



## **Water-borne Infectious Diseases**

### **Beware of bugs, blooms and bio-hazards**

*Much of BR's advice is more relevant to river and lake rowers. **However**, please read **all** the information below, most of which is relevant to us as coastal rowers.*

*The information and advice given below about water-borne diseases, prevention, symptoms and treatment, will shortly be on the club safety boards in the shed.*

#### **All members**

- Follow the advice and training given by the club on the prevention of contact with potentially harmful diseases (*details here and displayed in shed*)
- Adopt these measures as part of your routine before, during and after rowing
- Be aware of the symptoms of water-borne diseases and to know what action to take

#### **Minimum standards to be adopted**

Club members should be advised:

- Never drink water from the sea, a river or lake
- If you swallow contaminated water, refer to your doctor with full details of the incident
- Only drink from your own water bottle
- Always shower after contact with the water (*use own hand gel or supply provided in shed/compound*)
- Wash hands thoroughly and shower if necessary before eating or drinking
- Do not throw your coxswain into the water
- Cover cuts and abrasions (including blisters) with waterproof dressings
- Wear suitable footwear when launching or retrieving a boat, in order to prevent direct contact with the water and protect the feet from cuts and abrasions
- Avoid immersion in, or contact with, water, particularly if there is an algal scum or bloom (*this obviously does not reply to us when sea capsized drills are required!*)
- Do not splash sea, river or lake water onto your face or body in order to cool down (take a bottle of tap water with you for this)
- Hose down (clean) all equipment after outings to remove any potential contamination
- Keep oar handles clean particularly if contaminated with blood
- Wash, and thoroughly dry, any contaminated clothing before re-use
- Maintain your immunisation regime against Tetanus, also Hepatitis A, Hepatitis B, Polio, Typhoid and Dysentery when training abroad

The water we row upon is not always as clean as we would choose and certainly is not pure enough to be swallowed without giving more than a passing thought to the possible effects it will have upon our internal systems.

The ARA Guide to Safe Practice in Rowing has, as its primary aim, the prevention of accidents involving physical injury, damage to equipment and, at worst, drowning. However, there are other risks to health associated with water-based activities which arise from the microbiological or chemical, quality of the water itself and of its immediate environs. It is essential that, as users, we are aware of the risks present.

## **Water- borne diseases most likely to be encountered**

### **Gastro-intestinal illness – *\*relevant for coastal rowers***

The most common way to develop viral gastroenteritis — often called stomach flu — is through contact with an infected person or by ingesting contaminated food or water. If you're otherwise healthy, you'll likely recover without complications. But for infants/older adults/ people with compromised immune systems, viral gastroenteritis can be serious.

Assessing the risks posed by water quality is difficult as conditions can vary substantially in a very short space of time.

Gastroenteritis attacks your intestines, causing signs and symptoms, such as:

- Watery, usually non bloody diarrhea — bloody diarrhea usually means you have a different, more severe infection
- Abdominal cramps/pain
- Nausea/vomiting or both
- Occasional muscle aches/headache
- Low-grade fever

Depending on the cause, viral gastroenteritis symptoms may appear within one to three days after you're infected and can range from mild to severe. Symptoms usually last just a day or two, but occasionally they may persist as long as 10 days.

Because the symptoms are similar, it's easy to confuse viral diarrhea with diarrhea caused by bacteria, such as salmonella, E. coli, or parasites, such as giardia.

When to see a doctor

### **If you're an adult, call your doctor if:**

- You're not able to keep liquids down for 24 hours
- You've been vomiting for more than two days
- You're vomiting blood
- You're dehydrated — signs of dehydration include excessive thirst, dry mouth, deep yellow urine or little or no urine, and severe weakness, dizziness or lightheadedness
- You notice blood in your bowel movements

- You have a fever above 104 F (40 C)

### **For infants and children**

See your doctor right away if your child has a fever of 102 F (38.9 C) or higher

In general, the health risk will depend on the number and proximity of sewage effluent discharges in any particular body of water. There are currently no microbiological standards for recreational water and, at present, only the powers provided under the Public Health Act 1936 - Section 259, to deal with 'any pond, ditch, gutter or water course which is so foul or in such a state as to be prejudicial to health or a nuisance,' provide us with protection.

Many organisms causing gastro-intestinal illnesses (eg Salmonella) can be found in water contaminated with sewage and extra precautions should be taken when rowing on flood-water and water known, or suspected, to contain sewage.

There's no effective treatment for viral gastroenteritis, so prevention is key. In addition to avoiding food and water that may be contaminated, thorough and frequent hand-washings are your best defense.

### **Hepatitis A – *\*relevant for coastal rowers***

Hepatitis is caused by a virus present in faeces and is, therefore another condition that may be contracted from water contaminated with sewage. The onset of Hepatitis can be abrupt and symptoms include fever, jaundice and abdominal discomfort.

Symptoms of hepatitis A develop, on average, around 4 weeks after becoming infected. But not everyone with the infection has symptoms. See your GP if you think you could have been infected with the virus.

### **Initial symptoms**

Can include:

- feeling tired/generally unwell
- joint/muscle pain
- a raised temperature
- loss of appetite
- feeling or being sick
- pain in the upper right part of your tummy
- a headache/sore throat and cough
- constipation/diarrhoea
- a raised, itchy rash (hives)

These symptoms usually last from a few days up to a couple of weeks.

**Later symptoms** - the following symptoms may develop:

- yellowing of the skin and eyes (jaundice)
- dark pee

- pale poo
- itchy skin
- the upper right part of your tummy becoming swollen and tender

Most people make a full recovery within a couple of months, although the symptoms can come and go for up to 6 months.

There's currently no cure for hepatitis A, but it normally gets better on its own within a couple of months. You can usually look after yourself at home.

But it's still a good idea to see your GP for a blood test if you think you could have hepatitis A, as more serious conditions can have similar symptoms.

### **Signs of a serious problem**

Hepatitis A is not usually serious, but in rare cases it can cause the liver to stop working properly (liver failure).

As well as the symptoms mentioned, signs of liver failure can include:

- sudden, severe vomiting
- a tendency to bruise/bleed easily (for example, frequent nosebleeds/bleeding gums)
- irritability
- problems with memory and concentration
- drowsiness and confusion

Get medical advice as soon as possible if you have these symptoms. Liver failure can be life threatening if not treated quickly.

Other potential infections include Polio, Tetanus and Typhoid, though they are less likely to be found in British waters.

### **Weil's disease – Leptospirosis** *(more relevant for river/lake rowers)*

The risk of contracting Leptospirosis from recreational water is very small, however the serious nature of the disease is such that we must be aware of the dangers and should take simple precautions to reduce the risk of infection. Leptospirosis is an infection caught through contact with infected animal urine (mainly from rodents, cattle or pigs).

The causal organism can enter the body via cuts or abrasions of the skin or, the lining of the nose, mouth, throat or eyes.

If flu-like symptoms develop shortly after contact with the water (1-3 weeks) then your doctor should be contacted and advised of the circumstances of exposure.

Treatment includes a blood test and anti-biotics.

### **Blue-Green Algae – Cyanobacteria** *(more relevant for river/lake rowers)*

Cyanobacteria are commonly found in fresh and brackish water during mid to late summer. Algal blooms can form during extended periods of warm, settled weather.

The majority of blooms produce allergens and/or toxins. In humans they can cause eye irritation/dermatitis/joint/muscle pain or, more seriously, gastro-enteritis/pneumonia/liver damage and certain neurological conditions. They can also be dangerous to dogs and livestock.

The blooms may be flocculent/have a jelly/paint-like appearance and are normally blue-green in colour though red, brown or black forms can occur. Algal scums accumulate downwind on the surface of lakes and slow moving water.

Blue-green algae are capable of producing several different toxins. People may be exposed to these toxins through contact with the skin when swimming, inhalation when motor boating or water skiing or by swallowing contaminated water. Rashes/skin/eye irritation, and other uncomfortable effects such as nausea/stomach aches and tingling in fingers/toes may occur. As with the other water borne diseases described here, seek medical help if your symptoms are concerning you.