

Preparations for Climbing Mt. Kilimanjaro

This is to summarise some of the preparations that our Dingle Hillwalking group undertook in the months preceding our climb of Mt. Kilimanjaro in early February 2004. This paper discusses our physical fitness training, materials and supplies we gathered for our journey, including hillwalking gear and emergency medical supplies, and medication we took as an altitude sickness prophylactic (i.e., Diamox). A couple suggestions for best handling the final night ascent are also made.

I. Physical Fitness Training

A. Mountain Training

The most important training we undertook in preparation for Kilimanjaro was our weekly hillwalking in the mountains of West Kerry. All four of the Dingle contingent are members of the Dingle Hillwalking Club. In the year preceding our Kilimanjaro climb we had been walking in West Kerry for at least once a fortnight, and more often once a week. These were climbs of 600 to 950 meters, distances of perhaps 7 to 12 km, and typically 4 to 5 hours duration.

So when we began training in earnest, specifically in preparation for Kilimanjaro, we were beginning from a solid fitness foundation. Even before our dedicated training, we were all reasonably fit because of our weekly or fortnightly Club hillwalking. We started from a good base level of fitness.

By October 2003, we were all walking in the mountains once a week. At this point, four months prior to our Kilimanjaro climb, we increased the frequency of our hillwalking to twice a week. And there were a couple weeks when I managed three climbs per week. These additional climbs were usually shorter walks but at a brisker pace: working harder on a sharp ascent to push up the heart rate. The favoured climbs for these workouts were Beenoskee (826m) and An Cnoc Moal Mór (453m).

The training in the Kerry mountains was invaluable not only for fitness training -- conditioning muscles in both the legs and the heart -- but also testing of gear and simply developing a comfort level with certain gear. For example, from our Kerry hillwalking experience, we knew the value of walking with hiking sticks; the tremendous benefits the poles provide both uphill and downhill. And from our months of use of walking sticks, we knew how to properly use them to best effect. I could see that this was not the case with other walkers on Kilimanjaro, who either did not use walking sticks or used them improperly such that they were more a hindrance than a help. The proper use of walking sticks is highly recommended on Kilimanjaro: they will ease your ascent and speed your descent.

Another useful aspect of walking in the Irish mountains is getting to know the right clothing for particular conditions. As it is not uncommon to meet both spring-like and wintry conditions on the same day in the Kerry mountains, getting to know what gear works best in what conditions will serve you well on Kilimanjaro. There you will

meet all four seasons (including the worst winter you're likely to know this side of the Yukon) in the course of 5 days. There the weather changes from the sultry summer of the rain forest at the lowest reaches to the numbing cold of the arctic-like wastes and glaciers at the summit.

Finally, there is not only the physical fitness benefit of weekly hillwalks in the Irish mountains, but also a psychological one as well. Most walks in the Kerry mountains are demanding in that there are difficult conditions underfoot: boggy ground, uneven ground, holes hidden by heather, high heather to wade through, slippery ground and dangerous rocks, etc. Further, some of the approaches to various West Kerry summits are relatively steep and challenging. Because of this experience in the Irish mountains, we found the first four days of walking to Kibo Hut (the camp from which we made our final, night-time ascent) to be -- frankly -- quite easy and undemanding, even though we had not been sleeping particularly well. The conditions underfoot were far better and easier than in the Kerry mountains. Even on the less-travelled Rongai route, we followed a relatively smooth surface and track. Moreover, we found that what our guide would describe to us as "steep ground" (e.g., from Kilkelelwa to Mawenzi Tarn) was not at all steep by Kerry standards and instead quite manageable and easy. And, of course, we were walking at the recommended (indeed, essential) "polé, polé" pace (slowly, slowly); a pace far, far slower than we would ever walk in Kerry.

All of this provided us with a huge psychological boost. Climbing Kilimanjaro up to Kibo Hut was a joy and a lark! I am convinced this was so because of our Kerry mountain training. Mind you, this does not include the final night's ascent. That was far and away the most difficult and demanding physical challenge of my life. But we were all the more ready for it because the previous four days walking had progressed so smoothly and so well.

B. Gym Training

When we began our dedicated training, we undertook it with the notion and determination that if anything prevented us from making a successful ascent of Kilimanjaro (i.e., altitude sickness, injury, etc.) it would surely not be for lack of fitness. With this in mind, three of the four walkers undertook a regular leisure centre/gym fitness training regimen. The gym training was largely concentrated on cardiovascular (CV) fitness, and included cycling, rowing, running, stair machine and swimming. All of this CV exercise is to train the heart muscle so it pumps blood more efficiently and delivers more oxygen. Your body's efficient delivery of oxygen throughout the body, particularly the brain, is essential when climbing at high altitude.

"The fit person climbs more easily, uses less oxygen per unit of work done and is more energy-efficient. When everything takes more effort than usual, as at altitude, it helps progress and morale to know that your heart is pumping the available oxygen

efficiently to your tissues.” This is from the book Explore Mt. Kilimanjaro. In its section on training, it makes the following recommendations:

- ◆ You don't have to become an exercise junkie to climb Kilimanjaro. Just get reasonably fit so you can enjoy the experience.
- ◆ For CV fitness, you need at least 20-minute sessions for maximum training effect, but build up to 30 minutes, and, approaching your departure date, 40 to 60 minutes. On the summit day, you will be hiking for 15 hours (8 hours uphill!). So prepare your body for sustained effort.
- ◆ The best frequency for training is every other day: the body needs a rest to extract maximum benefit from the training session.
- ◆ Avoid relying on a single form of exercise. If you use a gym for convenience, try to complement it with some hill-walking expeditions in the weeks prior to departure.
- ◆ Stretching before and after exercise is essential. Stretching beforehand reduces the risk of injury. After exercise, stretching prevents a build-up of lactic acid in your muscles, which would lead to stiffness later.

For the most part, the three walkers who trained in the gym heeded these instructions. Two of us might have been guilty of over-training (“gym rats”), though in the end we were quite careful about tapering off both our gym and mountain training in the two to three weeks before the Kilimanjaro climb. Attached is one of my weekly training logs which I kept in the four months prior to the climb. It is a particularly hard week of “high intensity” training, and in most weeks the training was less intense and of less frequency.

There is no question that the gym training was useful and beneficial. Personally, because of it, I was in the fittest shape since I ran the marathon 15 years ago. However, if I had to choose only one -- gym training or mountain training -- there is no question I would choose the latter. The mountain training provided not only physical fitness benefits but the psychological boost mentioned earlier and also invaluable experience with hillwalking gear and clothing.

If you have the time and the opportunity, I do recommend a mix of training at least three times per week: whether it be hillwalking, swimming, running, cycling, etc or any other physical activity (e.g., dancing) that puts up your heart rate and builds your CV fitness. Most important of all of them, I would say, is hillwalking.

II. Vaccinations and Medications

A. Vaccinations and Anti-Malarial

Vaccinations which we all received about 10 to 12 weeks prior to our departure were for Hepatitis A, Typhoid, Diphtheria + Tetanus, and Yellow Fever. The total cost was 177 euro, including doctor's consultation.

In addition we were all on a malarial prophylactic. This was an antibiotic called Doxycycline, the course of which started a week or so before our departure and continued for some time after our return. (Malaria-carrying mosquitoes are a potential problem only the first and last days, but certainly enough of a threat that on these days we were careful to cover all exposed skin with Deet-containing bug repellent. Because of that vigilance, there was not a single mosquito bite among us.)

There are a number of different anti-malarial treatments, and you should get your doctor's advice. We all heard the horror stories about the side-effects of Lariam (hallucinations, severe depression, etc.) so we stayed away from that. None of us had any significant side-effects from the Doxycycline.

B. Diamox

To take Diamox, or not to take Diamox? This will be one of the most important decisions you make. Initially, after reading a bit about this altitude sickness drug, we had decided that we would not take it. Personally, I do not like taking medication or drugs of any sort (Murphy's stout excepted!), and after all the vaccinations and antibiotics going into my blood stream, I was not in favour of yet another chemical entering the fray. Further, I found that what I read about Diamox was somewhat ambivalent. Some writers called it a "wonder drug" to prevent AMS (Acute Mountain Sickness), but others were far less effusive.

After initially deciding not use Diamox, however, we had a meeting with a man who has had years of experience climbing mountains all over the world, including Kilimanjaro. This experienced climber could have been a salesman for Diamox, so demonstrative was he of its benefits. With considerable insistence, he recommended a course of light dosage of Diamox, a half-tablet or capsule per day (half of 250mg capsule or tablet) along with a half-tablet of aspirin.

Because he was so energetic in his praise of Diamox, and obviously experienced and knowledgeable, three of the four of the Dingle group decided to take Diamox as an AMS-prophylactic; that is, taking it before and during the walk to prevent AMS. (It is also used to treat AMS.) Starting one week prior to our departure, we took a half-capsule per day. This was the recommended course, and also to test for allergic reaction. We continued with the light dosage during the Kilimanjaro climb, and on the final day's ascent I moved from half-capsule to one full capsule.

Our adviser suggested taking the low dosage of Diamox *and* a half-tablet of aspirin. Others, however, recommend against this. They say use one or the other, but not both. (You will gather a lot of conflicting information and advice!) Diamox works by acidifying the blood, which stimulates breathing, allowing a greater amount of oxygen to enter the bloodstream. Whether aspirin, as a blood thinner, accomplishes much more on top of this is open to question. For us, two of the three who took Diamox did not take aspirin and one did. None of the three experienced anything

other than mild altitude sickness (i.e., a headache), and had no moderate or severe symptoms.

In the end, I highly recommend a low-dosage course of Diamox. Of the four Dingle hillwalkers, three were on Diamox. Those three did not experience any moderate or severe symptoms of AMS, and those three made it to Uhuru Peak. The fourth person, who was not on Diamox, experienced moderate to severe symptoms of altitude sickness and had to turn back at Gillman's Point, only 2 hours and 200 meter-ascent from the summit. [Gillman's Point, at 5,685m is on the rim of the mountain's crater and is one of the two acknowledged summits . Uhuru Peak is the highest point of this crater rim, at 5,896m. Both points are atop the crater rim and both receive Kilimanjaro National Park certificates, the only two points on the mountain to do so.]

Finally, if you decide to take Diamox, you should discontinue any vitamin or Iron supplements. I don't know the reason for this, but our adviser strongly recommended this. Once I decided to take Diamox, I discontinued taking a daily vitamin tablet (containing Iron) several weeks before.

C. Other Medications and Treatments

Here is a list of other medications and treatments that we brought along with us. All of the essential items were used at one time or another. The precautionary items were brought "just in case," perhaps in an excess of caution, and some items like sterile syringe and severe pain-killers because you are in Third-World country and you want to avoid receiving medical treatment there.

Essential

1. Solpadeine or other OTC Pain-Relief: I rarely experience a headache, but on Kilimanjaro I woke up with a headache every morning. This is one of the mild effects of altitude. Or feeling slightly hung-over or lethargic in the morning. I found one capsule of Solpadeine worked immediately, and I experienced no further headaches during the day as we climbed higher.
2. Plasters or Second-Skins: the latter are especially great for blisters
3. Sun Block
4. Bug Repellent with Deet
5. Toilet tissue and Wet Wipes: Do not forget the Wet Wipes!
6. Halls throat lozenges or other sweets: because of the altitude, you will always feel dry, however much water you drink
7. Treatment cream for insect bites, to stop the itch.

Precautionary

- ◆ Treatment for diarrhoea
- ◆ Foot Cream: This I used -- after a day's walking, it was comforting to give the feet a bit of a rub.
- ◆ Treatment for constipation
- ◆ Bandages, sterile pads, tape and wraps

- ◆ Sterile syringe
- ◆ Emergency tooth fillings
- ◆ An all-purpose antibiotic
- ◆ Medication for severe pain (e.g., Kapake)

III. Recommended Clothing and Other Gear

For the most part, you will find all or most of these items listed in any guidebook, or suggested by your tour operator. I make a few worthwhile comments on some of the items.

1. **Well-broken-in Walking Boots:** I find that it is best to have a bit of room at the top of the boot. Particularly on the summit day, you may be wearing 2 pairs of thick, warm socks. And not having a bit of room is terribly uncomfortable on the descent.
2. **Warm Walking Socks:** Another valuable recommendation from our experienced adviser was, on the night you make your summit climb, wear a plastic bag between your socks. This is a technique that requires some trial-and-error in your preparatory hillwalking before you leave for Kilimanjaro. If the plastic is too thin, your feet will break through the bag. If it is too thick, you will find it slippery and uncomfortable. Through trial-and-error, I found a sock/bag combination that worked very well. My feet remained perfectly dry, warm and comfortable throughout the final night's ascent and during a very difficult descent.
3. **Walking Sticks:** Learn how to properly use them, and they are brilliant.
4. **Layers of Warm Clothing:** As in the Irish mountains, the layered technique is best. On the final night's ascent here's what I wore inside to out -- **UPPER BODY:** a thin polypropylene shirt (wicks moisture away from skin), a medium-weight fleece jersey, a heavy fleece jacket, and heavy Gore-Tex jacket (4 layers). **LOWER BODY:** long thermal underwear, stretch hillwalking pants, Gore-Tex trousers (3 layers). I experienced no discomfort at all, always warm and dry on the summit approach. **CAVEAT:** Some guidebooks recommend a down jacket for the final approach. One walker in our group of 12 wore a down jacket, but because the conditions were very wet with snow, ice and fierce wind, she experienced considerable discomfort. While down is warm, it works only when it remains dry. I would recommend that a water-proof is more important for your outer layer. In combination with good inner fleeces you will be both warm and dry.
5. **Warm Stocking Hat and Balaclava:** On the final night, I wore both, covered by a hood., thus 3 layers. It was that cold and windy. I have never before worn a balaclava -- not in skiing the Rockies of Alps and not in Chicago's coldest winters -- but I was glad I had it that final night. It is a fierce, bitter, numbing cold on the summit. The one man who did not wear a balaclava looked like the abominable snowman when I saw him on the summit: his eyebrows and 5-day beard were completely frozen, covered in ice and snow. He was more frightening-looking than usual!
6. **Broad-brimmed hat:** This is for the lower altitude. Should be crushable so you can pack it away. A straw hat, then, is not suitable.
7. **Sun-Glasses:** the sun gives a fierce reflection off the snow and glaciers.

8. **Gloves or Mittens:** I would recommend the latter. It is bitter, bitter cold the final night. When your hands sweat and get wet, as they will, I found gloves to be a bit of a nuisance trying to put all the fingers back in properly. It's the kind of annoyance and distraction you don't need that final night. Besides, mittens are warmer.

9. Waterproof Jacket and Trousers

10. **Water Bottles or Bladder:** You should drink 3 litres of water a day. That takes some effort. You must make a conscious effort throughout the course of the day. The person who was most successful at drinking 3 full litres did so by determinedly drinking down 1 litre before breakfast, and the other two during the course of the day. For myself, I usually drank 2 litres, but always woke up feeling quite dehydrated. A water bladder is useful, and ensures you drink at quite regular intervals without having to stop. But beware that the tube will freeze on the final night. If you want to use the bladder that night, you must insulate the tube. All water will freeze on the final night unless you keep it *inside* your outer clothing.

11. **Water Purification Tablets:** We did not use these because our guides were quite diligent in boiling all our drinking water. Indeed, it was scalding. But beware: it is harder to get water up to boiling temperature at higher altitude.

12. **Head-torch and spare batteries:** As it happened I never had to turn on my head-torch on the final night but this, I gather, is unusual. I did use the head-torch quite a bit at the camps and in the tent.

13. **Four Season Sleeping Bag and Thermal Liner:** I found the liner to be essential. The one night I did not use it, I felt the cold.

14. Self-Inflating Sleeping Mat

15. **Spare Shoes (Runners):** Feels great at the end of the day to get out of the walking boots, give your feet a bit of message with foot cream and spend the rest of the evening in runners.

16. **Waterproof Rucksack Liner:** a bin bag will do

17. **Candle, Lighter and Playing Cards:** to pass the time in the evening

18. **Ear Plugs:** I found the most difficult part of the whole Kilimanjaro experience was getting a decent night's sleep. Not once in 6 nights did I sleep well, some nights not at all. This lack of sleep, I'm convinced, was the cause of the extreme exhaustion and ataxia which overcame me on the descent. If I were to do it again, I would use ear plugs every night and also do a bit of research on "sleeping at altitude." While I had the worst difficulty in sleeping among the group, it was a problem to at least some degree for all climbers.

19. **Dried Fruit, Cereal Bars or Other Snacks:** These were very popular, particularly dried apricots. And Energy Bars will come in handy on the final night's ascent, if used correctly.

20. Camera

IV. Other Suggestions

A. Six Day Route

If you have not already booked your route, I highly recommend you opt for the "six-day route." (After 4 days of walking, you start the final ascent on the fourth night,

and reach the summit on the morning of the fifth day. You then complete your descent on the 6th day of walking.) This is the slower pace which allows greater acclimatisation. Some statistics indicate that adding the extra day to the standard five-day itinerary increases your chances of reaching the summit by 20%.

The Dingle group climbed the six-day route on the Rongai trail. We chose it largely because it is less travelled than the more popular Marangu and Macheme routes. We booked with Exodus Walking and Trekking in the UK, and the local guides were provided by The African Walking Company. Overall, we were quite pleased with Exodus and, with some exception, found the local guides to be competent and professional. The management of the camps was outstanding. And the quantity, quality and presentation of the food were superb.

B. Acclimatisation Walks

Some days walking are shorter than others. On the Rongai route, for example, our scheduled walks on Days 1 and 3 to our next campsite took no more than 4 hours. We had plenty of time in the afternoon for an acclimatisation walk. That is, you walk for another hour or more so you climb perhaps 200 meters above your camp and then you return to camp. This allows you to abide the hillwalking maxim to “walk high, sleep low.” It is a huge help in acclimating to the high altitude.

I got the impression that our guides would take us for an acclimatisation walk only if we insisted on it. Do insist on it. It is a huge benefit.

C. Polé Polé

It's Swahili for “slowly, slowly.” Our guides were excellent in keeping a very slow, easy, steady pace. It is absolutely essential. Climbing too fast is the primary cause of AMS. It is one of the reasons that a fit person is as likely to get AMS as an unfit person: because his fitness allows him to move at a faster pace. And it is suspected this is why young men are more susceptible to AMS than women: like driving a car, they take it too fast.

If your guide is moving too fast, insist that he take it polé polé. Many experts swear this is the key to a successful ascent. SLOW DOWN.

D. The Final Night: Climb to Uhuru

Nothing in the previous four days of climbing Mt. Kilimanjaro prepares you for the final stage of your assault on the summit. On the Rongai route, we had easy, comfortable walks even when it was raining or a storm had kept us awake the night before. A couple days were only five or six hours of walking, and an ascent of no more than 900 meters. And the weather conditions were quite tolerable.

It is completely different, however, between Kibo Hut and Uhuru -- the final night. Now, instead of a full night's sleep (even if that had been possible) you are making your climb *during* the night. It is an 8 hour+ climb from Kibo Hut to Uhuru. We

started at midnight, and I arrived at 8 am, with others arriving over the next 15 to 20 minutes. It is the most punishing walk I have ever made. The weather and mountain conditions were horrendous: bitter cold, high snow drifts, slippery ice patches, fierce wind, blowing snow and ice. It's a kind of numbing, northern pall over your entire body. You hardly want to raise your head even to take in the vista of magnificent glaciers. (Some walkers did not even notice the glaciers -- they couldn't be bothered looking up!) By the time you get to the summit crater you have no interest whatsoever in scenery. (To give you even more a taste for just how punishing is the last night's climb, I also attach my essay on the experience.)

There are two suggestions I have for dealing with this punishing climb. The first you will see in every guidebook. The second I have seen mentioned nowhere.

First: *polé, polé*. Beware that your guide may have his own agenda. If he is moving too fast, do not follow. Make him conform to your pace, not you to his. The one woman in the Dingle group did just this, and she not only made it to Uhuru but was strong and fit on the way down -- something I can't say for myself.

Second: EAT. You need the fuel, and you need it long before you get to Uhuru. And if you wait too long, you will not have the energy even to eat.

In our group of 12, there was a noticeable loss of appetite at dinner on Day 4. That is one of the effects of altitude. Most people did not eat well at that final dinner before the night ascent. If I knew then what I know now, I would have forced myself to eat more, and then still more. This is your final meal before the most arduous day in your life. You must eat all you can, even though you do not want to.

That dinner was at 6 pm. A few hours later, at 11 pm, we were given only a cup of tea and a couple biscuits before we began the night-time ascent at midnight. This is why you need all the fuel you can stuff into your gob at that final dinner. You will likely not have an appetite. But you must force yourself to eat.

Further, along with that tea and biscuits at 11pm, I strongly suggest you also eat an energy bar or other nutritious snack. And then in the course of your ascent, eat a portion of chocolate or half an energy bar at *each* stage of the ascent (e.g., William's Point, Hans Meyers Cave, Jamaica Rocks, Gilman's Point). If you wait -- as I did -- until your energy is completely sapped, then it is too late. If I were to climb Kilimanjaro again, this is the one thing I would do differently, along with researching how to get a decent night's sleep at altitude.

I hope this review of preparations for our climb of Mt. Kilimanjaro proves informative and useful to you. Good luck in your preparation and success in your climb.

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