

ANTHRAX AND HEROIN USERS: WHAT WORKERS NEED TO KNOW

Background

People who use heroin are potentially at risk of infection with anthrax, and also other diseases such as botulism and tetanus, that are caused by organisms found in the environment. The bacteria that cause these infections produce hardy spores that can survive in the environment for very long periods. Heroin can become contaminated with these spores whilst it is being trafficked.

An outbreak of anthrax among heroin users in Scotland, England and Germany occurred in 2009 and 2010. During 2012 cases of anthrax have been reported in a number of European countries, including the UK.

A high proportion of heroin users who become ill with anthrax will die from their infection.

Information on anthrax can be found on the Health Protection Agency website at:
<http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Anthrax/>

Anthrax can be cured if treatment is started at an early stage

This guide aims to provide staff working with heroin users in specialist and non-specialist settings with key information on:

- *how heroin users can become infected*
- *signs and symptoms of anthrax infection in heroin users*
- *what workers can do to help.*

What is anthrax?

Anthrax is a bacterium that produces spores that can infect the body. It also produces harmful toxins that damage the body and can lead to death.

The infection of drug users by contaminated heroin is most likely to be acquired through:

- heroin injection, with the spores entering the skin or entering the tissues under the skin (such as fat or muscle) or
- heroin smoking or inhalation, with the spores entering the lungs.

Who is anthrax affecting?

People who use heroin.

Most of those who have become infected have injected heroin. However, some of those who have developed anthrax had smoked heroin. It is likely that heroin use by any route will carry a risk of infection if the heroin is contaminated with anthrax spores.

No heroin can be considered safe.

Can you spot the contaminated heroin?

No. The spores are too small to be seen by the human eye.

Heroin powder normally varies in colour, texture and how well it dissolves – depending on the batch and how much it's been cut. Heroin that was used by those who developed anthrax has varied in appearance.

Contaminated heroin cannot be identified by appearance and therefore all heroin has to be considered potentially dangerous.

Recognition of anthrax

As anthrax can be cured with early treatment, it is important that workers are aware what to look for.

Signs and symptoms of anthrax infection

Early identification of anthrax can be difficult, especially among heroin users whose general health may be poor anyway.

How someone actually reacts to infection depends, in part, on whether the infection came through the skin or from having breathed in spores.

So, look out for anyone who uses heroin and is feeling poorly – especially if they have a wound, redness or excessive swelling around an injecting site.

Other early presentations can be similar to other illnesses for example, with 'flu-like' symptoms, or feeling nauseated.

Having difficulty breathing is seen particularly in those cases of anthrax caught through inhalation or smoking.

What to look out for specifically

Infection at the injection site is the most common presentation among heroin users; however, other presentations of anthrax have also been seen.

Anthrax infection at an injecting site:

- redness and excessive swelling at the site or an area close to it
- locally – tenderness/pain/discharge of fluid/pus from wounds
- alongside the localised problems, a raised temperature and feeling unwell and weak, with generalised aches and pains and headache.

Anthrax infection in the skin (classical cutaneous/skin anthrax):

- usually occurs 2 to 7 days after infection
- usually begins as a raised/swollen itchy red bump, similar to an insect bite
- within 1 to 2 days, developing into a clear blister/abscess and then an ulcer which may be painless. It may also be black in the centre
- feeling 'flu-like', with fever, headache and/or nausea.

Anthrax infection through inhaling/smoking (inhalation anthrax):

- 'flu-like' illness (fever, headache, muscle aches, cough)
- breathlessness and chest pains
- rapid deterioration of consciousness – lapsing into a coma.

Anthrax can be cured with early treatment

What to do if someone has symptoms

If a heroin user shows any of the above symptoms (or is seriously unwell), you should **actively assist** them to be seen urgently by their nearest hospital Accident and Emergency department or GP.

Things you can do include:

- Helping them find their way to hospital or GP surgery
- Accompanying them to hospital or surgery
- Arranging for someone else – family or friend – to be there with them.

Are there risks to workers and family?

Any risks to workers and family are so low as to be absolutely minimal.

There are no documented cases of infection spreading from one person to another as a result of any form of intimate physical or sexual contact.

However, there is a potential risk from touching skin lesions, especially where skin is broken.

As with many skin infections, it's best to:

- avoid skin contact with leaking or dried out wounds or abscesses
- keep wounds covered with dressings or plasters
- wipe up anything that has leaked from a wound onto a surface with ordinary domestic bleach-based disinfectant at a suitable dilution.

How services can minimise anthrax risks

- Offer quick access to individually-tailored and effective drugs treatment
- Continue to advise users not to share needles, syringes and other 'works'
- Advise users not to reuse injecting equipment, particularly filters, as this has been associated with getting bacterial infections.
- Encourage injecting users to limit citric or other acids to dissolve drugs – tissue damage caused by the acid can allow infection to set in more easily
- Look at whether dosage levels for people on substitute medication are adequate to reduce the risk of "topping up" with street heroin.

General advice for heroin users

You should ensure that clients who use heroin are aware of the following:

How to reduce their risk of getting anthrax

1. There is no safe way of taking heroin.
2. They should try to stop using heroin; but if not, at least use less.
3. They should go to their local drug treatment service to discuss support and use of heroin substitutes such as methadone or buprenorphine.
4. If they continue to use heroin, don't share needles, syringes, cookers/spoons or other 'works' with other drug users.
5. If they stop heroin and then re-start, they should be careful at first - so that they don't overdose because of any lost tolerance.

Ensure clients are aware that whilst all routes of heroin use are a significant risk for anthrax; people who inject have much higher risk of overdose and blood borne viruses than those who use by other routes.

The early symptoms

Which are: *If injecting heroin:-*

lots of redness and swelling at the site of an injection, fever and flu-like symptoms may also occur.

If smoking or inhaling heroin:-

fever and flu-like symptoms and finding it hard to breathe.

And that, should they have these symptoms, they must seek urgent treatment at an Accident and Emergency Department or their GP as immediate treatment with antibiotics can be life saving.