

Biological Agents

See also [COSHH Legionellosis](#)

INTRODUCTION

Where there is a potential for occupational exposure, micro-organisms which are hazardous to human health are included as substances hazardous to health under the Control Of Substances Hazardous to Health Regulations (COSHH). Ill-health may arise by exposure to agents such as blue-green algae or via zoonoses (infections transmitted from animals to humans).

BLUE-GREEN ALGAE

Blue-green algae are natural inhabitants of many inland waters. In still waters these algae may multiply sufficiently in summer months to discolour the water such that it appears green, blue-green or greenish brown. The algae 'blooms' or 'scums' that may subsequently form can be toxic to humans, although no human deaths have been attributable to such toxins. Symptoms that have arisen have included dermatitis, asthma, eye irritation, rashes, blistering, abdominal pain, diarrhoea and nausea.

Control of exposure by restricting access is particularly important in pursuits where immersion to any extent or swallowing is likely. For work activities, skin contact can be avoided by the use of personal protective equipment and the provision of adequate hygiene facilities.

OCCUPATIONAL ZOOSES

The risk to an individual depends on the following:-

1. Current incidence in the U.K.
2. Infectivity of the organism.
3. The route of transmission.
4. The vulnerability of the individual.
5. The severity of the disease.
6. Controls currently in place.

Assessment of risk should be followed by confirmation, if necessary, of means of prevention and control. Health surveillance would be required only where there is a reasonable likelihood that an identifiable disease may arise from occupational exposure and for which there are valid detection techniques.

Appropriate information should be given to employees regarding the health risks from micro-organisms, the symptoms which may indicate infection and the precautions which should be taken. Some occupational zoonoses of relevance in the local authority - enforced sector include the following:-

1. **Leptospirosis (Weil's Disease)** - through contact with rats urine. Occupations at risk include those having contact with contaminated water (i.e. mainly static or slow flowing bodies of water). This disease can be fatal in up to 20% of cases and is notifiable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR).

2. **Newcastle Disease** - A non life-threatening conjunctivitis; fever and flu-like symptoms caused by virus spread via aerosols from infected birds. Although rare in the U.K., there is a slight potential for exposure to pet shop workers.
3. **Psittacosis (Ornithosis)** - Acquired by contact with infected birds. The disease varies from a flu-like illness to an atypical pneumonia with the possible involvement of other major organs. The number of cases is increasing in England and Wales, with most of those caused by bird contact being associated with pet birds. Occupations at risk include those who deal with 'pet' birds.
4. **Rabies** - An almost invariably fatal acute infection of the central nervous system resulting from the bite of a rabid animal. No reported cases have been contracted in the U.K. during the last 60 years. Animal handlers at kennels would be at potential risk should an incident occur in the U.K.

REFERENCES/FURTHER DETAILS

Publications

1. HELA Circular 6/1 - Blue-Green algae. www.hse.gov.uk/lau/lacs/6-1.htm
2. Leaflet INDG84- Leptospirosis, are you at risk? (HSE).
3. The occupational zoonoses. ISBN 0 1188 6397 5 (HSE).
4. Leaflet AIS2-Common zoonoses in agriculture (HSE). www.hse.gov.uk/pubns/ais2.pdf