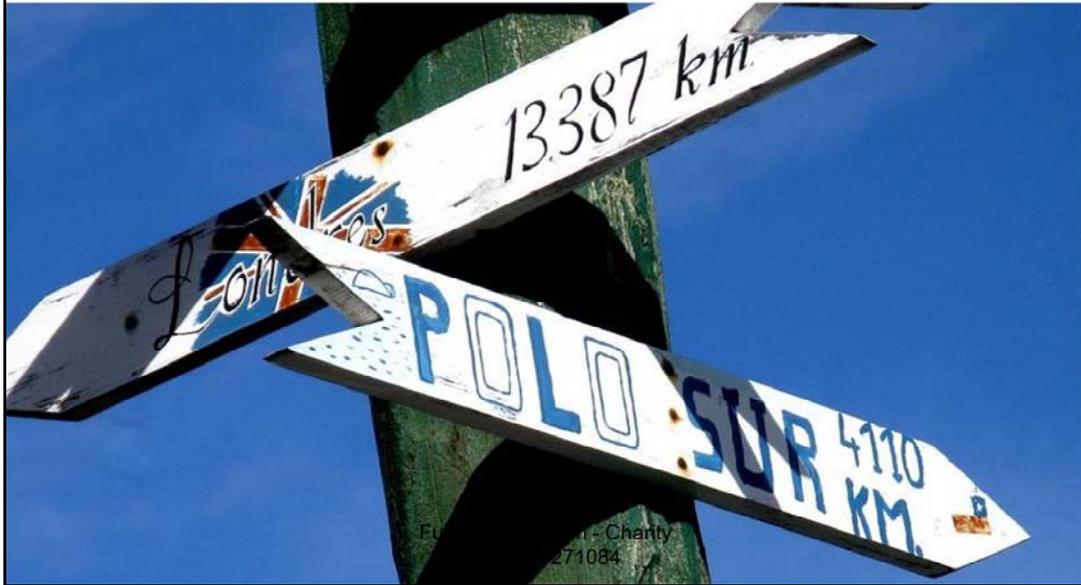


I travelled through the following places, in which was the photo taken?

London, Madrid, Santiago, Punta Arenas (S.Chile),
Patriot Hills in Antarctica (80.18.154S, 81.21.072W)



Answer: Punta Arenas

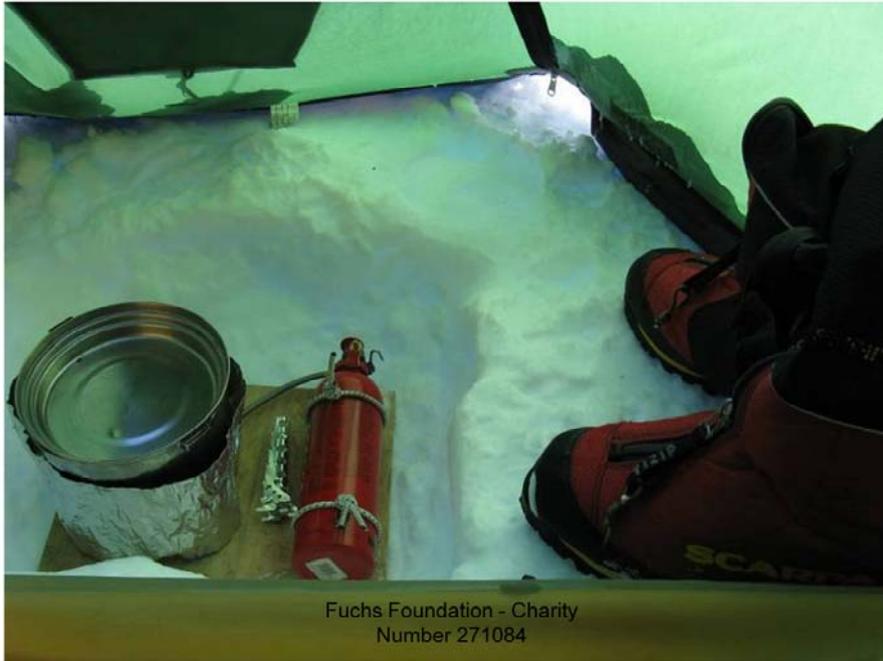
What are we wearing to help us cope with the extreme conditions of Antarctica?



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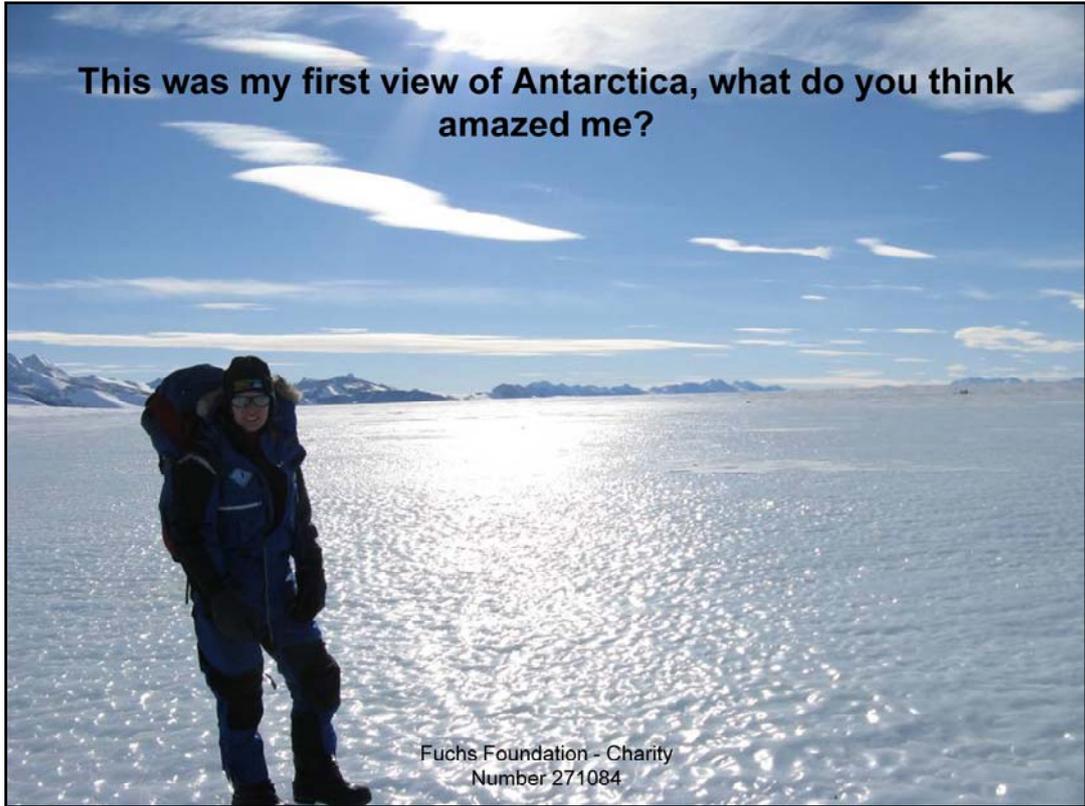
Down suits that create super insulation. Sun glasses because of the glare. Big, fleece-lined mukluk boots. Hats as the majority of body heat is lost through the head. Gloves as extremities are prone to losing blood circulation.

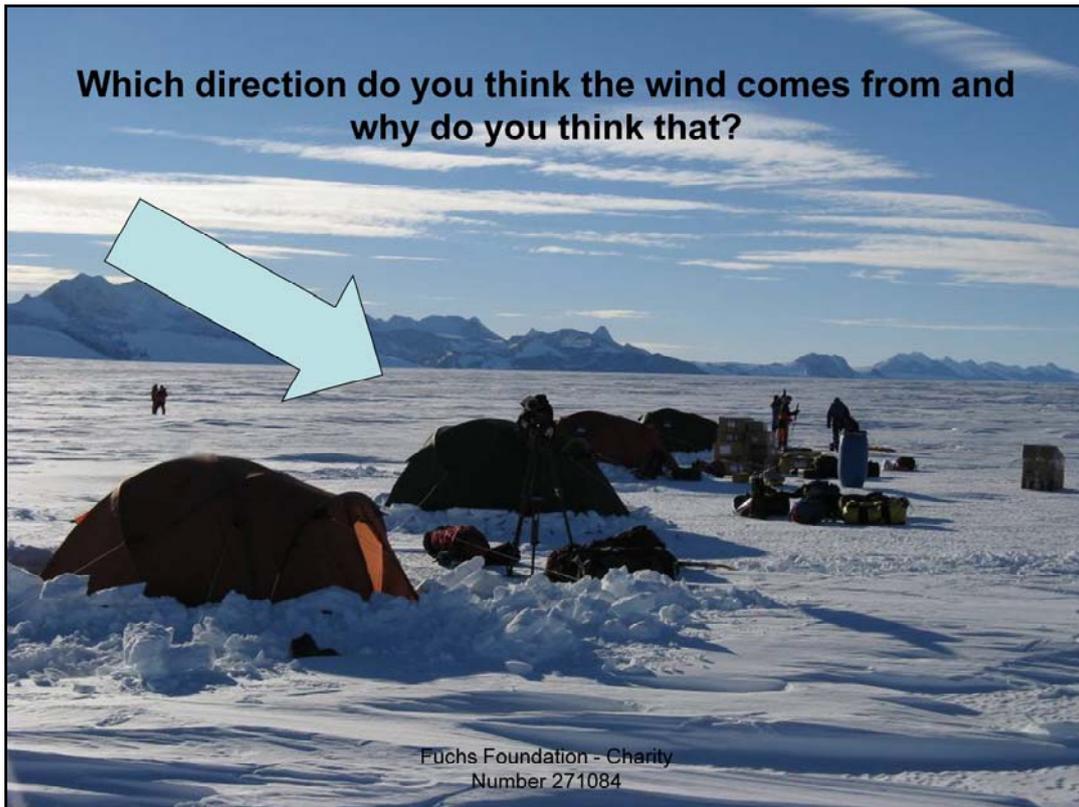
**Why am I cooking in the tent? What are the dangers?
How have I tried to lower the risk?**



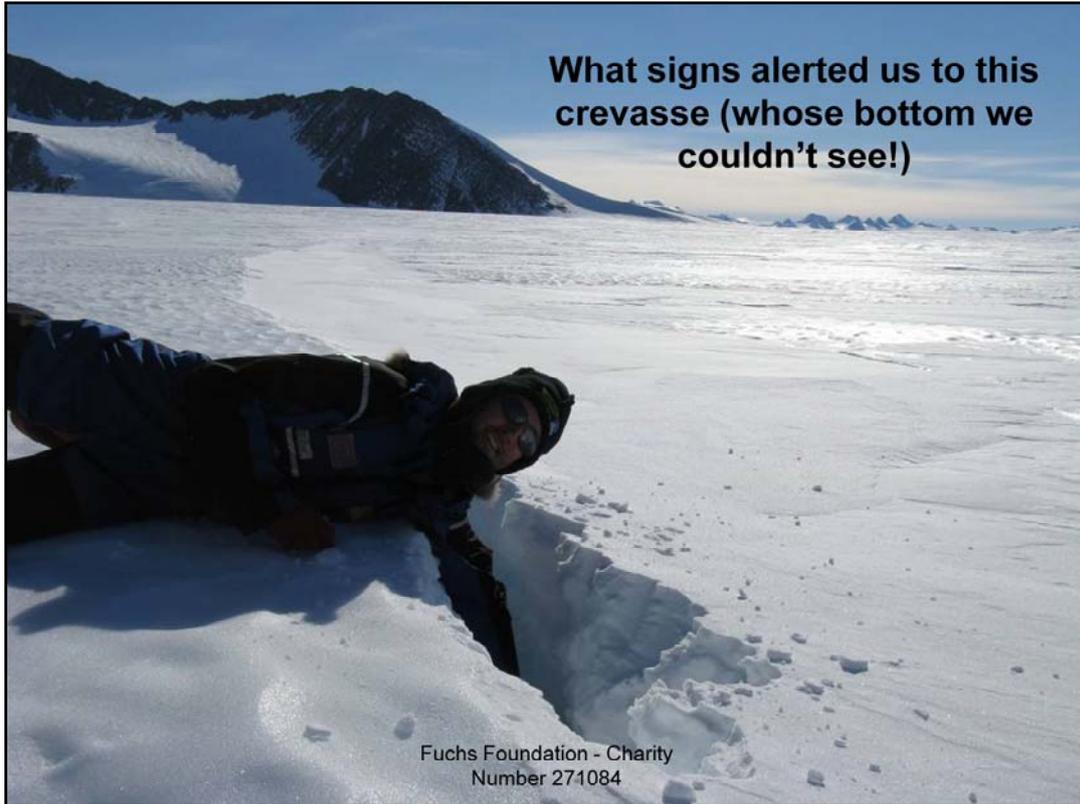
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Weather outside too extreme. Tent fire taking away my only shelter and leaving me dangerously exposed. Insulation around and over the flame, stove and fuel bottle all attached to a stable board, hole dug into the snow to give me more clearance to the roof of the tent.





From the left. Our tents are in a line across the wind to stop them drifting each other up. Our doors are away from the wind to stop snow getting into the porches.

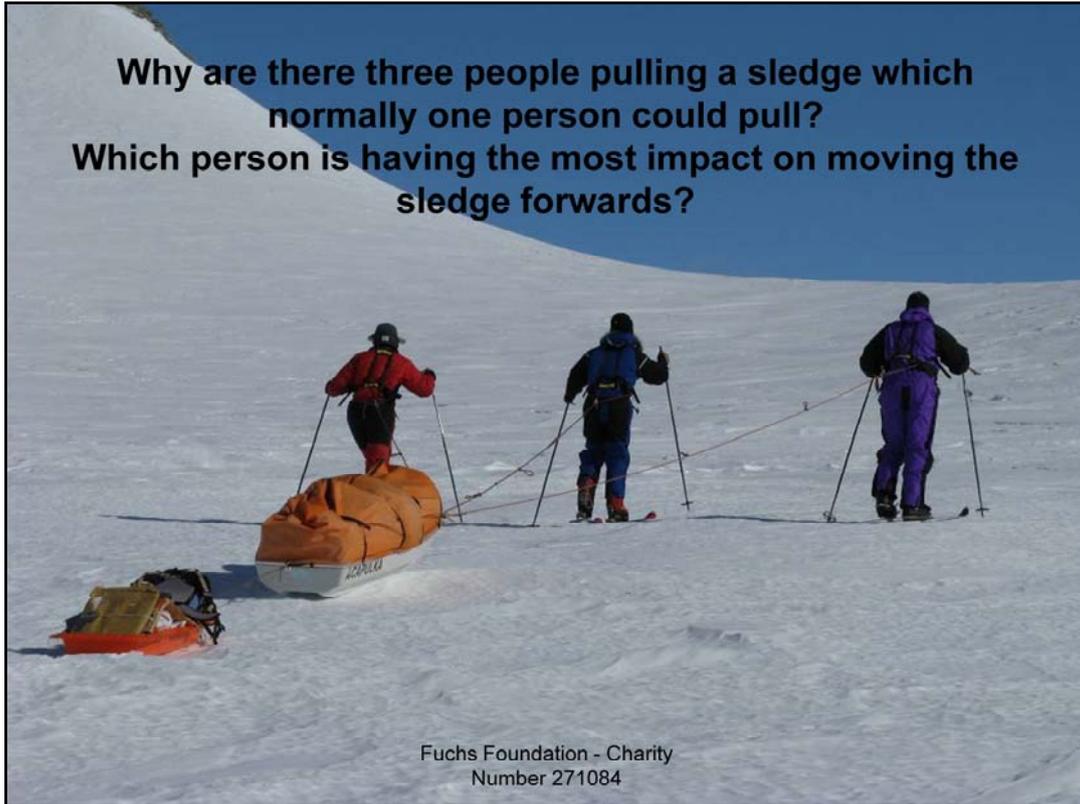


The smooth snow which can be seen over my left shoulder and in the right foreground is a snow bridge that has formed over the crevasse. We probed this area with a ski pole and the pole went straight through the thin crust. We were originally suspicious as the ice was going from flat to downhill.

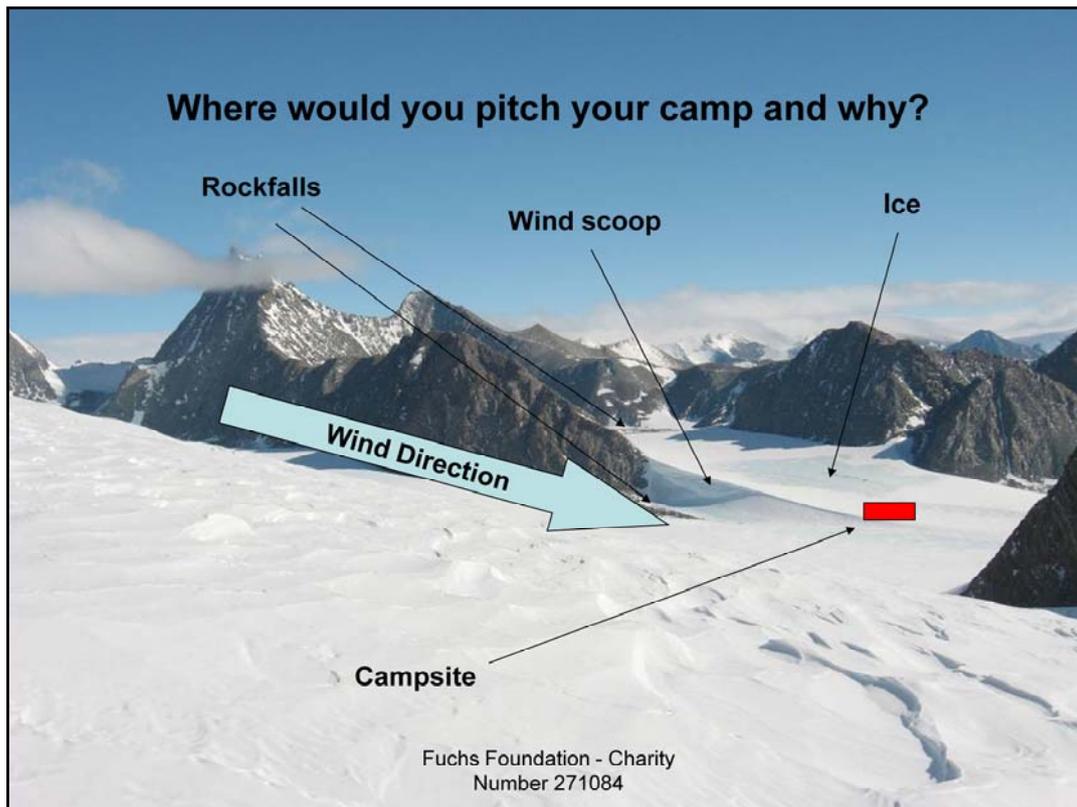
Could you spend five weeks living in this small space with another person? What would be good about the experience, what would annoy you?



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Our sledges weighed anywhere from 50/60kg to mine and Carl's which weighed over 100kg. They were fine on the flat, but the moment you got onto an uphill they became very hard work/impossible to pull. I'm not great on my vectors but Ruth in the middle seems to have the best position to move the sledge forwards, but Carl on the right is a bear of a man and is probably pulling much stronger.



Wind Direction shown by wind scoop. Ice no good for a campsite as you need to dig your tents into the snow and have snow nearby to turn into drinking water. Close to the mountains would be sheltered, but dangerous due to rockfalls. Also, being out in the open means you're in the shadow of the mountains for less time, making tent temperatures about 20 degrees warmer!!



This photo was taken at midnight. The sun is always visible in the height of summer (unless behind a mountain or cloud). It makes a temperature difference of about 20 degrees in the tents. On the equinox (21st Dec) it follows a straight line all around the sky, never deviating in height.

This is the daily ration for two people. What strikes you about it?



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Lots of sugar to get the calories in (4000 a day). Lots of packet stuff so that you can eat on the move at lunchtime. Stopping is not an option as it's too cold! Lots of water as Antarctica is a desert. Boil in the bag evening meal, pour in boiling water, wait five minutes, eat. Insulation around our water bottles/flasks to try and keep it liquid. Boiling water in flasks would start to freeze after about 30 hours.

What are some of the problems of sledge hauling in Antarctica?



Visibility makes navigation difficult. The ping pong ball effect of the sky and snow merging into one are in evidence in this picture. Concentration over such a featureless plain is tiring so we take it in turns to blaze a straight trail. Breaking trail is tiring as you're flattening down the loose snow. Different terrains require different footwear; in the photo we're on solid ground so are in boots, but Ruth has her skis strapped to her pulk in case there is softer snow ahead.



Breath freezing onto beard. Painful when it pulls the hairs out!

What are you going to achieve?



It took me 18 months to prepare for the trip of a lifetime; I had to fundraise, learn new skills, buy my equipment, organise my lessons and get my science project in order. What do you want to achieve in 18 months? Be it sporting, academic or adventure, pick your target and make it happen.

Where? When? Why?



Where: A laboratory at the University of Portsmouth

When: We did a whole series of tests (thermal sensitivity, sweating/shivering temperatures, fitness and power) before we went and when we came back so that we could see the effect that the Antarctic cold had.

Why: This test measures my VO₂ maximum. I cycle at 60 rpm whilst the man on the right progressively makes the work harder. All the time the lady on the left is recording my Heart Rate, how much oxygen I'm using and how much pain I'm in. After about 15 minutes, when I can no longer carry on, I slump over the handlebars, the woman records my maximum heart rate and maximum oxygen usage whilst the man stabs me and takes my blood so they can find out how much lactic acid is in my blood! All of this gives a good idea of my fitness.

My VO₂ before going was ever so slightly lower than my when I came back (65). But, I was much stronger on my return and some of the team were able to do more work at lower heart rates suggesting positive effects of altitude.

Our fitness levels showed that we were ready to haul sledges for miles. As I was the fittest member of the team, I got one of the heaviest sledges ... I shouldn't have tried so hard!!