



Wound Botulism and Drug Use: What Workers Need to Know



SDF
Scottish Drugs
Forum

Produced by the Scottish Drugs Forum

Wound botulism is life threatening and the information in this briefing should be shared with all frontline staff and discussed with all people who inject drugs. In the United Kingdom wound botulism is typically associated with heroin use, however elsewhere there have been links with both amphetamine and cocaine use.

This briefing aims to support staff working with people who inject drugs and will give information on:

- Page 3 Brief intervention information
- Page 5 What is botulism?
- Page 5 How a drug user becomes infected
- Page 6 Signs and symptoms of botulism infection
- Page 6 What to do if someone has symptoms
- Page 7 Other supports services can offer
- Page 7 Further information and useful links

Brief Intervention Information

Botulism is an infection that is caused by the bacteria *Clostridium Botulinum*. Drugs can be contaminated with this bacterium at any point from being manufactured, during transportation when being cut with adulterants and during preparation for injection.

There is no way for a user to tell whether their drug is contaminated with this bacteria. Therefore, all users should assume that the drugs they are using may be contaminated and act accordingly, taking the advice given in this leaflet. Obviously if there have been alerts around recent cases of infection or contaminated drugs, particular care should be taken.

Wound botulism may occur in people who inject contaminated drugs intra-muscularly (muscle popping) or sub-cutaneously (skin popping) and therefore these practices should always be avoided.

It may also be caused through an accidental 'missed' hit. Improving injecting technique makes this less likely.

Harm Reduction Advice

- » Make sure drug is injected directly into a vein
- » Smoke drugs as an alternative to injecting
- » If possible, stop use all together (support person to look at their treatment options)

Signs and Symptoms

Botulism infection can result in paralysis or partial paralysis of parts of the body. This can be in a wide range of areas of the body and so there is a wide range of possible symptoms. These include:

(Please note that not all of these need to be present).

- » Slurred speech, difficulty speaking
- » Difficulty swallowing
- » Difficulty with tongue and lip movements
- » Blurred or double vision
- » Drooping or falling of the upper or lower eyelid
- » Extreme weakness
- » Inflammation at the injection site
- » Paralysis that can affect the legs, the arms and muscles that control breathing

Staff and people who inject drugs should be aware of these symptoms.

If someone has symptoms

Left untreated botulism will get progressively worse. If a person is not treated quickly botulism can lead to death. Early treatment is important.

If a drug user experiences **any of the symptoms** mentioned above they should be actively supported to seek urgent medical attention from the Accident and Emergency department of the nearest hospital.

Botulism cannot be passed on directly from person to person.



What is Botulism?

There are different types of Botulism including food borne, wound and infant botulism. The type of botulism we are concerned about in Scotland is wound botulism. Wound botulism is the most common type in the UK and since 2000 there have been over 150 reported cases of wound botulism among people who inject drugs.

The mortality rate of wound botulism in the UK is around 5 – 10%. Early treatment greatly improves the prospect of a full recovery.

Botulism occurs as a result of infection with the bacteria *Clostridium Botulinum*. This bacterium is commonly found in soil, dust, river and sea sediments. It can and does end up in batches of drugs; contamination can occur at the manufacturing stage, during transportation, at the point where adulterants are added and there is also a risk of contamination at the drug preparation stage. The bacteria itself is not harmful however given favourable conditions (lack of oxygen) it produces highly poisonous toxins (botulinum toxins) which can be fatal if not treated quickly.

People with botulism will appear to have muscular weakness or paralysis (flacid paralysis). This is caused by the botulinum toxins binding to nerves and blocking the release of acetylcholine. Acetylcholine is the chemical messenger which is released by nerves and instructs muscles to contract.

How a drug user becomes infected

There are no means by which a person would be able to tell if the drug they have purchased is contaminated with *Clostridium Botulinum* - it is far too small to see and does not affect the appearance of the drug.

Wound botulism may develop in people who use contaminated drugs. The risk is **increased** if drugs are injected intramuscularly (muscle popping) or subcutaneously (skin popping). This can happen accidentally through a missed hit. The infection occurs as these forms of injecting offer a better environment for the bacteria to produce toxins (due to the lack of oxygen.)

Botulism cannot be passed on directly from person to person.

Signs and symptoms of botulism infection

Botulism infection can result in paralysis or partial paralysis of parts of the body. This can be in a wide range of areas of the body and so there are a wide range of possible symptoms. These include:

(Please note that not all of these need to be present).

- » Slurred speech, difficulty speaking
- » Difficulty swallowing
- » Difficulty with tongue and lip movements
- » Blurred or double vision
- » Drooping or falling of the upper or lower eyelid
- » Extreme weakness
- » Inflammation at the injection site
- » Paralysis that can affect legs, arms and muscles that control breathing

Staff and people who inject drugs should be aware of these symptoms.

What to do if someone has symptoms

If a person is not treated quickly botulism can lead to death.

If a drug user experiences any of the symptoms mentioned above then they should be actively supported to seek urgent medical attention from the Accident and Emergency department of the nearest hospital.

Ideally workers should:

- » Accompany the person to Accident and Emergency, or
- » Arrange that a friend or family member attend Accident and Emergency with the person

Botulism is not a common disease and can be difficult to identify and diagnose. As such it may go undiagnosed by medical staff or diagnosed late which can potentially lead to a more severe clinical intervention for the person. People presenting may need support in their engagement with A&E. It may be useful to take a copy of this leaflet.

Other supports services can offer

For those who are unlikely to be able to stop injecting drugs:

- » As accidental 'missed hits' are a significant risk factor for wound botulism, staff should support the person to adopt better and safer injecting practices, discussing their injecting techniques so that they can inject directly into a vein is always important but especially crucial in relation to wound botulism (as well as supporting people to access their local needle exchange).
- » General harm reduction information related to safer injecting should continue to be promoted (washing hands and injecting site prior to injection, using in a safe, clean and warm environment, only using equipment and associated paraphernalia once, not sharing injecting equipment or paraphernalia, importance of using a filter, not using too much citric acid/ vit C, discarding used injecting equipment in sharps containers and returning to needle exchange for safe disposal, Naloxone training). However using clean needles and paraphernalia will not reduce the risk of wound botulism as it is the drug that is contaminated.

For those who can be encouraged to adopt a safer means of administration:

- » As an alternative to injecting, where possible smoking drugs should be promoted and services should know where to access foil for smoking heroin (ask local needle exchange if not sure). Staff should discuss smoking technique and provide information on how to smoke drugs effectively.

For those who are interested in reducing their use and would like to look at their treatment options:

- » Staff should provide support for the person to access their community treatment services for individually tailored treatment

Further Information and Useful Links

(References available on request)

Scottish Drugs Forum

www.sdf.org.uk

Directory of Scottish Drugs Services

www.scottishdrugservices.com

Scottish Needle Exchange Directory

www.sdf.org.uk/index.php?clD=747

Information relating to Botulism

www.nhs.uk/Conditions/Botulism/Pages/Introduction.aspx

Health Protection Scotland

www.hps.scot.nhs.uk



SDF
Scottish Drugs
Forum

Main Office

91 Mitchell Street, Glasgow, G13LN

t: 0141 221 1175

f: 0141 248 6414

Edinburgh Office

139 Morrison Street, Edinburgh, EH3 8AJ

t: 0131 221 9300

f: 0131 221 1556

Find drug services in your area:

www.scottishdrugservices.com

Hepatitis Scotland:

www.hepatitisscotland.org.uk

e: enquiries@sdf.org.uk

Charitable Status

Scottish Drugs Forum (SDF) is a company limited by guarantee, registration no. 106295 with charitable status and is also a registered Scottish charity, registered SC 008075.