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Heroin and anthrax

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What is anthrax?

Anthrax is a bacterium which creates spores that can infect the body, produce lethal poisons and lead to death. The infection among heroin users is most likely to be acquired through:

- spores entering the skin or tissues under the skin (such as fat or muscle), via injecting contaminated heroin into the body;
- breathing in spores while smoking or snorting contaminated heroin (inhalation).

Who contacted anthrax in the 2009-10 outbreak?

All confirmed cases had a history of recent heroin use. Some had deliberately injected into veins or to muscle – or accidentally injected into muscle or the fatty tissue just beneath the skin.

Some reported only smoking heroin, some were homeless, others were in settled accommodation. Some, not all, were on methadone treatment. Ages ranged from late 20s to mid 50s. More men were affected than women.

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.

Contaminated heroin cannot be identified by appearance or in terms of how well it dissolves and therefore all heroin has to be considered potentially dangerous.

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 reacts also depends on whether the spores entered through the skin (via injection) or through the lungs (via smoking). So look out for anyone who uses heroin and is feeling poorly – especially if they have a wound, redness or swelling at or close to an injecting site.

But other early symptoms can be similar to other illnesses like the 'flu, and may include feeling nauseous or even having difficulty breathing.

What to look out for

Infection at the injection site was the most common presentation in the 2009-10 outbreak. Someone may be infected with anthrax if he or she shows any of the following symptoms:

Anthrax infection at an injecting site (below the skin – in subcutaneous fat or muscle tissue)

- infection (redness and swelling) of the injection site or an area close to it;
- tenderness/pain/discharging of fluid or pus from wounds;
- may be accompanied by a raised temperature and feeling generally unwell and weak, with aches and pains including headache.

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

- usually occurs 2-7 days after exposure;
- usually begins as a raised/swollen itchy red bump, similar to an insect bite;
- within 1-2 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;
- person-to-person spread of cutaneous anthrax is extremely rare.

Anthrax infection through inhaling (inhalation anthrax):

- flu like illness (fever, headache, muscle aches, cough), which may cause breathlessness and chest pains;

- rapid deterioration of consciousness – lapsing into a coma.

What to do if someone has symptoms

If a heroin user shows any of the above symptoms, 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?

The risk to non-heroin using individuals appears to be 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.

- healthcare advice should be taken on the best way to heal a wound;
- small wounds can be covered with a waterproof dressing;
- wounds should be dressed and should not leak through the dressing;

- care should be taken to avoid contact with the wound or any wound discharge by wearing single use gloves to dress wounds or to clean up any spillages;
- afterwards, remove gloves and wash hands with soap and water.

How services can minimise anthrax risks

- Offer quick access to individually-tailored and effective treatment for drug problems;
- Continue to advise users not to share needles, syringe, filters and other “works”;
- Advise users of the importance of filters;
- Advise users of the importance of using new filters each time they inject. Filters must be discarded after each use;
- Encourage injecting users to limit citric acid – 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.