

# DRUG-RELATED DEATHS/ WHAT YOU SHOULD KNOW

SAVE  
SOME  
NALOXONE

**SCOTLAND HAS AMONG THE HIGHEST RATES OF DRUG-RELATED DEATHS IN EUROPE. THIS BOOKLET AIMS TO PROVIDE INFORMATION FOR DRUG USERS.**

**IT CAN BE USED AS A RESOURCE FOR DRUG WORKERS TO TALK THROUGH SOME OF THE ISSUES AND FACTS SURROUNDING DRUG DEATHS.**

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# 1/ DRUG OVERDOSE ASSOCIATED DRUGS

THE MOST COMMON DRUGS IDENTIFIED IN A DRUG-RELATED DEATH ARE:

## DEPRESSANTS / DOWNERS

HEROIN / DIAZEPAM (AND OTHER BENZODIAZEPINES SUCH AS TEMAZEPAM AND NITRAZEPAM) / ALCOHOL / METHADONE

## STIMULANTS / UPPERS

COCAINE / AMPHETAMINE (SPEED) / ECSTASY

Although stimulants feature in some drug deaths, the depressants listed above are the top four drugs involved in overdose.

There are other drugs, both illicit and prescribed, which could contribute to a drug death when used in combination with the main drugs listed above.

These could include opiate-based drugs such as:

- / Dihydrocodeine.
- / Over-the-counter medicines which contain codeine.
- / Prescribed drugs such as anti-depressants.

There is a greater danger of overdose through mixing drugs such as heroin (particularly when injected) and other depressant drugs.

# 2/ DRUG OVERDOSE DRUG EFFECTS

## DEPRESSANTS / DOWNERS

BREATHING PROBLEMS (SLOW, SHALLOW, IRREGULAR) /  
SLOW HEART RATE / FEELING LESS ALERT /  
UNCONSCIOUSNESS / POOR MEMORY /  
NOT FEELING PAIN / LOWER BODY TEMPERATURE

## STIMULANTS / UPPERS

INCREASED HEART RATE / FASTER BREATHING /  
FEELING MORE ALERT / RAISED BODY TEMPERATURE

# 3/ DRUG OVERDOSE THE MAIN CAUSES

## SOME OF THE MAIN CAUSES OF OVERDOSE INCLUDE:

### LOW TOLERANCE

As your body gets used to the repeated presence of a drug and learns to tolerate it in your system, a higher dose is needed to maintain the same effect. Tolerance will be reduced if there is a break or reduction in drug use for a period. There will be a risk of overdose if you return to high levels of drug use following a break or reduction, e.g. after a spell in prison or residential rehabilitation.

### MIXING DRUGS INCLUDING ALCOHOL

Mixing drugs, especially depressants, is extremely dangerous. Each depressant on its own can slow down breathing and heart rate - but when used in combination these physical effects become enhanced and much more dangerous. The long-acting nature of some depressant drugs can also lead to the risk of unintentional 'topping up' or polydrug misuse.

### USING TOO MUCH

Specific circumstances such as a cash windfall, depression or seeking oblivion can lead to using too much.

### USING ALONE

Using on your own puts you at greater risk as there is no one around to intervene or call for medical assistance.

### INJECTING DRUG USE

Injecting is the most risky route of drug use, although large numbers of deaths do occur among non-injectors, e.g. 44% of drug-related deaths in 2003 were non-injectors<sup>1</sup>.

### PURITY LEVELS

Illegal drugs can vary in strength. Use of low purity drugs followed by higher purity drugs may have implications for tolerance levels.

# 4/ DRUG OVERDOSE HIGH RISK TIMES

## THE FOLLOWING ARE 'DANGER' PERIODS WHEN PEOPLE MAY BE MORE AT RISK OF OVERDOSE:

- / On release from prison.
- / On leaving residential rehabilitation or hospital.
- / When recently detoxed.
- / During relapse.
- / When in poor physical or mental health.
- / After a recent life event, such as bereavement, relationship breakdown or loss of custody of children.
- / During Festive periods, weekends or holidays.

**Most overdoses occur in those who are not in treatment.**

**Longer term users are also at high risk.**

## THE FESTIVE PERIOD CAN BE PARTICULARLY DANGEROUS FOR THE FOLLOWING REASONS:

- / Bingeing on drugs bought in bulk for fear of dry up or reduced access to dealers over the holiday period.
- / Seasonal increase in alcohol use combined with drug use.
- / Access to more money to buy drugs.
- / Holiday dispensing arrangements which supply take-home methadone to users not used to unsupervised consumption/prescription.
- / Rises in stress and/or depression associated with the festive period such as isolation from family, friends, children or support services, or added pressure on finances.

<sup>1</sup>Source: Zador et al. National Investigation into Drug-related Deaths in Scotland, 2003. Scottish Executive (2005)

## 5/

# DRUG OVERDOSE SIGNS AND SYMPTOMS

**IF YOU CAN CORRECTLY IDENTIFY THE PHYSICAL SIGNS AND SYMPTOMS OF OVERDOSE, THERE IS A CHANCE YOU WILL BE ABLE TO SAVE A LIFE.**

## SOME OF THESE INCLUDE:

- / Pinpoint pupils (this indicates whether opioids are involved).
- / Breathing problems (e.g. slow/shallow or infrequent breaths, snoring/rasping sounds or not breathing at all).
- / Pale skin colour. Lips, tip of nose, fingertips or nails with a bluish tinge.
- / No response to noise (shouting) or touch (shoulder shake).
- / Loss of consciousness.

When someone has overdosed they can look and sound like they are simply asleep. Always check when you hear snoring that the person is actually asleep and not in an overdose situation. Snoring/rasping can be an indication of breathing difficulties.

The time gap between a person using drugs and slipping into an overdose can be several hours.

**Unintentional overdose through polydrug use, especially when mixing long-acting drugs such as methadone and benzodiazepines, is a real danger.**

## 6/

# DRUG OVERDOSE WHAT YOU SHOULD DO

- / Be vigilant and think of your own safety first. Watch out for needles that might be around the casualty. Never attempt to re-cap a needle.
- / Check the casualty for a response – shake their shoulders and shout loudly 'open your eyes' or 'wake up'.
- / If there is no response, shout for help from anyone that is around.
- / Turn the casualty on their back and open their airway by gently placing two fingers under their chin and tilting their head back.
- / Place your ear above the casualty's mouth and LISTEN for breathing, FEEL for breath on your cheek. Also LOOK at their chest to see if it rises and falls. Do this for 10 seconds.

## BREATHING

Place the casualty in the recovery position (see section 7).

DIAL 999 and calmly ask for an ambulance.

Give the location and status of the casualty ie. the address and that the casualty is unconscious and breathing.

Stay with the person until the ambulance arrives.

## NOT BREATHING NORMALLY

DIAL 999 and calmly ask for an ambulance.

Give the location and status of the casualty ie. the address and that the casualty is unconscious and NOT breathing.

Begin CPR (see section 9).

The emergency call handler can talk you through this process.

**Important:** The average adult will take between 12 and 20 breaths per minute. Some drugs can seriously affect breathing, and in overdose a person may breathe as little as 3-5 breaths a minute.

## 7/

# RECOVERY POSITION

## HOW TO DO IT

### THE RESUSCITATION COUNCIL (UK) RECOMMENDS THE FOLLOWING SEQUENCE OF ACTIONS TO PLACE A CASUALTY IN THE RECOVERY POSITION:

- / Remove the casualty's glasses (if worn).
- / Kneel beside the casualty and make sure that both their legs are straight.
- / Place the arm nearest to you out at right angles to the body, elbow bent with the hand palm uppermost.
- / Bring the far arm across the chest, and hold the back of the hand against the casualty's cheek nearest the ground.
- / With your other hand, grasp the far leg just above the knee and pull it up, keeping their foot on the ground.
- / Keeping the hand pressed against the cheek, pull on the far leg to roll the casualty towards you onto their side.

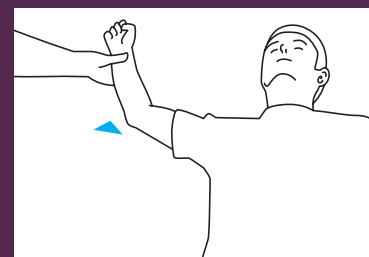
- / Adjust the upper leg so that both the hip and knee are bent at right angles.
- / Tilt the head back to make sure the airway remains open.
- / Adjust the hand under the cheek, if necessary, to keep the head tilted.
- / Check their breathing regularly.

**Important:** Ensure you have dialled 999. Stay with the casualty until help arrives. Always look after your own safety too – look around you and make sure you are in a safe position, e.g. not in close proximity to a road or dangerous equipment. Be vigilant about potential needle stick injuries.

## 8/

# RECOVERY POSITION

## WHAT IT LOOKS LIKE



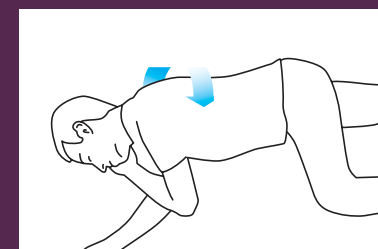
Say 'hi'



Support my face



Lift my leg



Roll me over

## 9/

# CARDIO-PULMONARY RESUSCITATION (CPR)

## IN THE CASE OF AN OPIOID OVERDOSE, CPR CAN BE PERFORMED AS FOLLOWS:

- / If the casualty is not breathing normally, give 30 chest compressions. Place your hands on top of each other and place them in the centre of the chest (on the breastbone). Compress the chest by pushing straight down approximately 2 inches deep.
- / You are aiming for a rate of 120 compressions per minute (2 every second).
- / Give two rescue breaths (use a protective mouth guard if you have one). Ensure the head is still tilted back keeping the airway open and pinch the casualty's nose closed. Make a seal with your mouth over the casualty's mouth and breathe for about one second.
- / You will see the chest rise if CPR is performed correctly.
- / Continue the process of 30 compressions to 2 rescue breaths until someone takes over for you, emergency help arrives or the casualty's condition improves.

**Important:** An opioid overdose is not a cardiac related event. The person is at risk of dying from lack of oxygen due to respiratory depression, hence why it is essential to provide rescue breaths.



I MADE  
THE  
CALL  
THAT  
SAVED  
A LIFE

**OVER 80% OF CASUALTIES ARE ALREADY DEAD BY THE TIME AN AMBULANCE ARRIVES. THAT IS WHY IT IS IMPORTANT TO CALL THE AMBULANCE EARLY.**

**SAVE  
SOME  
NALOXONE**

# 10/ COMMON MYTHS

**COMMON MYTHS ABOUT  
HOW TO HANDLE AN  
OVERDOSE.**

**THESE MYTHS ARE MORE  
LIKELY TO CAUSE HARM.**

## **DON'T WALK THE CASUALTY AROUND**

There is a real danger of dropping the person and causing additional injury. Walking can also increase the rate at which the drugs are absorbed.

## **DON'T INFLECT PAIN, I.E. SLAPPING, BURNING**

People mistakenly think that inflicting pain will rouse someone who is unresponsive or unconscious. This will not work on someone who is unconscious.

**Important:** Depressants, especially heroin and other opiates/opioids, dull the sensation of pain.

## **DON'T INJECT STIMULANTS (UPPERS)**

Stimulant drugs, such as cocaine, crack cocaine, ecstasy and amphetamine (speed), cannot counteract or reverse the physical effects of an opioid overdose on the part of the brain which regulates breathing. There is an added danger that someone administering these stimulants could be implicated in any formal investigation into a death.

## **DON'T INJECT SALT WATER**

There is a common misconception around injecting salt water which may have its origins in the use of saline drips in hospital.

## **DON'T THROW WATER OR PUT THE CASUALTY IN THE BATH OR SHOWER**

This could result in triggering shock or lead to the victim accidentally drowning.

## **DON'T PUT THE CASUALTY OUTSIDE**

This could result in hypothermia.

## **DON'T DO NOTHING!**

**Important:** Even if you have tried the 'don'ts' above before and they appeared to have worked at the time, it is highly likely that either of the following scenarios occurred:

- / The casualty did not consume the amount of drugs which would lead to a fatal overdose, and/or
- / Once the drug began to wear off, the casualty recovered naturally.



# 11/ WHAT IS NALOXONE

**NALOXONE IS A VERY COMMONLY USED 'COMPETITIVE OPIOID ANTAGONIST'. THIS MEANS THAT IT BINDS WITH THE OPIOID RECEPTORS IN THE BRAIN/BODY WITHOUT ACTIVATING THEM.**

#### TO PUT IT ANOTHER WAY:

Naloxone is a medicine that can temporarily reverse the effect of an opioid overdose by removing the opioid from the receptors, thereby assisting with the restoration of breathing.

Naloxone has been used for many years by doctors and nurses in hospitals for reversal of post-operative respiratory depression, and reversal of respiratory and 'Central Nervous System' depression from opioid administration during labour and child birth.

Naloxone is also used by paramedics in communities to reverse the effect of opioid overdose.



#### FACTS

- / Naloxone **CANNOT** make someone intoxicated/stoned/high.
- / Naloxone is not poisonous and causes **NO** harm if swallowed.
- / Naloxone is a 'Prescription Only Medication' and is currently only licensed in the UK for administration by subcutaneous, intramuscular or intravenous injection.
- / In Scotland Naloxone is also supplied to people under a Patient Group Direction (PGD). The PGD for supply of Naloxone is a document, agreed by senior clinicians, nurses and pharmacists, so that they can **LEGALLY** supply the medicine to people who might be at risk of opioid related overdoses **WITHOUT** first looking at the person's medical record or consulting a doctor, who would normally be responsible for writing a prescription.
- / Naloxone comes in various

- 'presentations' (pharmacy speak for packages, concentrations and doses). In the UK Naloxone comes in ampoules, pre-filled syringes and 'mini jets'. It is manufactured in two different concentrations, 0.4mg per ml, and 1mg per ml.
- / In Scotland (and at the time of writing) it has been decided to use a 1mg per ml concentration that comes in a 2 ml pre filled syringe, meaning that people are supplied with 2mg of the medication.
- / Naloxone is very safe but does have some 'contraindications'.

# 12/ WHEN TO USE NALOXONE

## **NALOXONE SHOULD BE GIVEN TO ANY PERSON IF THEY ARE SUSPECTED OF EXPERIENCING AN OVERDOSE WHERE OPIOIDS ARE INVOLVED.**

If the person who has overdosed is someone you were with when they used opioids, don't hesitate to administer naloxone - even if you have not been trained.

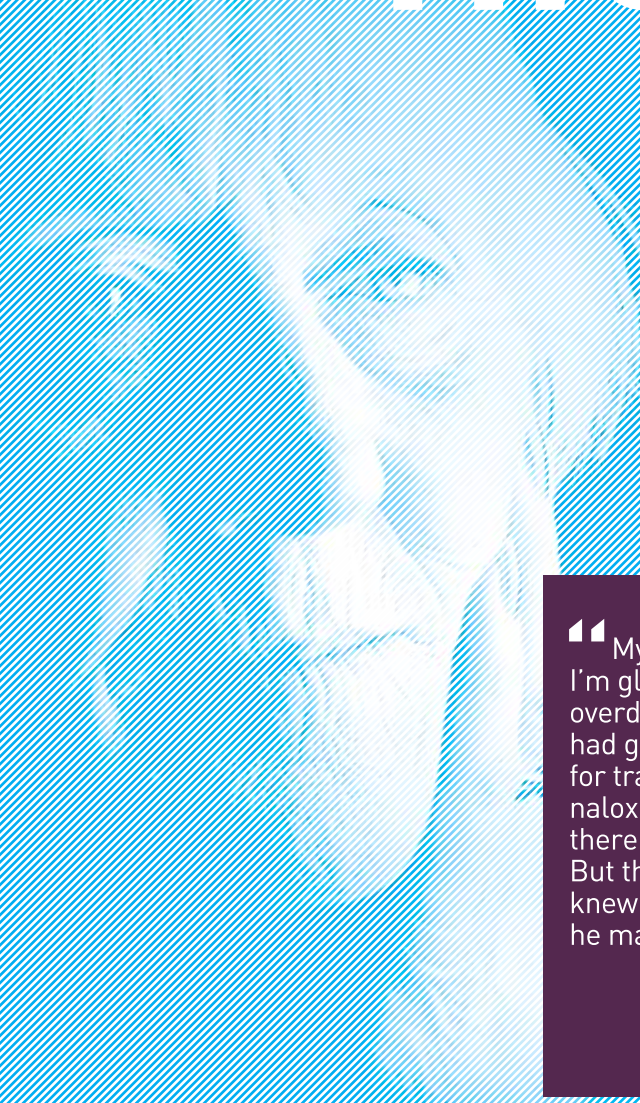
If you didn't see opioids used, you may need to ask any friends/witnesses some questions about the drugs used. If you do not know which drugs have been used, the decision to administer naloxone should be based on evidence of signs and symptoms of overdose (see section 5).

Even if there is no opioid drug using paraphernalia (silver foil sheets/tubes; syringes and needles; medication bottles/packets) but you suspect opioids may have been taken, you can still use naloxone.

**Even if it does not help, it will do no harm.**

**Please note:** this section focuses on when naloxone should be used in a community setting, NOT when it should be used in a hospital/clinical setting by doctors/nurses.

# ISAVED MY SON'S LIFE



“ My boy is still alive... I'm glad we had talked about overdose before, and that I had gone to the drug service for training and knew about naloxone. Seeing him lying there, dying, was so frightening. But the training I'd had meant I knew what do. Without naloxone, he may have died.”

**SAVE  
SOME  
NALOXONE**

# 13/ DANGER COMMON INFECTIONS IN DRUG USERS

**TAKING ANY ILLEGAL DRUG POSES SIGNIFICANT UNKNOWN RISKS DUE TO THE TOTALLY UNCONTROLLED PRODUCTION AND PROCESSING OF THE MATERIALS. NOT ONLY IS THERE A RISK OF ACCIDENTAL OVERDOSE BUT THERE IS ALSO THE RISK OF PICKING UP INFECTIONS WHICH CAN LEAD TO THE AMPUTATION OF LIMBS OR DEATH.**

The following pages describe the main categories of infection and how they are contracted. If someone is concerned about the risk of infection through drug use and needs more information they should speak to their health care provider (e.g. GP or other professional).

The infections most commonly experienced by injecting drug users can generally be grouped into four categories:

- / Viruses that spread through the bloodstream, like hepatitis B, C and HIV (blood-borne viruses).
- / Bacteria that can infect the skin and possibly spread to the whole body.
- / Sexually-transmitted infections.
- / Infection of the respiratory system – the lungs and air passages (organs) associated with breathing.

# 14/ DANGER BLOOD- BORNE VIRUSES

HIV, Hepatitis B and Hepatitis C are blood borne viruses (BBVs). Sharing any type of drug using paraphernalia (needles, syringes, filters, spoons, water, crack pipes and even rolled bank notes / tubes for snorting drugs) can result in BBVs being passed from one person to another via blood to blood contact.

It is important that injecting drug users use sterile equipment for every injection to prevent transmission of BBVs. Sterile injecting equipment can be accessed free of charge through injection equipment providers (needle exchanges) in pharmacies in local communities and some drug services.

In the early stages of infection there may be few obvious signs and symptoms which means people are often unaware that they have acquired a BBV. It is therefore important that anyone who has been involved in risky behaviours, such as sharing drug using equipment, should consider getting themselves tested. HIV, Hepatitis B and Hepatitis C are diagnosed using blood tests, which are available at lots of different services

(GPs, sexual health centres and some drugs services). A vaccine is available for Hepatitis B, and anyone at risk (including people who use drugs) should consider getting themselves vaccinated. The vaccine is available from GPs and sexual health centres. There is no vaccine available for Hepatitis C, but effective treatments are available.

The most common BBV amongst drug users in Scotland is Hepatitis C. Hepatitis C can lead to serious liver damage and may eventually lead to death, particularly if left untreated.

**Liver disease can slow the body's breakdown of drugs and alcohol. This can significantly increase the length of time someone is at risk of overdose after using substances.**

For more information on Hepatitis B and Hepatitis C please see:  
[www.hepatitisscotland.org.uk](http://www.hepatitisscotland.org.uk)

# 15/ DANGER BACTERIAL INFECTIONS

**Injecting drug users can be exposed to a wide range of bacteria in various ways that can give rise to local or systemic (throughout or affecting the whole body) disease. Recent research showed that over 30% of injecting drug users have experienced infections resulting in abscesses or open wounds at or near the place on the body that they had injected.**

Sharing contaminated needles and other drug injection equipment, injecting without first cleaning the injection site and injecting contaminated drugs are all situations that can transmit bacteria.

General poor health and hygiene can also increase the risk of infection with the drug user's own naturally occurring skin bacteria.

Injecting into muscles (known as muscle popping) and using too much citric acid to dissolve heroin increases the chances of some bacterial infections developing in drug users. Injecting technique is important in reducing the risk of such infections.

Just because people have been injecting for a long time does not mean that they have a safer and hygienic injecting technique.

Some bacteria can cause infections that vary in how severe they are, from minor skin and soft tissue infections to life-threatening diseases like **septicaemia** (blood poisoning), **necrotising fasciitis** (commonly called 'flesh-eating infection' which can be caused by a range of different bacteria), **gangrene** or **endocarditis** (infection of the heart valves).

Infections caused by spore forming bacteria such as bacteria from the Clostridium family have caused deaths in heroin users. These bacteria have contaminated batches of heroin causing occasional outbreaks of infection amongst heroin users in Scotland. Some of these bacteria are:

- / **Clostridium novyi** – which has been found in injecting drug users who have died.
- / **Clostridium botulinum** – which can cause wound botulism.
- / **Clostridium tetani** – which causes Tetanus.

# 16/ DANGER ANTHRAX INFECTION

**In 2009 and 2010 batches of heroin contaminated with Anthrax were being supplied in Scotland with a further case in 2012.**

**It is likely that the heroin was contaminated on route from the source countries Afghanistan or Pakistan, with contamination from an animal carcass or hide in Turkey thought to be the most likely source.**

**This outbreak has seen many people infected and resulted in the tragic loss of lives.**

Public health experts have warned that the risk that heroin and other drugs could be contaminated again with anthrax (or other harmful organisms) remains. Drug users need to be constantly aware of this infection risk and need to avoid high risk exposure to contracting harmful organisms, especially through any form of injection.

## **SYMPTOMS OF ANTHRAX INFECTION:**

- / Redness, swelling or pain at the injection site, or in the part of the body that was injected e.g. foot, calf, leg, buttock, hand, arm, shoulder.
- / Redness, swelling or pain in any part of the body after injecting.
- / Flu-like symptoms, such as high temperature, sore head, aching muscles and/or joints.

If you know someone who has any of these symptoms after injecting or using drugs, it is essential that they are checked at the nearest A&E immediately. Treatment with antibiotics can be given, and may save a life.

**For more information please see: [www.hps.scot.nhs.uk/anthrax/resources.aspx](http://www.hps.scot.nhs.uk/anthrax/resources.aspx) for more information.**

# 17/ DANGER SEXUALLY TRANSMITTED INFECTIONS (STIs)

Drugs can affect decision-making and judgement, so when under the influence of some substances (including alcohol), people may engage in risky behaviour. This can include risky sexual behaviour and may lead to having unprotected sex, and possible infection.

Some STIs can have long-term consequences including damage to, or loss of, fertility.

For more information please see:  
[www.hps.scot.nhs.uk/bbvsti/sexuallytransmittedinfection.aspx](http://www.hps.scot.nhs.uk/bbvsti/sexuallytransmittedinfection.aspx)

# 18/ DANGER RESPIRATORY INFECTION

Smokers aren't the only people at risk for drug-induced lung damage. People who inject drugs can contract a life-threatening lung condition called talcosis, in which talc accumulates in the lungs and causes complications like emphysema, pulmonary fibrosis and cancer.

Various pill form drugs, both illicit and prescribed, contain talc or similar substances as a binder and are sometimes melted down/partially dissolved and injected by drug users, a dangerous practice that can result in respiratory complications and death.

Talc or similar substances may also be used to cut/bulk up drugs like cocaine and heroin because of its similar texture and appearance.

Drug users who choose smoking as their route of administration are at greater risk of a number of respiratory problems.

Smoking increases the risk of chronic and serious lung infections regardless of the substance smoked. Hot smoke irritates airways and damages the protective cilia lining the lungs, leading to decreased resistance to infections like pneumonia and bronchitis.

Respiratory conditions caused by drug use can be either short-term but possibly recurring, as in bronchitis, or permanent, as with emphysema.

Anyone who experiences trouble breathing, chest pain or bloody sputum (coughed up spit), should seek emergency medical treatment immediately to avoid potentially life-threatening consequences.

# 19/ DANGER ASSOCIATED RISKS

**DRUG USERS FACE SIGNIFICANT RISKS NOT ONLY FROM THE DRUGS THEY TAKE BUT FROM THE HAZARDS ASSOCIATED WITH THEM.**

**THERE ARE RISKS:**

- / From contamination with bacteria and chemicals.
- / From cutting agents used.
- / From variations in 'purity' and 'potency' creating accidental overdose.
- / From introducing contaminants/organisms into the body via injecting through the skin.
- / From sharing injection paraphernalia due to the potential for transmission of blood-borne viruses.
- / From inhaling drugs.

**The risks are many and varied – if you know someone at risk get them to seek help. Recovery is possible with the right assistance.**

# FURTHER INFORMATION/ CONTACT

**ENQUIRIES@SDF.ORG.UK**

**WWW.SDF.ORG.UK**

**FOR MORE INFORMATION  
ON NALOXONE VISIT/  
WWW.NALOXONE.ORG.UK**

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