on end. Most individuals do not have the ability to participate in a one month medical clinic trip. Therefore, to meet time restraints, and cover as many villages as necessary, we created an itinerary that calls for long days with half day medical clinics. Due to the size and remoteness of the villages we are visiting, a half day of medical clinic is more than sufficient.

OUTLINE

- Day 01: Arrive in Kathmandu
- Day 02: Drive to Soti Khola via Arughat – (around 9-hour drive)
- Day 03: Trek to Jagat (around 8-9 hour walk)
- Day 04: Trek to Philim (around 3-hour walk) – *Half day Medical camp*
- Day 05: Trek to Ghap (around 7-8 hour walk)
- Day 06: Trek to Namrung (around 4-hour walk) – *Half day medical camp*
- Day 07: Trek to Samagaun (around 7-8 hour walk)
- Day 08: Explore Manaslu base camp and return to Samagaun (around 7-8 hour)
- Day 09: *Half day medical camp* and trek to Samdu (around 3-4 hour walk)
- Day 10: *Half day medical camp* and trek to Larkye Phedi (around 4-5 hour walk)
- Day 11: Cross Larkya La pass (5220m) – (around 9-10 hour walk)
- Day 12: Trek to Goa (around 6-7 hour walk)
- Day 13: Trek to Dharapani (around 3-4 hour walk) – *Half day medical camp*
- Day 14: Drive to Besi Sahar and drive to Kathmandu by private vehicle (around 11-hour drive)
- Day 15: Depart Kathmandu

Note: above walking durations depends upon the walking speed.

DETAILS

Day 1: Arrive Kathmandu

Flying to Kathmandu on a clear sunny day will provide a panoramic glimpse of the mighty Himalayas that will stay without you for the rest of your life. We will meet our local driver and proceed to the hotel. At the hotel, you will be briefed about your daily activities.

Day 2: Drive to Soti Khola via Arughat- (around 9 hr drive)

After an early morning breakfast, we will be picked up from the hotel and will begin our journey towards Sotikhola via Arughat the starting point of our trek. The drive from Kathmandu to Dhading Besi is a comfortable, however, be prepared for a bumpy ride with winding dirt road and rough terrain on the road from Arughat and then to Sotikhola. Though a rough ride, this is an incredibly beautiful area and the majestic sites will serve as a perfect distraction. As we follow the Budi Gandaki River towards its point of origin, we will pass the village of Morder and Simre to reach the Arkhat River and descend to Kyoropani. Finally, we will reach Soti Khola where we spend our night.

Day 3: Trek to Jagat (around 8-9 hrs walk)

After the morning meal, we will begin our trek in earnest, cross the Macha Khola river and heading upstream to the tiny village of Khola Bensi and the hot springs at Tatopani. The terrain on either side of the river will remain quite steep, ultimately becoming impassable at which point the route will switch to the other side of the river by way of a suspension bridge. The trail is quite exposed and challenging in places. After a short section of forest path, we reach the single teahouse at Doban. Above Doban, the Buri Gandaki river descends in an impressive series of rapids. Beyond this steep section, the river is much more placid, meandering across a broad gravel bed. At Lauri, we will cross the river on a suspension bridge, and then climb on a high path to the fields of Jagat where we will stay overnight.

Day 4: Trek to Philim (around 3 hrs walk) - Half day medical camp

Finishing our early morning breakfast, we start our journey towards Philim. After crossing a suspension bridge over Budhi Gandaki we will enter Philim, a big village mainly inhabited by the Gurungs. Small monasteries, chortens and prayer flags fluttering in the sky, graves and traditional houses will be seen as we cross through the village where we will begin our first day of medical camp.

Day 5: Trek to Ghap (around 7-8 hrs walk)

After an early morning meal, we will traverse to north out of Philim, through some gorgeous forests with views up the narrowing valley. After a slow descent along the riverbank, we will reach the small village of

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Bihi Bazaar near the Tibetan border. From this point, we will be immersed in Tibetan culture as we walk for a few hours to Ghap village where we will spend the night

Day 6: Trek to Namrung (around 4 hrs walk) half day medical camp

After breakfast, we will descend towards the Budhigangadi River and cross a suspension bridge to reach Bihi phedi. Once again, the strong Tibetan cultural influence on the Gorkha region will be apparent. The trek will gradually ascend into the dense rhododendron forest. Finally, we will reach Namrung village where we will conduct the second day of Medical camp.

Day 7: Trek to Samagaun (around 7-8 hrs walk)

The team will wake very early to view of the captivating sunrise against the backdrop of Mt. Manaslu. Surrounded by mind-blowing scenery, we will head towards Samagaun through rhododendron forest, passing by Shyala village. During this portion of the trek we will be passing 3660m (12,007ft), and will start to feel the altitude. We will witness a drastic change in vegetation and landscape as we trek into the higher elevations. Trekking for a few more hours, we will reach the village of Sama for our overnight stop.

Day 8: Explore Manaslu base camp and return to Samagaun (around 7-8 hrs walk)

After our early morning breakfast, we will take a short detour towards Manaslu base camp to soak up the incredible views and experience the true majesty of this impressive mountain. After getting our fill and fulfilling some bragging rights, we will return back to the Samagaun for our overnight stay.

Day 9: Trek to Samdu (around 3-4 hrs walk) half day medical camp

After breakfast, we will trek through a pleasant forest on the border of Tibet until we reach Samdu. Once again, amazing panoramic views of the mighty Himalayas will present a fantastic photo opportunity. In Samdu we will conduct a medical clinic and spend the night.

Day 10: Trek to Larkey Phedi (around 4-5 hrs walk) half day medical camp

After an early breakfast, we will trek to Larkey Phedi where we will conduct another medical camp and stay overnight.

Day 11: Cross Larkya La pass (5220m) and trek to Bhimphedi (around 9-10 hrs walk)

Today is the big day! After an early departure, we will climb towards Cho Chanda and then slowly head up the steep terrain towards the snowy Larkya La Pass. From the top of the pass, the panorama is absolutely

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breath taking. Peaks like Himlung Himal (7126m), Cheo Himal (6820m), Gyagi Kung, Kang Kuru(6981m), and Annapurna II (7937m) can be seen in their full glory from this vantage point. The descent from the pass is steep, heading through Moraines, towards Bhimphedi where we spend our night.

Day 12: Trek to Goa (around 6-7 hrs walk)

The next day we will descend towards Goa. The south horizon is impressive with Manaslu in the east and Annapurna II in the west. Further down, we will follow the trail across a bridge at Dudh Khola, trek through the blossoming rhododendron flowers, leave Karche in our wake, pass through Thonje village, cross Marsyangdi River, finishing at Goa.

Day 13: Trek to Dharapani (around 3-4hrs walk)

From this point forwards, the route will get much easier. We will start the day with a gentle climb through paddy fields towards Karcha La pass and descend through fig trees and Rododendron forest. We will conduct our final medical camp at Dharapani and stay overnight.

Day 14: Drive to Besi Sahar and drive to Kathmandu (around 11 hrs drive)

With hardly a hill along the way, we will conduct a leisurely walk along the little-known east bank route from Besi Sahar. After lunch we will be picked-up b and drive to Kathmandu for a traditional farewell dinner and a night in a comfortable bed at the hotel.

Day 15: Depart Kathmandu

After a leisurely breakfast we will head to the airport for our flight back to the U.S.

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Training for the Trek

*The recommendations in this document have been prepared for your convenience and should not be interpreted as exhaustive in nature. For comprehensive climb preparation training, participants should consult an experienced, professional personal fitness trainer. Additionally, it is absolutely vital to consult your physician to ensure that no health conditions exist that could interfere with the physically rigorous demands of a training program. **You also need to have a thorough exam and consultation with your personal physician to determine if it is advisable for you to participate in very strenuous climbing and hiking over rough terrain at high altitudes in remote wilderness areas far from health care facilities.***

PREPARATION FOR HIGH ELEVATION HIKING TREKS

If you've never climbed in high altitudes (above 8,000 feet), you will soon be introduced to a part of the world like no other. A great challenge comes along with the dramatic scenery and culture that our trek will provide. Being in strong physical shape is one of the most important aspects for success on a high-altitude trek. Proper physical conditioning is essential to reaching your goals—while enjoying every step. Dedication is the key element in conditioning for your trek. Though we all have busy lives, you must find time to be committed to a daily personal training regimen. The goal is to create a workout program that gets you in top shape at the date of your respective trek. Your personal program will depend on many factors including your schedule, location, climate, and access to training equipment.

Trekking requires cardiovascular endurance (via aerobic training), strength endurance (through strength conditioning), and hiking-specific training (via hiking with a pack). During your training, you should be planning to progressively ramp up your speed, duration (time or mileage), and pack weight of weekly training hikes to give you hiking-specific conditioning that cannot be matched by any other sort of training.

CARDIOVASCULAR CONDITIONING

Suggested activities include running, walking on an inclined treadmill, doing stair stepping or step mill training, trail running, working on an elliptical machine, walking up and down hills, or participating in step aerobics classes. While biking, rowing and swimming are cardiovascular options for the off-season or earliest stages of your training, be sure as you get closer to your expedition that you include predominantly spinal-loading cardiovascular exercise such as any of the activities mentioned above.

When embarking on a cardiovascular training program for such a trek, be sure to include at least three to four sessions of 30 minutes of sustained activity at a moderate intensity, and build to four to six aerobic sessions of sustained effort for at least 45-60 minutes each. Be sure to include a 5-10-minute gentle warm-up before working at your target heart rate for the day (for most workouts, choose a level of exertion that allows you to connect a few words together in a phrase, but leaves you feeling comfortably tired at the end of the workout), and cool down with 5-10 minutes of appropriate stretching of the muscles you use most in your activity, including lower back, calves, hamstrings, hips and quadriceps. Training with free weights, bands, a backpack, bodyweight exercises, or gym machines

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will help you build overall strength, particularly in the core (lower back and abdominals), upper back, and legs. Developing strength in your upper back and shoulders will help you with such tasks as carrying a pack and using trekking poles effectively. The calves, hips, quads, hamstrings and glutes are all involved in ascending and descending trekking routes, and strength endurance is required in all areas of the legs and hips.

TREKKING CONDITIONING

Hike steep outdoor trails, gradually increasing your pack weight with each outing until you are at your target trekking pack weight. A reasonable goal would be to ascend 2,000 to 2,500 feet carrying an average pack of 15-20 pounds in a 2-hour period, or roughly 1,000 vertical feet in an hour. A good training option for pack weight is to carry water in gallon containers or collapsible jugs, so you can dump water at the top as needed, to lighten the load for the descent. In early season, you might include hikes that gain up to 1,500 elevation over 6-8 miles around trip and carry a light day pack; each hike try adding a few pounds until you are comfortable with a 20-pound pack, then begin increasing the total elevation gain, speed, and mileage. When you can gain 3,500 feet with a 20-pound pack, start-decreasing rest breaks and drops the last 5 pounds of pack weight so that you can work on increasing speed. Try filling your pack with one-gallon water jugs, and emptying them out when you reach the top- this way you save your knees the stress of hiking downhill with a load. A five-gallon camp water jug is even more convenient as it keeps the load stable. One gallon of water weighs 8.36 pounds.

STRENGTH CONDITIONING

Training primarily with free weights will give you the functional, trekking-specific strength that will help you most in the mountains. Free weight-training requires that you balance the weights as you would your own body, weighted with a pack, in three-dimensional space. When starting any strength conditioning program, complete two full-body strength workouts a week for 30-45 minutes each, focusing on compound exercises such as squats, lunges, step-ups, dips, pull-ups, rows, dead lifts, bench presses, pushups, and overhead presses. In the beginning phase of strength conditioning, your focus will be building a foundation for harder workouts; to that end, keep the weight light enough to concentrate on good form and complete 2 sets of each exercise for 12-15 repetitions. As you continue to train, you will shift focus to building strength, strength endurance, and mental and physical stamina; each phase varies the weight used, repetitions completed, number of sets, and rest interval. Most important in strength training is to be sure you maintain proper form always to prevent injury or strain.

ALTITUDE TRAINING

One training technique that is useful for high altitude climbing is to include interval training in your weekly program. To do this, find a steep hill or sets of stairs that will allow you to climb steadily for several minutes. Push as hard as you can while you go up, then recover coming down, and repeat for anywhere from 30-45 minutes. For hill walks, add weight to your pack on a regular basis until you can carry 20-25 pound the whole time. Since you will be spending several days above 11,000ft on this trek, try to include a hike or climb above 8,000ft so you can see how your body responds. This is strictly to

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see how your body responds to altitude and is not mandatory. If you don't have access to higher altitudes, don't be concerned, training at altitude is **not** necessary for this trek. For years, many endurance athletes have believed that exercising in thin mountain air is the best way to improve performance at altitude. Training at altitude, where there is less oxygen, will force your body to respond by producing more red blood cells to boost oxygen levels to compensate, which ultimately allows you to perform better at altitude. **However**, the benefits of high-altitude training are offset by the negatives such as limited training load in oxygen deficient air, muscle loss, immune system suppression, advanced dehydration and excessive fatigue. In these conditions, you cannot train at your maximum ability. Therefore, it is often more advantageous to train at the altitude in which you live day to day. Given the gradual nature of the trek, our bodies will have the opportunity to produce additional red blood cells as we acclimate.

OTHER CONSIDERATIONS

Focus on optimizing sleep

Strive to get at least eight hours of sleep a night during your training. People often have trouble sleeping at higher altitudes, and diminished sleep will make your expedition much more challenging. Staying hydrated will help you sleep better, and so will making sure you have the right equipment to be comfortable. Try out your sleeping set up for a few nights before your trip to get used to it and make sure you are comfortable. It is also a good idea to get used to sleeping with earplugs, as they are helpful on windy nights on the trail.

Staying hydrated and nutrition

It's important to develop good eating and drinking habits when you exercise frequently. Remember this is what fuels your body! On long workout days (more than 1 HR), bring snacks with you (e.g. gels, bars, dried fruit, etc.) and drink water often. Your body will require an increased fluid intake when during your climb at altitude. Running low on fluids diminishes your endurance, contributes to fatigue, and makes you more susceptible to getting altitude illness. Focus on staying well hydrated during your training. Your body will need it with your workouts, but it also needs to get used to hydrating. You will need to drink large amounts of liquids during your climb (three to four quarts per day minimum) and your body should now start getting used to taking in those copious amounts. Replace your lost electrolytes after exercise or it will help you recover faster. Dehydration is hard on your body – try to avoid it.

Listen to your body

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Don't be a slave to the schedule! If you feel off-color, excessively tired or your resting heart rate is elevated by more than 10% then take the day off from training. It is better to miss a day or two and allow your body to recover than attempt a session and make your condition worse.

Warming up and stretching

Always warm up before each session for approximately 10 minutes. A warm-up will prepare your body for exercise, reduce your risk of injury and enhance your performance for your session.

Cooling down Always finish each session with a cool down, lasting for approximately 10 minutes as per your warm up. A proper cool down will help your recovery and limit any post-session muscle soreness.

Spend a few minutes at the end of your cool down stretching the main muscle groups that you have used, so that you remain, loose, supple and reduce your risk of injury.

Keep it fun

Above all, keep your training in perspective. Your trek is an exciting adventure which should enhance your life and not diminish it so enjoy the whole process and keep it fun.

Gear and mental preparation

Besides being physically fit, a trek takes a lot of preparation. You should train with all your gear (including your pack, your trekking clothes, boots, personal gear and so on). You should also mentally prepare – a trek is always an adventure and the altitude, the weather, and the environment can be very taxing at times. Be ready for the unexpected and cultivate mental toughness.

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FOUR MONTH TRAINING PLAN

Long-term training

A four-month training program can seem long and daunting. Don't get overwhelmed – instead, take it day by day. If you fall behind, don't try to catch up by taking short cuts – adjust your progression to what is manageable for you. Also, don't increase your workload too fast – you'll risk getting injured or too tired. Listen to your body! If you're sore every day – you're training too hard. Find partners to do your workouts with – it's more fun and keeps you honest. If you develop an injury, back off right away – don't let it get bad. Adjust your workouts and see a doctor.

How to customize this program

Of course, everyone has a different body, a different work schedule, and a different terrain to train in. For this reason, you must adjust your own personal training plan. Make it work within your possibilities. Switch the training days around if necessary. If you don't have any mountains to climb nearby, try to at least hike outside some and do some stair--- master workouts, climb the stair flights of a high---rise building, or cross-country ski (and carry your pack). If you can, find some hilly trails nearby and occasionally try to do longer climbs in the mountains. If it's dark when you come home from work, try an indoor routine and get outside on the weekends. Be creative.

Heart rate zones

Most of your training will be conducted in Heart Rate Zone 1 (50-60% of Maximum Heart Rate). Heart Rate Zone 1 represents the level of physical effort that is right under your aerobic threshold, and Zones 2 through 4 progressing ever higher above your aerobic threshold, with increasing reliance on anaerobic metabolism. The goal is to keep your heart rate in zone 1 for the duration. You are teaching your body to be able to use act more efficiently over a long period. Many people run at 75-80% of their MHR which is a black hole. It isn't "difficult" enough to increase anaerobic strength and it isn't slow enough to build aerobic endurance. Again, you are teaching your body to work effectively over a long period. For many, this type of exercise is difficult to adjust to. A good rule of thumb is to exercise at a pace in which you can breathe through you nose most the time. If you feel tempted to breathe through your mouth, slow down the pace a bit. Your altitude training and strength conditioning are an entirely different story. For your altitude training you should reach 80% or your Maximum Heart Rate during peaks of intensity. For more information about Heart Rate Zones and to calculate your Maximum Heart Rate follow this [link](#).

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PLAN OVERVIEW

FOUR MONTHS PRE-TRIP - Focus on increasing aerobic capacity with endurance training and getting a conditioning program started.

Plan to spend about 4-6 hours per week doing general endurance training (outdoors or indoors, hike trails, run, bike, swim, ski, stair---master, etc.) with workouts lasting 40min to 1 hour and one longer one lasting up to 1 1/2 hours of easy pace, and workout (45 min long) of conditioning (choose your own). You should have 3 rest days per week. At the end of the month, take 4-5 days completely off from your training, which will give you a good time to recharge mentally and physically.

THREE MONTHS PRE-TRIP - Focus on increasing the length on your endurance workouts.

Spend 5-7 hours per week doing general endurance training, starting to focus more on hiking / running / snowshoeing if possible and less on other exercises such as biking. Work up to a 2-hour-long workout at an easy pace each week. Keep with your routine of 1 session per week of conditioning. Take 2---3 rest days per week and 3-4 days completely off at the end of the month.

TWO MONTHS PRE-TRIP - Focus on all-around improvement – creating a foundation for the serious training block coming up.

Spend 6-8 hours per week on endurance training (again, try to incorporate specific training: hiking, running or cross country skiing). Start using your backpack. Add a work-out of 30 min of higher intensity training (heart rate 80% of max) – this could be for example running on hilly trails, hiking a steep mountain trail, a faster bike ride, or a skate skiing workout. Be sure to warm up and cool down for this workout. One of your endurance workouts should be up to 2 hr. long. Keep with your conditioning routine or add a second session. Be disciplined and take 2-3 rest days per week. Take 3-4 days completely off at the end of the month. And take a deep breath – now we're getting serious!

ONE MONTH PRE-TRIP - Focus on specific training and adding intensity.

Try to train with your pack loaded with increasing weight. Try to get out on trails for your hikes and use your boots. If you can't get out to do the specific training, do stair master workouts or something similar. Do 2 sessions of conditioning per week. One workout with 75 min of higher intensity integrated in it is preparing you for harder efforts on the mountain and will improve your ability to withstand fatigue. Do as much specific training as possible in your endurance and intensity workouts – this is when it matters.

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SAMPLE PLAN DETAIL

Below is a more rigorous sample weekly plan. Customize this plan as needed. This plan is not mandatory but if you can follow a similar program you will be in fantastic shape for the trek.

FOUR MONTHS PRE-TRIP

	Week 1	Week 2	Week 3	Week 4	Week 5
Day 1 - Rest	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest
Day 2 - Strength/Cardio Conditioning	Strength Conditioning	Strength Conditioning	Strength Conditioning	Strength Conditioning	Rest
	1/2 HR Run or Other	1/2 HR Run or Other	1/2 HR Run or Other	1/2 HR Run or Other	
Day 3 - Trek Conditioning	1/2 HR Stairs w/ 5lb Pack	1/2 HR Stairs w/ 5lb Pack	1/2 HR Stairs w/ 10lb Pack	1/2 HR Stairs w/ 10lb Pack	Rest
Day 4 - Rest	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest
Day 5 - Cardio Conditioning	1 HR Run or Other	1 HR Run or Other	1 HR Run or Other	1 HR Run or Other	
Day 6 - Altitude Training	1/2 Hr Intensity - Steep Hike or Intervals	1/2 Hr Intensity - Steep Hike or Intervals	1/2 Hr Intensity - Steep Hike or Intervals	1/2 Hr Intensity - Steep Hike or Intervals	
Day 7 - Trek Conditioning	2.5 HR Long Slow Endurance - Hike w/ 5lb Pack	2.5 HR Long Slow Endurance - Hike w/ 5lb Pack	2.5 HR Long Slow Endurance - Hike w/ 10lb Pack	2.5 HR Long Slow Endurance - Hike w/ 10lb Pack	

** Note: All training besides Strength Conditioning and Altitude conditioning should be conducted in Heart Rate Zone 1

** Altitude training should have points of intensity reaching Heart Rate Zone 4

THREE MONTHS PRE-TRIP

	Week 1	Week 2	Week 3	Week 4	Week 5
Day 1 - Rest	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest
Day 2 - Strength/Cardio Conditioning	Strength Conditioning	Strength Conditioning	Strength Conditioning	Strength Conditioning	Rest
	3/4 HR Run or Other	3/4 HR Run or Other	1 HR Run or Other	1 HR Run or Other	
Day 3 - Trek Conditioning	3/4 HR Stairs w/ 5lb Pack	3/4 HR Stairs w/ 10lb Pack	3/4 HR Stairs w/ 15lb Pack	3/4 HR Stairs w/ 15lb Pack	Rest
Day 4 - Rest	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest
Day 5 - Cardio Conditioning	1 HR Run or Other	1 HR Run or Other	1 HR Run or Other	1 HR Run or Other	
Day 6 - Altitude Training	3/4 Hr Intensity - Steep Hike or Intervals	3/4 Hr Intensity - Steep Hike or Intervals	3/4 Hr Intensity - Steep Hike or Intervals	3/4 Hr Intensity - Steep Hike or Intervals	
Day 7 - Trek Conditioning	3 HR Long Slow Endurance - Hike w/ 10lb Pack	3 HR Long Slow Endurance - Hike w/ 15lb Pack	4 HR Long Slow Endurance - Hike w/ 15lb Pack	4 HR Long Slow Endurance - Hike w/ 20lb Pack	

** Note: All training besides Strength Conditioning and Altitude conditioning should be conducted in Heart Rate Zone 1

** Altitude training should have points of intensity reaching Heart Rate Zone 4

TWO MONTHS PRE-TRIP

	Week 1	Week 2	Week 3	Week 4	Week 5
Day 1 - Rest	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest
Day 2 - Strength/Cardio Conditioning	Strength Conditioning	Strength Conditioning	Strength Conditioning	Strength Conditioning	Rest
	3/4 HR Run or Other	1 HR Run or Other	1 HR Run or Other	1 ¼ HR Run or Other	
Day 3 - Trek Conditioning	3/4 HR Stairs w/ 15lb Pack	3/4 HR Stairs w/ 15lb Pack	1 HR Stairs w/ 20lb Pack	1 HR Stairs w/ 20lb Pack	Rest
Day 4 - Rest	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest
Day 5 - Cardio Conditioning	1 HR Run or Other	1 HR Run or Other	1 HR Run or Other	1 HR Run or Other	
Day 6 - Altitude Training	3/4 Hr Intensity - Steep Hike or Intervals	1 Hr Intensity - Steep Hike or Intervals	1 Hr Intensity - Steep Hike or Intervals	1 1/4 Hr Intensity - Steep Hike or Intervals	
Day 7 - Trek Conditioning	3 HR Long Slow Endurance - Hike w/ 20lb Pack	3 HR Long Slow Endurance - Hike w/ 20lb Pack	4 HR Long Slow Endurance - Hike w/ 25lb Pack	4 HR Long Slow Endurance - Hike w/ 25lb Pack	

** Note: All training besides Strength Conditioning and Altitude conditioning should be conducted in Heart Rate Zone 1

** Altitude training should have points of intensity reaching Heart Rate Zone 4

ONE MONTH PRE-TRIP

	Week 1	Week 2	Week 3	Week 4 -Taper	Week 5
Day 1 - Rest	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest
Day 2 - Strength/Cardio Conditioning	Strength Conditioning	Strength Conditioning	Strength Conditioning	Rest	Rest
	1 1/2HR Run or Other	1 1/2HR Run or Other	2 HR Run or Other	1/2 HR Run or Other	
Day 3 - Trek Conditioning	1 HR Stairs w/ 20lb Pack	1 HR Stairs w/ 25lb Pack	1 1/4 HR Stairs w/ 25lb Pack	1 HR Stairs w/ 30lb Pack	Rest
Day 4 - Rest	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest/Stretching	Rest
Day 5 - Cardio Conditioning	1 HR Run or Other	1 HR Run or Other	1/2 HR Run or Other	1/2 HR Run or Other	
Day 6 - Altitude Training	1 Hr Intensity - Steep Hike or Intervals	1 Hr Intensity - Steep Hike or Intervals	1 1/4 Hr Intensity - Steep Hike or Intervals	Rest/Stretching	
Day 7 - Trek Conditioning	5 HR Long Slow Endurance - Hike w/ 25lb Pack	6 HR Long Slow Endurance - Hike w/ 30lb Pack	6 HR Long Slow Endurance - Hike w/ 30lb Pack	7 HR Long Slow Endurance - Hike w/ 30lb Pack	

** Note: All training besides Strength Conditioning and Altitude conditioning should be conducted in Heart Rate Zone 1

** Altitude training should have points of intensity reaching Heart Rate Zone 4

Equipment

Print the list below. Use it as a checklist to plan and again to pack. Strict adherence is not required if you have a system or combination of items you know works for you. Use your judgment, but don't bring items or systems that you have not used before. Additionally, keep in mind many of these items can be rented. They can either be rented in the United States or in Kathmandu.

Items of clothing and gear that might fail or be difficult to repair while trekking should be left home and replaced with more reliable items. It is important that you have used your clothing, sleeping, and gear systems this before the trip. You need to be very familiar and comfortable with all your clothing and gear during your pre-trip training. That means hiking with the boot/sock system you will use, and sleeping out in the exact bag/pad system you plan to use.

HOW WILL EQUIPMENT BE CARRIED

Most your equipment will be carried inside your duffle bag which will be placed on a yak. The remaining items, including items that you may need quick access to, will go in your backpack which you will carry on your back during the trek. Your backpack will weight no more than 30 lbs.

WHERE TO BUY GEAR

If you need to obtain clothing or gear, know that "quality" does not necessarily mean "expensive." You can sometimes find some needed items at Army surplus and thrift stores. Here are some additional options for best buys:

- Backcountry - <http://www.backcountry.com/>
- Steep and Cheap – <http://www.steepandcheap.com/>
- "Garage Sales"/"Gear Swaps" held occasionally at REI stores and local mountaineering shops
- Sierra Trading Post website – great sale prices: <http://www.sierratradingpost.com>
- Campmor website: <http://www.campmor.com>
- REI Outlet has daily specials: <http://www.rei.com/outlet>
- Used gear bulletin boards at mountaineering shops

Please mark all your gear with your last name or initials using an indelible marker, to the extent practical. It can be difficult to remember which water bottle or pair of mittens belongs to you, and many items of clothing and gear can look almost identical.

Inspect all your gear and clothing carefully to insure the materials, grommets, zippers, seams, and waterproof characteristics are in good shape. Jackets and rain pants should be treated with durable water repellent (such as Nikwax TX Direct or Gore-Revivex) before the trip.

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GEARLIST

General

- ❑ Personal diagnostics
- ❑ Daypack – for use as your carry-on bag when you fly, and carrying personal items while trekking (water bottles, extra clothing, head lamp, snacks, camera, etc).
- ❑ Duffle bag - to hold everything you will not be carrying in your daypack. It will be checked as luggage when you fly, and carried by a porter while we are trekking. It should be made of durable cordura, ballistic cloth, or heavy pack cloth. Porters do not prefer to use backpacks. They tend to carry loads in a woven basket with a single strap around the forehead. A duffle is expected and acceptable. Ensure things that should stay dry are packed in a waterproof stuff sack or a plastic garbage bag (trash compactor bags work well for this purpose because they are thick and won't tear easily).
- ❑ Sleeping bag – rated to 0 degrees Fahrenheit.
- ❑ Sleeping pad - suited for cold weather. Inflatable pads tend to be warmer but can be fragile.
- ❑ Nalgene water bottles (2) – with a minimum combined capacity of 2 liters. Consider water bottle holders that attach to your hip belt; the easier the access to the water, the more likely you will drink often. "Hydration systems" are acceptable but an insulated hose is recommended.

Personal Diagnostics

Mandatory

- ❑ Stethoscope
- ❑ Blood pressure cuff
- ❑ Otoscope (battery or rechargeable) Thermometer
- ❑ Reflex Hammer
- ❑ Penlight

Optional

- ❑ Ophthalmoscope (battery or rechargeable)
- ❑ Calculator
- ❑ Sanford Guide or other prescribing references
- ❑ dermatology/tropical medicine/other references as books or
- ❑ phone apps (downloaded, not on line)
- ❑ Any other tools you utilize in your specialty

Footwear

- ❑ Hiking boots – suitable for rocky trails and occasional snow. Should go above the ankle. Either a Gore-Tex membrane or a leather exterior that can be waterproofed is strongly recommended. The

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boots should support your ankle and the rest of your foot. If you are using leather boots, bring along some extra waterproofing material. Boots must be well broken in prior to the trip!

- ❑ Gaiters – should be waterproof. They help you avoid getting pebbles, dirt, or snow in your boots and prevent your boots, socks, and the bottom of your trousers getting as wet and worn as they would otherwise. Ankle high gaiters are best for this trip.
- ❑ Liner socks - thin Capilene, other synthetic, or silk socks worn next to the skin to reduce the incidence of blisters or hot spots. NO COTTON. Bring a minimum of two pairs, and alternate days. You can switch out your liner socks and dry them in your bag at night.
- ❑ Insulating socks – bring the very warmest wool or synthetic blend sock that comfortably fit in your boots. NO COTTON. Bring 3 pairs – 2 to alternate like you do with your liner socks, and keep the third fresh for sleeping in and use around camp.
- ❑ Light weight trekking shoes - old running shoes or low trekking shoes to wear around camp after a day on the trail. Once you see how the trails are, there may be days low in the Manaslu when you might prefer to wear these instead of your boots. This will likely be your shoe while we are in Katmandu.

Clothing

Bring at least two thick insulating layers and a rainproof outer layer. These garments should fit comfortably over each other so they can all be worn at the same time. Combinations of insulating layers are acceptable.

- ❑ Waterproof shell coat and pants - lightweight, strong, and roomy. Full front zippered, agoules and anorak coats are all acceptable. Garments made of breathable fabrics are best, including Gore-Tex, Klimatex, Entrant, eVent, Precip, Watertight, Epic, Triplepoint, Drilite, and others. Coated nylon is not recommended.
- ❑ Fleece or thick wool jacket and pants - your principal insulating layer when the weather is cold.
- ❑ Down jacket
- ❑ Base layer uppers and lowers – thin lightweight synthetic to be worn next to your skin. Bring 2 base layer uppers, and just one base layer lower. While expensive, new generation Merino wool (such as Icebreaker or Smartwool) is comfortable, super warm, and does not absorb odors as much as synthetics.
- ❑ Insulating 2nd upper and lower layers – thicker expedition weight synthetic or wool.
- ❑ Trekking pants – 2 pairs of light and comfortable synthetic pants that turn into shorts.
- ❑ T-shirts – bring 2 pairs of whatever is comfortable for you. Synthetic are best. Suggest a cotton shirt to keep cool if the temperature is hot when we descend back to Lukla at the end of our trek or KTM.
- ❑ Underwear – synthetic! (Cotton set to sleep in is OK.)
- ❑ Sunhat - a lightweight brimmed hat or baseball cap will be useful on hot sunny days in order to avoid getting sunburn.
- ❑ Insulating hat – wool or synthetic material. Must cover your ears. Balaclavas are great. You must have either a waterproof hood on your outer shell or a waterproof outer fabric on your hat.
- ❑ Liner gloves – made of wool or synthetic material.
- ❑ Mittens or expedition gloves – for the high passes and hills. Mittens are warmer than gloves. Do not bring gloves unless they are of the highest quality with a waterproof outer fabric. Think skiing on a cold day in the PAC NW/Colorado and you know what you need!

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Miscellaneous

- ❑ Journal and pen or pencil.
- ❑ Hand sanitizer – required! You must use some before each group meal.
- ❑ Headlamp - a light at night is essential for getting to the toilet or finding things in a dark tent. A headlamp is practical since it leaves your hands free, but a small, lightweight flashlight works fine too. Bring a set of extra batteries for your headlamp/flashlight.
- ❑ Sunscreen – exposed skin can quickly get badly burned at high altitudes. Bring SPF of 30 or higher. To gauge volume needed, remember that only your face and neck will be exposed for most of the trip but you will need it every day.
- ❑ Lip balm – with SPF of 15 or higher.
- ❑ Sunglasses – with protection from ultraviolet. Failure to protect your eyes at altitude can lead to painful snow blindness and an expensive evacuation.
- ❑ Chemical heat packs - for your feet and hands for the two high passes we cross or the two high hills you will have an opportunity to ascend. Bring 4 pairs of each.
- ❑ Toilet kit – put the following in a zip-lock bag and carry it in your daypack during the trek: toilet paper, hand sanitizer, small lighter (to burn the TP when you are away from pit latrines).
- ❑ Toothbrush and toothpaste.
- ❑ Spare laces - in case you break yours.
- ❑ Cotton bandanna - 101 uses, including to clean sunglasses or cover your head. A dark colored bandanna is preferable, as it will not show dirt like a light colored one.
- ❑ Money/passport carrier - is essential to keep your passport and money secure and out of sight.
- ❑ Waterproof stuff sacks or garbage bags – for your sleeping bag, clothes, and other things that need to stay dry.
- ❑ Blister repair kit – such as moleskin.
- ❑ Medications - prescription meds you need should be carried in a waterproof container. Also consider bringing Pepto-Bismol, Imodium, ibuprofen or aspirin, decongestants, cough or throat lozenges, and any other personal medical items you think you will need. The team will have a comprehensive first aid kit and medicine kit, but that should not be relied on for your regular or predictable needs.

Optional

- ❑ Camera - a lightweight digital camera may be preferable to a larger traditional 35mm SLR. Consider an extra battery.
- ❑ Video camera – see the caution above for cameras. Consider an extra battery. Most phones and cameras are suitable for both photo and video combined.
- ❑ Trekking poles –especially if you experience knee pain, these walking poles can offer some relief especially during walks down steep trails.
- ❑ Pocket knife - it might be handy to bring along a basic blade, can and bottle opener, scissors, and tweezers, but make sure you store it in your checked luggage for the flight.
- ❑ Pee bottle – nights are cold and this sure beats getting out of your tent and going for a walk. Use a 1-liter minimum size. It must be labeled conspicuously so someone else does not inadvertently fill it with potable water. Some people use a rectangular bottle that differs in shape from your drinking bottles so it can easily be identified in the dark of a tent. Obviously, it must have a secure screw lid,

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like a Nalgene. Nalgene makes a collapsible canteen which is useful. Ladies should consider a pee funnel (e.g. Freshette or Lady J).

- ❑ Electric 110/220 adapter – useful if you plan on using personal electric appliances in Katmandu
- ❑ Acetazolomide (Diamox) – this prescription drug is often used for the prevention and treatment of Acute Mountain Sickness that occurs at high altitudes. Diamox can be used prophylactically or to treat the symptoms of altitude sickness as they occur. Diamox often helps people sleep better at altitude. Thoughts regarding its efficacy and use vary among mountaineers, guides, and the medical community. Increased urination is a common side effect of this drug. If you want to use it, you should educate yourself about its use and try it before arriving in Nepal for the mission. Be sure to talk to your doctor about this medication first.
- ❑ Down booties – for in your tent, around camp, or in your bag on cold nights up high.
- ❑ Pre-moistened towelettes.
- ❑ Foot powder.
- ❑ Small camp towel.
- ❑ Binoculars – lightweight models only.
- ❑ Earplugs – these light and small items may help you sleep if your tent mate snores.

Suggestion

- ❑ Leave expensive jewelry and watches at home.

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