

From E.coli to Weil's disease, the perils of outdoor swimming...and how to avoid them

By Jill Foster

Far from being the preserve of a few hardy types foolish enough to brave chilly British waters, outdoor swimming – in lakes, ponds, streams and lidos – is increasingly popular. One group, Wild Swimming, which lists the most picturesque places to swim in the UK on its website, has more than 15,000 members. And during the summer months, rivers countrywide are teeming with watersport enthusiasts. But could they be risking their health?

Waterborne diseases are far from uncommon in Britain – a case in point being the death of Olympic Gold medal-winning rower Andy Holmes last year of Weil's disease. Whether due to sewage or infections spread by wildlife (rats, in particular), open water can easily become contaminated.

'Sea water usually provides fewer problems because water cannot stagnate and its saltiness stems bacteria proliferation. Freshwater swimming is more risky,' warns clinical microbiologist Professor Paul Hunter, who specialises in waterborne disease at the University of East Anglia. 'But there is no need to be scared – it is fantastic to get in touch with the outdoors. Just be sure to take precautions.'

So just what can you do to be sure you don't contract something nasty while taking a dip? Here, experts give advice on the most common culprits – and how to avoid them.

WEIL'S DISEASE

Leptospirosis or Weil's disease is a bacterial infection spread by animal urine. Symptoms include vomiting, diarrhoea, severe headaches, muscle pain, fatigue and, without treatment, fatal organ failure. According to the Health Protection Agency, 58 Britons contracted it in 2009, and eight people have died from Weil's in the past 13 years. Vigilance is essential.

'Many think Weil's is spread only by rat's urine but it can also come from fox, rabbit, cat and even hedgehog urine. It tends to be found in still, recreational water such as lakes, where water is not flowing freely,' says Prof Hunter. 'It is possible to get Weil's from ingesting infected water but it is much more commonly caught when it gets into the bloodstream. Fishermen, canoeists and jet-skiers are the usual victims because they often cut themselves in the water.'

Prof Hunter advises wearing sandals to avoid cuts and scratches and, if you already have a wound, keeping out of the water. Never swim in an urban area unless you know it is

monitored for safety and never swim in flood water. If symptoms develop after being in water, visit your hospital immediately where you will be treated with antibiotics.

CRYPTOSPORIDIOSIS

This condition is caused by a parasite called *Cryptosporidium* (Crypto), which targets the small intestine. It is most common in children aged from one to five, but can affect anyone – about 5,500 Britons are infected with the parasite each year. Sym-

ptoms include diarrhoea, vomiting, dehydration, severe headache and sometimes a rash around the stomach. Untreated, Crypto can be fatal in the very young or old but those with a healthy immune system normally recover within a month.

'Crypto tends to come from either sewage or dead animals,' says Prof Hunter. 'It's more common in streams where cows or sheep may have urinated so avoid drinking from these – even if they look clear.' To avoid contracting Crypto, wash

hands thoroughly after paddling in a river or stream. Do not eat anything until you are sure your hands are clean.

ESCHERICHIA COLI

Normally associated with food poisoning, E.coli bacteria can also be picked up from streams and rivers containing sewage.

'E.coli bacteria can be picked up even in small mouthfuls if the water has come into contact with any kind of animal faeces, guts or even bird

TRAGEDY: Olympic Gold medal-winning rower Andy Holmes died of Weil's disease, one of many illnesses spread in water

droppings,' says Prof Hunter. 'It causes vomiting and diarrhoea and can be fatal in the very young and old but is easily treated with antibiotics and healthy adults will usually recover quickly.'

Prof Hunter advises using breaststroke to minimise the amount of water getting into the mouth.

SWIMMER'S EAR

Otitis externa is a common infection that affects the ear canal and is known as swimmer's ear because regular swimmers are five times more likely to develop the infection. Small scratches, cuts or blemishes leave the ear vulnerable to many types of bacteria that are plentiful in water, which causes the ear to become inflamed and itchy. In severe cases the ear will excrete discharge, causing temporary deafness.

'To avoid an ear infection do not put your ears underwater unless you know they are free of irritation and the water is clean. Earplugs can prevent dirty water getting to dry or vulnerable skin deeper inside the ear,' explains ear, nose and throat surgeon Robert Quinney from the Royal Free Hospital, London.

'If symptoms develop after swimming, visit a GP immediately to get antibiotic eardrops.'

ALGAE

In warm weather blue-green bacteria called cyanobacteria can cover the surface of slow-moving water.

'These organisms rarely kill a person but can trigger itchy rashes, stomach upsets and, in severe cases, allergic reactions that cause difficulty breathing,' explains Prof Hunter. 'Dogs that swim among these algae can die. Avoid any lakes that have condensed areas of algae growth.'

● www.wildswimming.co.uk



GETTY IMAGES / ACTION IMAGES / SPORTING PICTURE

'Golf ball' therapy for breast cancer

A radioactive sphere the size of a golf ball is set to revolutionise the treatment of breast cancer. The device is placed in the breast for 30 minutes during tumour-removal surgery to kill any cancerous tissue that may have escaped detection. Laboratory research suggests that the radiation may reduce the risk of recurrence.

Researchers at University College Hospital, London, say the technology means women over 45 will no longer need to undergo up to six weeks of post-surgery daily radiotherapy, which is highly effective but can carry a risk of long-term side effects.

About 50,000 new cases of breast cancer are diagnosed in women in the UK each year – with about 12,000 deaths. Survival rates have improved significantly, with the five-year survival rate about

By Roger Dobson

82 per cent due to earlier detection and advances in treatments.

Until 30 years ago, radical mastectomy – where the whole breast was removed – was the only surgical option.

But since the Eighties, breast-conserving surgery has been increasingly used. This type of surgery includes lumpectomy, where only the lump is taken away, and quadrantectomy, where part of the breast is removed.

Radiotherapy – the use of high-energy radiation in the form of X-rays to destroy cancer cells – can be used both before and after surgery and is often paired with chemotherapy in a process called chemoradiation. However, X-rays

are known to cause damage to surrounding tissue, leading to side effects that include skin irritation or damage at the site where the normal cells are exposed to radiation, as well as fatigue and nausea. In the long term, fibrosis, when normal tissue is replaced with scar tissue that can cause numbness or tightness in the breast, or possibly a second cancer caused by radiation, are also risks.

A study at the University of Michigan showed that 59 per cent of women with cancer of the left breast who were treated with traditional radiation suffered heart damage. In the new procedure, breast-conserving lumpectomy surgery is carried out as usual, but at the end of the operation, radiation is given immediately via the radioactive ball.

The ball is connected to a small

radiation-generating device on a mechanical arm. It is carefully inserted into the cavity following the removal of the lump and low-energy X-rays are emitted.

These rays reduce in strength upon leaving the ball so that the tissue nearest the site of the tumour receives the strongest radiation dose, and surrounding organs are undamaged. The ball is left in place for half an hour before being removed and the patient is stitched as normal.

There is then no need for further radiotherapy. New research shows no significant difference in recurrence rates in women who received the new treatment compared with those who had conventional therapy, but experts suggest it may actually reduce the chance of tumours returning. One theory is that chemicals released

by the body involved in wound healing also stimulate the growth of cancer cells. Recurrences are often seen around scar tissue. The laboratory research suggests that immediate radiation affects the healing fluids in such a way that makes them less likely to promote cancer growth.

'This treatment option will save women from having to travel to hospital every day for up to six weeks after surgery, and also means they will avoid unnecessary radiation to non-involved parts of the breast and chest,' says Jayant Vaidya, breast cancer specialist and consultant surgeon at the Whittington, Royal Free and University College, London hospitals in the capital.

'There is suddenly great hope for patients who previously had no other choice but mastectomy.'