

news release

Final Tally of Anthrax Cases Announced

An outbreak of anthrax associated with contaminated heroin led to 47 confirmed cases in Scotland, 13 of whom sadly died.

With no new cases having been confirmed in Scotland since July, the national Outbreak Control Team (OCT) now consider the outbreak, which started in December 2009, to be over. However it is also the position of the OCT that the possibility of anthrax contamination must now be considered an ongoing risk of heroin use, a conclusion supported by more recent sporadic cases among heroin users in England.

All confirmed cases in Scotland were among heroin users. The heroin is believed to have been contaminated with anthrax at or near its source country. Dr Colin Ramsay, Consultant Epidemiologist and chair of the OCT, has the following advice for heroin users: "Anthrax infection must continue to be considered a risk when taking heroin. There is still no way to prepare or use heroin that will remove this risk, so our advice must be to avoid heroin use. Anyone who does continue to use heroin should seek urgent medical advice if they develop redness and swelling at injection sites, or other symptoms of general illness such a fever, chills or a severe headache, as early antibiotic treatment can be lifesaving. Marked swelling of a limb which has been used as an injection site is a particularly important sign of possible anthrax infection. Anyone who needs support in giving up heroin is encouraged to find out more about support services in their area by calling Know the Score on 0800 587 5879 or visiting www.scottishdrugservices.com."

The OCT will now produce a full outbreak report, which will be made available in 2011.

Confirmed cases by NHS board area (total: 47)

- NHS Ayrshire and Arran – 1
- NHS Dumfries & Galloway - 5
- NHS Fife – 5
- NHS Forth Valley – 2
- NHS Greater Glasgow & Clyde – 19
- NHS Lanarkshire – 7
- NHS Lothian – 2
- NHS Tayside – 6

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Chairman Bill Matthews
Chief Executive Ian Crichton



Deaths by NHS board area (total: 13):

- NHS Fife - 1
- NHS Forth Valley – 1
- NHS Greater Glasgow & Clyde – 7
- NHS Lanarkshire – 2
- NHS Tayside – 2

[ENDS]

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Notes to the Editor

Anthrax (*Bacillus anthracis*) is a type of bacteria and can be identified in tissues, blood or other body fluids. In order to confirm a case, a combination of methods are used in order to differentiate between *Bacillus anthracis* and other bacteria. Some of these tests are genetic and others involve culturing (growing) the organism, and as a result, final confirmation may take some time. Slight changes to laboratory classifications of results have resulted in some changes in case status throughout the course of the outbreak, however these classifications had no impact on patient treatment or outcome.

Drug users looking for support in stopping are encouraged to contact Know the Score on 0800 587 5879 or to visit www.scottishdrugservices.com for details of services in their area.

More information on the outbreak in Scotland is available at <http://www.hps.scot.nhs.uk/giz/anthrax.aspx>

Details of the cases in England are available from www.hpa.org.uk.

Background information on anthrax

Q1. What is anthrax?

Anthrax is a very rare but serious bacterial infection caused by the organism *Bacillus anthracis*. The disease occurs most often in wild and domestic animals in Asia, Africa and parts of Europe; humans are rarely infected. The organism can exist as spores that allow survival in the environment, e.g. in soil, for many years.

Q2. How does anthrax usually affect humans?

There are three classical forms of human disease depending on how infection is acquired: cutaneous (skin), inhalation and ingestion. In over 95% of cases the infection is cutaneous, generally caught by direct contact with the skins or tissues of infected animals. Inhalation anthrax is rare and is caught by breathing in anthrax spores. Intestinal anthrax is very rare, and occurs from ingestion of contaminated meat or spores.

Q3. How has anthrax been affecting drug users in Scotland?

Since December 2009, a significant number of heroin users have been found to have anthrax infection. Sadly, a number of these people have died. It is thought that they contracted anthrax from taking heroin contaminated by anthrax spores.

Q4. How common is anthrax?

The disease was also known as 'wool-sorters disease' and was a recognised occupational hazard for some workers, including woollen mill workers, abattoir workers, tanners, and those who process hides, hair, bone and bone products. However, anthrax is now uncommon in humans in the UK, only a handful of cutaneous cases have been notified over the last decade. A death from anthrax occurred in Scotland in 2006; this was a case of atypical inhalation anthrax which probably followed exposure as a result of playing/handling animal hide drums. Human infections are more frequent in countries where the disease is common in animals, including countries in South and Central America, southern and eastern Europe, Asia and Africa.

Anthrax in drug users appears to be very rare; prior to the outbreak in Scotland, only one previous case had been reported in Norway in 2000.

Q5. How long can you have the infection before developing symptoms?

This is dependent on the dose and route of exposure and may vary from one day to eight weeks. However, symptoms usually develop within 48 hours with inhalation anthrax and 1-7 days with cutaneous anthrax. It is not known exactly how long symptoms can take to develop following the use of contaminated heroin, however in most cases during the outbreak, symptoms started within 1 to 7 days of taking heroin.

Q6. What are the symptoms?

Early identification of anthrax can be difficult as the initial symptoms are similar to other illnesses.

Symptoms vary according to the route of infection:

Anthrax in drug users

Drug users may become infected with anthrax when heroin or the cutting agent mixed with heroin has become contaminated with anthrax spores. This could be a source of infection if injected, smoked or snorted. The clinical presentation is likely to vary according to the way in which the heroin is taken and might include:

- Swelling and redness at an injection site, which may or may not be painful
- Abscess or ulcer at an injection site often with marked oedema (swelling) of a limb or area near injection site
- Septicaemia (blood poisoning) – general malaise, fever, chills/rigors
- Severe headache, indicating possible meningitis
- Symptoms of inhalational anthrax (see below)

Cutaneous anthrax - Local skin involvement after direct contact.

- Commonly seen on hands, forearms, head and neck. The lesion is usually single
- 1-7 days after exposure a raised, itchy, inflamed pimple appears followed by a papule that turns vesicular (into a blister). Extensive oedema or swelling accompanies the lesion – the swelling tends to be much greater than would normally be expected for the size of the lesion and this is usually PAINLESS
- The blister then ulcerates and then 2-6 days later the classical black eschar develops
- If left untreated the infection can spread to cause blood poisoning

Inhalation anthrax - symptoms begin with a flu-like illness (fever, headache, muscle aches and non-productive cough) followed by severe respiratory difficulties and shock 2-6 days later. Untreated disease is usually fatal, and treatment must be given as soon as possible to reduce mortality.

Intestinal anthrax is contracted by the ingestion of contaminated carcasses and results in severe disease which can be fatal. This is found in some parts of the world where the value of an animal dying unexpectedly outweighs any fears of contracting the disease.

Q7. Can anthrax be treated?

Cutaneous anthrax can be readily treated and cured with antibiotics. Mortality is often high with inhalation and gastrointestinal anthrax, since successful treatment depends on early recognition of the disease.

Prompt treatment with antibiotics and, where appropriate, surgery is important in the management of anthrax related to drug use.

Q8. How is anthrax spread?

A person can get anthrax if they inject, inhale, ingest or come into direct physical contact (touching) with the spores from the bacteria. These spores can be found in the soil or in contaminated drugs. It is extremely rare for anthrax to spread from person-to-person. Airborne transmission from one person to another does not occur; there have been one or two reports of spread from skin anthrax but this is very, very rare.

Q9. How do drug users become infected with anthrax?

Heroin or the cutting agent mixed with heroin may become contaminated with anthrax spores from the environment. This could be a source of infection if injected, smoked, or snorted.