

ROTHERHAM UNITED F.C.

WATER BORNE DISEASES

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WHAT IS A WATER BORNE DISEASE?

- They are micro-organisms which can be present in water due to contamination from sewage or from animals or animal waste
- The water which flooded the ground may have come from rural areas upstream as well as urban areas nearby

BACTERIA

- Single celled organisms.
- Can live and reproduce outside a host cell.
- Are less than 3 microns in diameter.
- Reproduce by dividing in two.

ROUTES OF ENTRY

SAMPLE

INGESTION

- Some agents infect on ingestion as they are carried in foodstuffs or water.
- Poor hygiene can also lead to transfer from the hands to the mouth.

SKIN - CUTANEOUS

- Contact with some agents on the skin can lead to infection. Once the agent has entered the body it is likely that it will travel and cause disease elsewhere.

DIRECT ENTRY

- Entry directly into the body by puncture wound.
- Entry through open cuts.

TYPES OF DISEASE

SAMPLE

CHOLERA

Description

- Cholera is an acute diarrhoeal disease caused by the bacillus *Vibrio Cholerae*
- Man is the only known host of cholera
- Occurs where there is poor sanitation and inadequate sewage disposal
- Not normally encountered in the UK

TYPHOID

Description

- Caused by the bacterium *Salmonella Enterica*
- Occurs where there is poor sanitation and inadequate sewage disposal
- Not normally encountered in the UK

LEGIONNAIRES' DISEASE

Description

- An atypical pneumonia caused by the bacterium *Legionella Pneumophillia*
- The organism is widespread, and is readily recovered from rivers, lakes, streams, ponds and soil.
- It requires a certain conditions to multiply, eg presence of sludge, scale, algae, rust and organic material plus a temperature of 20 - 50⁰ c

LEGIONNAIRES' DISEASE

Symptoms

- Aching muscles.
- Headache, fever followed by a cough.
- confusion, emotional disturbance and delirium may follow acute phase.

LEGIONNAIRES' DISEASE

Transmission

- Victims become infected by inhaling the organism in contaminated water aerosols. Smoking, age and alcohol may increase susceptibility.
- There is risk of person to person spread.

LEPTOSPIROSIS

Description

- Otherwise known as Weil's Disease is a potentially fatal illness causing liver damage, kidney failure and meningitis.
- It is transmitted in rat's urine.
- It is encouraged by warm surroundings and survives well in water courses and ditches protected by vegetation which shade it from direct sunlight. Can survive 15 days in soil.

LEPTOSPIROSIS

Symptoms

- Symptoms vary depending on species.
- Liver damage.
- Kidney Failure.
- Meningitis.
- Conjunctivitis.
- Flu like illness.

LEPTOSPIROSIS

Transmission

- The infection can be transmitted directly via contact with blood or urine, or indirectly by contaminated environment.
- Infection enters through: Broken skin or mucous membrane, animal bites, by handling infected animals and by inhalation of droplets containing leptospire.

BRUCELLOSIS

Description

- Flu like illness caused by bacteria with animal hosts, primarily cattle, goats and pigs.
- The organism does not produce spores, but survives drying and remains infectious for long periods.
- The brucella are small bacteria easily killed by disinfectant, eg phenol and by pasteurisation.

BRUCELLOSIS

Symptoms

- Lassitude.
- Headache.
- Muscular Pain.
- Drenching sweats, especially at night.

BRUCELLOSIS

Transmission

- Man is highly susceptible to brucellosis but there is no evidence of person to person spread.
- Infection is from consuming contaminated meat, milk or milk products, inhalation of the organism, contamination of mucous membrane with droplets, direct inoculation into bloodstream and through skin abrasions.

CRYPTOSPORIDIUM

Description

- Cryptosporidium is a microscopic single celled parasite somewhat smaller than a red blood cell, which, if swallowed, can cause gastroenteritis. It is not a bacterium or a virus, but belongs to a group of micro-organisms known as protozoa. It infects humans, animals such as cattle and sheep, and sometimes, dogs, cats, rodents, birds etc.. Most of the infections in man and livestock are with just one species, *Cryptosporidium parvum*.

CRYPTOSPORIDIUM

Symptoms

- Loss of appetite, nausea and abdominal pain.
- Followed by profuse, foul smelling, watery diarrhoea and vomiting (especially in children).
- There may be mild fever and noticeable weight loss.
- In otherwise healthy people the symptoms usually persist for 1 to 3 weeks but some symptoms can recur for longer periods (usually not more than a month).

CRYPTOSPORIDIUM

Transmission

- The infection may be passed either directly from an animal or from person to person. It may also be passed indirectly through the environment, especially in water, unpasteurised milk, offal and occasionally undercooked meat such as sausages. Further transmission may then result in secondary cases, for example in families or play groups. This is especially so between children who are not toilet trained or adults caring for them.

PEOPLE AT RISK

SAMPLE

PEOPLE AT RISK

- Those cleaning the ground and its fixtures and fittings such as the seats who may come into contact with water or deposits of material from the flood
- Those removing flood damaged items such as walls, floors, bricks etc on which there may be a film of material from the flood water

RISK MANAGEMENT

SAMPLE

INFORMATION REQUIRED

- The risks to your health and safety.
- Any precautions necessary.
- Procedures for the task.
- Results of any monitoring.
- collective results of health surveillance.
- Correct Personal Protective Equipment (PPE).

TRAINING RECORDS MUST BE KEPT

PREVENTION & CONTROL

- Understand the risks and the way you can become infected.
- Use safe systems of work and wear the PPE that is provided.
- Report damaged equipment and get it replaced - **DO NOT USE IT!!**

PREVENTION & CONTROL

- Avoid becoming contaminated.
- Do not touch your face, eat, drink or smoke unless you have washed your hands and face thoroughly with soap and water. Use a nail brush for your finger nails - Don't bite your nails.
- Clean **ALL** wounds and cover with a waterproof dressing.

PREVENTION & CONTROL

- Change out of contaminated clothing, wash thoroughly before eating drinking or smoking.
- Clean contaminated equipment on site do not take clothing home to wash. Your employer should do this.
- Follow procedures that are laid down.

PRECAUTIONS TO BE USED

- Training and information.
- Personal hygiene.
- PPE.
- Segregation.
- Handling.

QUESTIONS

SAMPLE

SAMPLE