



SWIMMING... WITH ICEBERGS!

The southern winter was approaching. From Lewis Pugh's boat you could look down and see grey ice thickening the waves. A fast wind off the ice shelf meant the air temperature was a mind-blowing -37°C . It was so fantastically cold that, having gone out in a Zodiac to check the water for killer whales, Pugh's wife didn't actually get wet when a wave crashed over the **dinghy**. 'I saw the water come out and, in the air, I saw it turn into ice,' Pugh says.

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The idea was to swim a kilometre, but immediately he could see the water freezing on his arms as he lifted them for each stroke. At 250 metres he saw that two **knuckles** on his left hand were white, frozen. 'I get to 330 metres and I realise if I carry on any longer, I'm actually going to lose my hands right here.'

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Known as the human polar bear, a week later, Pugh looks OK, but tired. I ask if he's confident that the polar swimming which he does at nail-biting risk to his life to draw attention to the steady destruction of the world's wild places, hasn't done him permanent damage. 'No,' he says. 'I try not to think about it.'

What is quickly clear when you meet Pugh is that he doesn't do this stuff because it's exciting. 'I have no death wish. I take these risks because of life, because I want to protect life, because I care about these things.'

Pugh says there are two misunderstandings about him. One is that he's somehow superhuman. The other is that he enjoys cold water. 'Anybody who's been cold and says they enjoy the cold, well, they haven't really been cold.'

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The Lancet has published an eye-opening study of Pugh's physiology in which it listed the clinical conditions that being in very cold water can bring on in seconds in normal people. Pugh is one of very few people in history to have shown that mind can beat matter, even in polar waters.

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His doctors say this useful internal warming is acquired, not **innate**. 'They think the cause is that I've spent so many years swimming in extreme cold water that I know subconsciously if I don't heat up my **core** before I get in, I simply won't survive. And so, getting into the water, I'm sweating and I'm thirsty.'

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His first long, cold swim was 12 years ago, round the North Cape, in the Arctic Ocean. He returned to the Arctic each year after that for four years, swimming a kilometre across the North Pole in 2007 to show the world that there was no ice there anymore.

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His five Antarctic swims last month were intended to persuade nations to back his call for a giant marine protected area (MPA) **encompassing** the entire Ross Sea. Pugh calls this giant area of ice and ocean the world's last **pristine** marine ecosystem.

- a** What protects him against the cold is a weird physiological thing. When he stands in the freezing wind in his swimming trunks, his core temperature goes up. His doctors have measured it and given it a name: anticipatory thermogenesis. The theory that it is unique to Pugh is apparently false.

- b** Pulled aboard by a support crew, he managed to get into the Zodiac. He had to be lifted gently to minimise the damage to his frozen fingers. A duvet was thrown over him as the dinghy raced to the mother ship. It took the best part of an hour in a hot shower to get his core body temperature back to normal.
- c** He has since cheated death in a glacial lake two-thirds of the way up Mount Everest, nearly drowning on his first attempt to cross it because he set out too fast, at breakneck speed, forgetting about the altitude.
- d** 'Real cold is like an ice-cream headache all over,' he says, and that's just the beginning. The longer you stay in water that is nearly freezing, the more of your body nearly freezes. The blood rushes to your core to protect your vital organs, but fingers, arms and legs lose feeling and function.
- e** When the Zodiac came back, it was the heart-stopping moment for Pugh to do what he'd come to do. Having taken off his outer layer, he jumped into the water from a piece of floating ice, wearing just swimming trunks and a swimming cap. Pausing for a second to put on his goggles, Pugh felt the thick water **rip them off**. It was cold enough to freeze his eyeballs, but the goggles were gone and there was no time to get others, so he started swimming.
- f** One result is that he has to drink a lot before swimming – and we're talking water, not hot tea. But he is not immune from the symptoms of hypothermia. They hit him later, in the shower, when the warm blood near his heart is used to warm up his legs from the inside – and comes back thoroughly chilled.