AIVL
Australian Injecting
& Illicit Drug Users League

AIVL VEIN CARE GUIDE

Welcome to the 2020 revised version of the AIVL Vein Care Guide.

This is a targeted educational resource for people who inject drugs and is not for general distribution under any circumstances.

AIVL Vein Care Guide has been created by drug users for drug users to provide information that will help people make informed decisions and reduce the risks of drug related harms.

This online resource on Vein Care and Hepatitis C was produced by the Australian Injecting and Illicit Drug Users League (AIVL) for people who inject drugs on why looking after your veins can be one of the best ways to prevent getting or passing on hepatitis C (hep C) and other blood borne viruses (BBVs) like HIV and hepatitis B (hep B).

This guide aims to reduce the risk of all BBVs, but has a particular focus on hep C. This is because many injecting drug users already have hep C and this means that new injectors are at high risk of getting infected or reinfected. What you need to understand is that hep C is preventable! You don't need to get hep C. You just need to get sorted on how to inject as safely as possible including learning how to look after your veins.

The good news is that you will not only be doing what you can to remain hep C free or protect others from becoming infected if you already have hep C, but there will be other health benefits such as preventing abscesses and potential vein damage.

Good veins = Healthier Drug Users!

Of course the best way to avoid contracting hep C and other BBVs is not to inject. If you want information on other ways to use your drugs or information on stopping your drug use see the section 'Alternatives to Injecting' in this guide.

If you do have hep C it is still important to protect yourself and others – up to 30 percent of people will clear their hep C infection without treatment. You need to know there are many different strains (genotypes) of hep C and you can be re-infected with a different strain. You can also become infected with other BBVs, this is why it is so important to always inject as safely as possible.

So how can looking after your veins prevent hep C infection?

Looking after your veins can prevent hep C a lot more than you might think. Injecting involves blood, sometimes a little, and at other times (particularly when injecting in groups, or if your veins are in bad shape) there can be a lot of blood around. Regardless of the number of people you are injecting with, or the amount of blood you can or can't see, when people inject drugs there is **always** blood around. Hep C is transmitted via blood.

Unsafe injecting practices account for almost 90% of all new hep C infections and up to 80% of existing hep C infections in Australia. Research shows that almost 50% of people will contract hep C within 6-12 months of starting to inject.

Many new injectors have a greater reliance on others to give them their first and early injections. It is therefore essential that if you are new to injecting you understand all the risks associated with injecting and hep C, and how to protect yourself – even if someone else is injecting you.

Just because there is a high risk of getting hep C if you inject drugs, it doesn't mean that all injecting drug users will get hep C, or that it's inevitable – **hep C is preventable**. People who inject drugs can protect themselves and others from hep C in a number of ways, including by looking after your veins.

Getting the link between vein care, blood and hep C?

Most people who inject drugs will have heard or be aware of the slogans, '**new fit for every hit**' and '**always use new equipment**' – It is important for injectors to continue to follow these messages in trying to stop the spread of hep C. But they're not the only issues injectors should consider in relation to protecting themselves and other users from hep C and other BBVs.

Put simply, there are three things for hep C transmission to occur:

1. A point of exit (for contaminated blood to leave the blood stream of one person);
2. Blood (literally millions of hep C virus particles can exist in a drop of blood the size of a pin head, but you actually don't need many hep C virus particles for transmission to occur); and
3. A point of entry (this could be a cut or a wound, but in terms of injecting we're generally talking about an injecting site) for contaminated blood to enter a person's bloodstream.

If you have 'bad' veins, abscesses, blocked veins, scarring, etc, there's likely to be more blood around due to multiple puncture wounds (from injecting attempts). So this increases the risk of hep C infection. There's also more chance of getting frustrated, upset and agitated (making the situation worse and 'finding' veins even more difficult) and a greater chance that you might need assistance. These situations also increase the risk of hep C infection.

When you're having trouble finding a vein there often comes a point where someone else steps in, to help you inject.

The situation is you've got blood on you. You might have tried to wipe it off, but remember those millions of hep C virus particles that were mentioned earlier? They're not visible to the human eye. The person assisting you may have already had their shot and they may have touched their own or someone else's injecting site. They'll need to touch you. There could be blood on the tourniquet, on their hands and/or fingers, on other equipment. All of these things could carry hep C virus particles, and you may not even know.

Generally, when new injectors start using, it is easier to access larger veins in the arms. These are also the veins peer educators recommend. They are recommended because they are more accessible and therefore new users can inject themselves. Not needing to ask other people to assist means you have more control, which means there is less blood around and less chance of hep C transmission.

However, if these more accessible veins aren't cared for and get damaged over time, injectors may move on to other areas of the body to find injection sites. Sites that are harder to reach, sites that might require more attempts to inject, more 'holes', more blood, greater chance of hitting arteries – even more blood, more chance of needing assistance – more touching, and, of course, more chance of hep C transmission.

So why is it important for injecting drug users to avoid getting hep C?

Hep C is one of the most commonly notified diseases in Australia. It can severely affect the liver and health of those who contract it. Most people who get hep C don't have symptoms, or may not get symptoms for many years – by then it has had the chance to cause serious damage to the liver.

Hep C can cause serious liver disease and liver cancer. Viral hepatitis is now the leading cause of liver transplantation in Australia. If you are currently injecting drugs, avoiding hep C or other BBVs is one of the best things you can do for your long term health. This resource gives you all the information you need to protect yourself and your friends from getting hep C and other BBVs due to bad vein care and unsafe injecting. Make use of it!

For more detailed information on hep C and other BBVs see other information on the AIVL website

So to get started on caring for your veins and avoiding hep C and other BBVs read on...

Topics and information include:

- Vein Care and Injecting Related Issues;
- Vein Care and Injecting Sites on the Body;
- Injecting Myths and Bad Habits;
- Vein Care and Safer Injecting;
- Alternatives to Injecting; and
- Vein Care and the Circulatory System.

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VEIN CARE AND INJECTING RELATED ISSUES

You may be wondering what the link is between vein care and hepatitis C (hep C). One of the biggest reasons vein care is so important is that the more scarring and problems you have with your veins, the more likely it is that large amounts of blood will be around in the injecting process. More blood significantly increases the risk of hep C (and other BBVs) transmission.

It is quite common for people to inject with one or more other people. When this happens, poor vein care can lead to high risk situations if, for example, someone struggles to find a vein. Research has shown that the more blood there is around when injecting (on equipment, surfaces, clothes and hands, etc) the greater the risk of hep C transmission. The risk of hep C being transmitted is even greater if you share needles and syringes with someone else.

Regular injecting can lead to damage to the veins and surrounding tissue. Some of the more common injecting related issues are described here.

Thrombosis

Blood clots form when there is turbulence in the flow of blood. Damage to, or inflammation of the lining of the vein can trigger clotting of the blood at the site of the damage. These clots stick to the lining of the vein, and are known as 'thromboses'.

A blood clot inside a vein does the same things as a blood clot on the surface - it hardens and turns to scar tissue that shrinks and pulls the edges of the vein together.

It's this pulling together of the edges that makes veins 'collapse.' Veins that have collapsed in this way do not 'unblock' - the blood has to find another way back to the heart.

DVT – Deep Vein Thrombosis

Injecting, particularly in the leg or groin, can cause dangerous blood clots to form in the deep veins of the leg. These clot formations are known as 'Deep Vein Thrombosis' (DVT). DVT can form at or near the injection site, or lower down in the leg around the calf muscle.

The symptoms of a DVT include redness, pain and swelling of the leg. If you inject in the groin and you get these symptoms, you should go to the hospital emergency department immediately.

If you have symptoms of a DVT and you get chest pains and become breathless, call an ambulance. The blood clot may have broken away from the vein, travelled up through your body and got stuck in the lungs. This is known as a pulmonary embolism (PE) and can be life threatening.

In hospital, DVT and other blood clots can be treated with injections that dissolve the clot.

Vein blockage and collapse

Veins may become temporarily blocked if the internal lining of the vein swells in response to repeated injury or irritation. For people who inject drugs, this may be caused by the needle, by the substance injected, or both. Once the swelling subsides, circulation usually becomes re-established.

Smaller veins may block as a consequence of too much suction being used when pulling back against the plunger of the syringe to check that the needle is in the vein. This pulls the sides of the vein together and the sides of the vein may stick together, causing the vein to block – this can be a particular problem if the vein is inflamed. Removing the needle too quickly after injecting can have a similar effect.

Permanent vein collapse can occur as a consequence of:

- Long-term injecting;
- Repeated injections at the same site, and especially with blunt needles;
- Poor injecting technique;
- Injecting substances which irritate the veins (i.e. pills containing chalk and wax, methadone etc);
- Injecting large volumes of liquid; and
- Injecting with large bore needles.

Long-term consequences of substantial vein damage

When the flow of blood through the limbs has been severely affected, a number of problems can arise, including:

- Ulcers;
- Development of a sinus;
- Scarring;
- Local infections; and
- Gangrene.

Ulcers

Ulcers form when the skin is knocked or scratched (or injected into) and the surface is broken. The slow flow of blood means that the cells cannot reproduce quickly enough to heal the wound. The resulting moist and painful wound can take years to heal, and can be compounded by infection.

Factors affecting healing

A number of factors can affect the rate of healing, including:

- Diet and nutrition;
- Stress;
- Poor accommodation;
- Poor general health; and
- Excessive drug and alcohol use.

Local infections

As well as the risk of transmission of BBVs such as hep C and HIV, injecting carries the risk of introducing bacterial and fungal infections to the tissue surrounding the injection site.

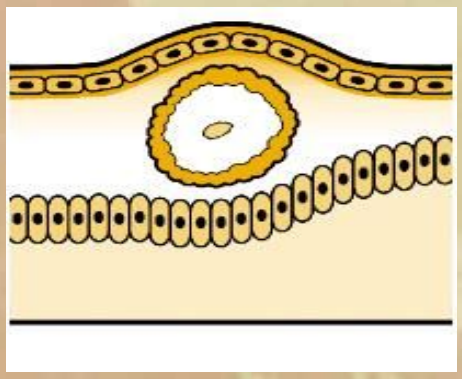
Local infections are often caused by bacteria, which normally live harmlessly on the skin, getting picked up by the needle and forced below the skin where they multiply.

The risk of local infection will be increased by:

- Sharing needles and syringes, and other injecting equipment;
- Reusing unsterile injecting equipment (including filters);
- Injecting non-pharmaceutical medications;
- Unhygienic preparation of drugs;
- Poor personal hygiene; and
- Other health factors affecting circulation and immune function (eg smoking, lack of exercise, poor nutrition, chronic disease).

Local infections include abscesses, phlebitis, and cellulitis.

Abscesses



An infected abscess is a localised collection of pus that is caught within inflamed tissue. It can be caused by a wide range of bacterial and fungal infections. An abscess is different from cellulitis in that it has a defined edge and shape.

An abscess is characterised by:

- Raised skin surface;
- Localised heat;
- Tenderness and pain;
- Redness of the skin;
- Pus formation; and
- A foul smell if there is a discharge. If you develop an abscess you should seek medical advice and treatment as soon as possible. An abscess will require antibiotic treatment and/or lancing to release the pus.

You should never try to lance or puncture an abscess yourself. This can spread infection and, without appropriate antibiotic cover, you can quickly develop septicaemia (blood poisoning). You should try to alternate injecting sites as this will lessen the risk of localised inflammation, infection and abscess formation. Talk to your local drug user organisation or a medical professional about safe injecting sites that you can use in rotation.

Phlebitis

Phlebitis is an irritation of the smooth inner lining of a vein. This roughening of the vein lining can encourage clot formation. If this happens, the vein becomes inflamed and can sometimes be felt as a thick cord beneath the skin.

Phlebitis can occur as a result of:

- Injecting irritant substances (such as benzos, pills, etc);
- Poor injecting technique;
- Infection; and
- Accidental injury (knocks or blows).

A dangerous complication of phlebitis is deep vein thrombosis (DVT) which can lead to pulmonary embolism.

If phlebitis is suspected you should seek immediate medical advice. Treatment includes resting and raising the limb, antibiotics and anti-inflammatory drugs.

Cellulitis

Cellulitis is a painful spreading inflammation of the skin, which appears red, hot and tender to touch, and is swollen with fluid.

Cellulitis can occur as a result of:

- Irritant substances lodged in body tissues; and
- Serious infection.

When cellulitis is suspected you should seek immediate medical advice. Treatment includes resting and raising the affected limb, and treatment with antibiotics and anti-inflammatory drugs. Never inject into areas that show signs of cellulitis and/or inflammation.

The following can help reduce the general risk of developing cellulitis:

- Always using sterile injecting equipment;
- Using sterile water where available or appropriate alternatives when it isn't;
- Avoiding the injection of irritant or heavily adulterated drugs;
- Avoid injecting large volumes of drug; and
- Removing jewellery prior to injecting if injecting in the hands.

Gangrene

Gangrene is the death of body tissue caused by impaired or absent blood supply. Gangrene generally occurs as a result of infection and artery damage.

The effects of gangrene can be disastrous, potentially leading to loss of limbs. It can also cause the products of tissue breakdown to enter the bloodstream causing blood poisoning or septicaemia which can be life threatening.

Gangrene and artery damage

Gangrene can be the result of injecting into an artery instead of a vein. It can also be the result of injecting irritant drugs (such as benzos, and other pills) into the femoral artery rather than the femoral vein. However, it can also occur when people inject into the smaller arteries in the arm.

Gangrene as a result of injecting into an artery can occur in the following ways:

- The artery can go into spasm and interrupt the supply of oxygenated blood to the tissues;
- The injected substance can block the artery interrupting the blood supply to the tissues;
- Small particles of the injected substance can be transported into, and block, the capillaries in the tissue -causing their breakdown;
- Affected tissue initially becoming white;
- Affected tissue eventually blackening;
- Infected tissue becoming odorous; and
- If untreated, affected tissue dropping off.

Gangrene prevention and treatment

If you inject, it's really important to be aware of the following in order to prevent gangrene:

- The dangers of injecting into an artery;
- First aid treatment following accidental arterial injection; and
- Avoiding injection of crushed tablets and gel-tabs, especially benzodiazepines, Unisom gel capsules, and Diconal.

If you experience any of the symptoms of gangrene, you need to:

- Understand it's a serious complication that will not go away unless you get medical help; and
- Get urgent medical treatment - if the onset is sudden you should call an ambulance.

Speak to your local drug user organisation to find out more.

'Missed hits'

A 'missed hit' describes the swelling which appears around an injection site during, or immediately after injecting. It may be caused by fluid entering the tissue surrounding the vein because the needle has:

- Not entered the vein properly;
- Entered the vein and slipped out again;
- Entered the vein and gone through the opposite vein wall; or
- Entered the vein correctly but excess pressure has caused the vein to split.

These problems can be prevented by ensuring that you:

- Check that the needle is in a vein by gently pulling back on the plunger to see that venous blood enters the syringe;
- Always release the tourniquet before injecting;
- Maintain a steady hand whilst injecting;
- Use the smallest possible syringe and needle;
- Inject at the correct angle (in line with the vein); and
- Inject the fluid slowly.

A 'missed hit' will mean that the drug is absorbed much more slowly by the body, and the effect will be less pronounced. It can also lead to problems such as abscesses, cellulitis, and granulomas.

‘Lumps and bumps’

Many injectors have various ‘lumps and bumps’ under their skin, which can often cause anxiety. The vast majority of these are not serious, and are often caused by one of the following:

- Previous abscesses;
- Frequently used veins that have now collapsed;
- Previous misses; and
- Previously injected tablets.

However, if you are worried, or if the lump/bump ever changes (size, colour, placement) you should seek medical advice.

Bruising

When you inject, blood can leak from the vein out under your skin causing a bruise.

Taking care of bruises

There are a number of creams that may help treat bruising and thrombosis, such as anti-thrombotic and anti-inflammatory creams (available from chemists) and herbal ointments made from arnica (available from health food shops and some chemists). You can also use vitamin E oil, aloe vera, comfrey, calendula and ice to reduce bruising.

You should wait a couple of hours before applying the cream, until the injection wound has begun to close. Don’t squeeze ointment straight from the tube onto the injection site and **never** let anyone else put their fingers in your ointment jar, as these are ways of spreading bacteria and/or BBVs.

Scar tissue

The scar tissue that fills collapsed veins (often referred to as ’trackmarks’) can remain visible for many years and feel like there is a ‘bit of string’ under the skin, Sometimes, there can be hard ‘knots’ under the surface of the skin, at the points where the valves in the vein used to be.

Scar tissue from injuries we suffered as children can often persist into adulthood, and scar tissue below the skin surface (caused by injecting injuries) can also persist for a long time. Old abscesses can also leave lumps of scar tissue that remain for many years.

Sterile abscess

A sterile abscess occurs as a result of injecting irritant substances such as crushed tablets, and possibly also as a consequence of a ‘missed hit.’

This will often disperse without treatment but, over time, a granuloma may form around it. However, if a lump begins to become red, hot and painful then seek medical advice.

Granulomas

Granulomas are benign growths of scar tissue that are associated primarily with subcutaneous (under the skin) injections or ‘missed hits’. This happens where the solution has ended up in the surrounding tissue. If this happens a residue may remain for many years, eventually leading to granuloma formation.

Many of the common cutting agents for injectable drugs, such as quinine, mannitol, dextrose and lactose, are not thought to cause foreign body granulomas. However the injection of crushed tablets will increase the risk. The principle filler of tablets is often ‘hydrogenous magnesium silicate’, frequently referred to as ‘chalk’ by drug users.

You should note that ‘successful’ intravenous injection of crushed tablets doesn’t remove the risk of granuloma formation. It simply changes the place that they may be found, from the injection site to the lungs. If crushed tablets are injected, they should always be thoroughly filtered first.

Endocarditis

Endocarditis is a potentially life-threatening infection of the heart valve. It can develop through injections contaminated with bacteria, fungi or other germs. The germs collect and grow on one of the four valves inside the heart, eventually damaging the valve and stopping the normal flow of blood.

The symptoms of endocarditis can come on quickly, over 1 or 2 days, with fever, chest pain, fainting spells, shortness of breath and heart palpitations. In severe cases, a person may suddenly collapse; have a rapid pulse and pale, cool, clammy skin. Sometimes, endocarditis builds up over months and the symptoms are more vague - a low fever, chills, night sweats, pain in the muscles and joints, headache, shortness of breath, poor appetite, weight loss, odd chest pains and tiny broken blood vessels may appear on the whites of the eyes, inside the mouth, and on the chest, fingers and toes.

Treating endocarditis

Endocarditis usually responds well if treated early with long term intravenous antibiotics (generally administered in hospital). If endocarditis is not detected and treated, it can be life-threatening, or can require a heart valve transplant and long term medication. If you think you might have endocarditis, it is really important to get checked out properly by a medical practitioner and, if necessary, get proper medical care in hospital.

To prevent endocarditis, avoid injecting near skin infections or wounds no matter how small they are. The bacteria most frequently responsible for endocarditis in people who inject drugs is staphylococcus aureus (s. aureus), or staph for short. This same germ can cause things like septicaemia, cellulitis and abscesses, and it can live in the mouth too, so avoid blowing into baggies and/or licking spoons or injection sites - that's another way of spreading staph.

If you have a heart condition, a damaged immune system (eg through HIV/AIDS) or have had endocarditis in the past, it's important to let your doctor and dentist know before you have surgery or dental work done. You might also want to consider another way of using drugs to reduce the risk of contracting endocarditis.

Septicaemia

Septicaemia, or blood poisoning, can be caused by bacteria, fungi or other germs that can get into the bloodstream through unhygienic injecting. This can happen by using contaminated water, using unsterile filters, or having dirty hands. Septicaemia can also occur when a local infection such as an abscess is not properly treated. Among the initial symptoms are chills, fever and feeling totally exhausted. Like endocarditis, septicaemia can be treated with intravenous antibiotics, and it can also be life-threatening if left to progress. If you think you might have blood poisoning, it is really important to get checked out properly by a medical practitioner and, if necessary, get proper medical care in hospital.

Tetanus

Tetanus spores live in the soil and in dirt that you may not be able to see - on floors, other surfaces and even on your hands. Wash your hands and the surface you are working on, before preparing your hit. If you drop your fit, it may become contaminated: throw that fit away and use a new one. Whilst tetanus among people who inject drugs has been reported, it is not very common. There is a vaccine available for tetanus, so it is a good idea for all people who inject drugs to get vaccinated. A tetanus booster shot is required every 10 years.

Dirty Hits

A dirty hit is caused by pollutants and/or adulterants in a hit. They can come from any number of sources: nicotine from a used cigarette filter, dirt from your hands, powder that hasn't been filtered out of crushed pills, powders used for cutting drugs, bleach left behind (if you have cleaned your fit but not rinsed it properly), or bacteria and other micro-organisms in filters, unsterile water, and on your hands. The effects of a dirty hit can come on really quickly, but may also take hours. The symptoms can be severe - headaches, the shakes, vomiting, sweating, fever, aches and pains. Aspirin or paracetamol will help the fever. If you are vomiting, anti-nausea medication might help. It is best to rest and drink lots of fluids. Seek medical attention if the symptoms are strong and cannot be relieved, or if they continue to worsen. As difficult as this might be, it is a good idea to tell the doctor that you have had a hit and that this reaction came on afterwards. This is so you can be treated properly and you won't be misdiagnosed with other conditions such as meningitis or septicaemia.

Eye Infections

You might think that eye infections have little or nothing to do with injecting, but there are some kinds of eye infections that can be caused by some injecting practices. An example is using lemon juice to mix up. A fungus that is on the lemon is injected into the blood stream and lodges in the eye where it settles.

In Australia, a small number of reported eye infections are known to have happened when people have injected Buprenorphine tablets that have spent time in someone's mouth. The infection happens when the tablet picks up traces of the Candida fungus, which can live in the mouth or in wounds on the skin.

This kind of eye infection may be preceded by small infections around the hair follicles on the scalp or other parts of the body, or around the injection site where the fungus entered the body. Some days afterwards, the symptoms in the eye appear. These include: a red, bloodshot, or painful eye, sensitivity to light, blurred vision, partial loss of vision and seeing spots. If left untreated for an extended period, this type of eye infection can lead to glaucoma, cataracts and loss of sight.

This kind of infection often requires a physical examination of the eye, as well as a blood test. However, diagnosis may be less complicated when the person's injecting history is known.

Treating these types of eye infections may require injections of anti-fungal medications and/or steroids, followed by anti-fungal tablets. The type and length of treatment will vary from person to person. Sometimes the problem can return once treatment finishes. If the symptoms do reoccur, you need to seek further treatment.

If you think you might have an eye infection through injecting, it is really important to get checked out properly and, if necessary, get proper medical care in hospital.

Summary

The injecting related problems discussed above can all potentially be avoided. You can do this by deciding not to inject in the first place or, if you do choose to inject, by looking after your veins – while they are still functional you are less likely to have problems with injecting, with less blood involved in the process and therefore less risk of hep C and other BBV transmission.

Vein care is about rotating injecting sites, using new syringes EVERY TIME you inject, applying bruising/scarring creams or ointments, using your own tourniquets where needed, avoiding arteries and nerves, being hygienic and taking your time.

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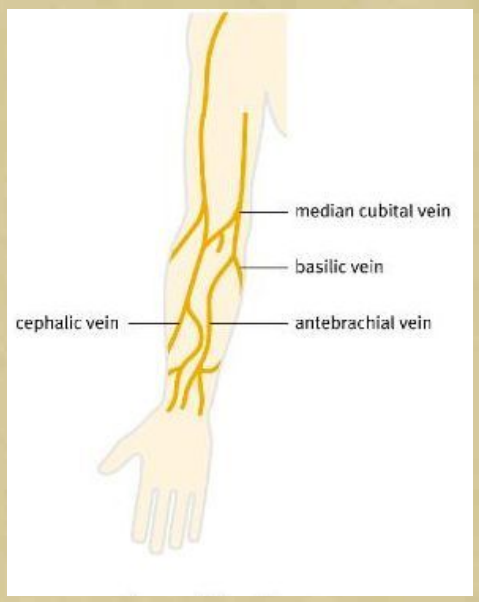
VEIN CARE AND INJECTING SITES ON THE BODY

For people who inject drugs, the loss of the most accessible veins can ultimately lead to stark choices: either to stop injecting, switch to another way of using or move to another site on the body where injecting can pose much greater health risks, particularly in relation to blood borne virus (BBV) transmission such as hepatitis C (hep C).

The following information is provided to help you make informed decisions about where to inject and how to minimise the risks of BBV transmission as much as possible.

Arms

Most people who inject drugs start out using the veins in their arms. These are often the easiest and most reliable veins to 'find'. Easy and clear access to veins helps to reduce the risk of BBV transmission which is why injectors should try to do everything they can to preserve the veins in their arms for as long as possible. While the precise location of these veins will vary from person to person, the diagram below shows where these main veins are in your arm.

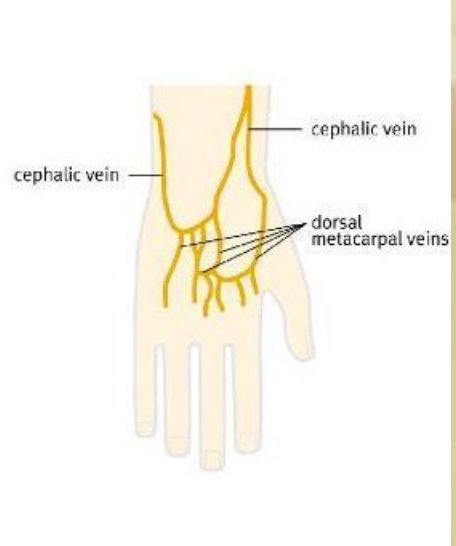


If you are having trouble locating a vein in your arm (or in any other part of your body), it's important you get advice from a professional, maybe a doctor you feel you can trust, or someone from your local drug user organisation.

Before you decide to inject in more dangerous places on your body, it's important that you seek advice about alternatives to injecting, as well as about safer injecting practices.

Hands and Fingers

The veins on the back of your hands can be quite prominent and highly visible, but they tend to be small and fragile. This can make injecting here both difficult and risky.



It can be really difficult to use these veins, and to hide the evidence of injecting here, so many injectors avoid them. When people do inject into their hands, serious problems can arise. If complications such as infection or cellulitis occur, they are likely to be much more disabling in the hands than they would be in the arm. This can lead to severe problems, such as scarred tendons and loss of finger movement, especially if rings have been left in place while injecting into the hand.

Injecting into your fingers should be avoided as the veins here are ***very*** small. If you do inject into your fingers, and this also applies to your hands more generally, it's vitally important to remove all rings beforehand. If your hand, or a finger, starts to swell with a ring in place, it can quickly obstruct the blood flow which can lead to the loss of the finger. The artery that supplies the finger lies just below the vein - if the artery is damaged and blood flow to the finger is cut off, the finger can 'die.' You need to immediately seek urgent medical assistance if you believe you have such an injury.

Legs

The superficial leg veins (those near the surface) are unlikely to be viable long-term prospects for injecting, because they are furthest from the heart, and due to gravity, blood flow through the leg veins is slow. This slow blood flow means that it is easy for people to inject too quickly here, causing leakage into surrounding tissue. This can cause infection, bruising and further vein damage. These veins also contain more valves than the veins in the upper body, and this increases the likelihood of problems occurring. Injecting at or around a valve causes more turbulence in the blood flow, and therefore increases the likelihood of blood clotting. Injecting near a valve in these veins can also permanently damage the valve, which further slows blood flow.

The superficial veins of the leg also tend to 'wobble' when you try to get a needle in them, and this can result in more frequent 'missed hits' and further vein and tissue damage.

The flow of blood in the leg veins is upwards (towards the heart). Therefore, an injection in the leg should be done with the needle pointing up towards the top of the leg. It can be quite difficult to self-inject in the correct direction in the legs, but it is important that it's done this way. When an injection is performed with the needle pointing in the wrong direction (ie towards the foot), more damage is done to the vein (and to the valves in the vein), and the fluid being injected is forced in against the flow of blood. If drugs are injected too fast, or against the flow of the blood, the veins won't be able to cope with the pressure of the extra fluid. When this happens, fluid can escape from the vein, around the needle, causing a 'missed hit' and swelling. This can be reduced by injecting slowly, and by injecting in the right direction.

Healing of injection site damage, and resistance to infection, are more problematic in legs because the blood flow is slow. Abscesses and other infections are therefore a greater potential risk if you inject into your legs.

Varicose veins are caused by damaged valves. A varicose vein is a swollen vein that has tight, thin walls and is often raised, stretching the skin. You should ***never*** inject into a varicose vein as they can bleed profusely and more blood means a higher risk of getting BBVs such as hep C and B.

Feet

Although the veins in the feet are used by some people, there are several reasons why they should only be used very occasionally, if at all:

- Blood flow in the veins of the feet is slow – this means that healing in this area is also often slower than in other parts of the body. If you get an infection it can lead to loss of mobility;
- Other injuries to the feet are often slower to heal, especially in people with already damaged circulation;
- Fungal infections of the feet are common - there may be an increased risk of introducing these into the body through the injection site; and
- Wearing shoes and socks may encourage or compound problems of infection.

As with the legs, injecting into the feet should be done as slowly as possible to prevent overloading the vein.

Highly dangerous sites

The following highly dangerous sites (such as the neck and penis) are only discussed here because some people do try to inject in them. It is impossible to ensure injecting in these sites will be safe. While we provide this information as a guide, we STRONGLY recommend that you speak to a medical professional and your local drug user organisation about the risks - whether you are already injecting in any of these sites, or just thinking about it.

It is impossible to guarantee a 'safe' injection in the neck, or in and around your sexual organs, and you should consider the use of other veins, or other routes of administration. If you've run out of options and don't have any other veins you can find, you should think about:

- Taking a break from injecting and moving to another, (safer) way of using; or
- Taking a break from using, if you can, maybe by trying community or inpatient drug treatments if you need some help.

Breasts

Although there are usually small veins visible in the breasts, especially during pregnancy, it is dangerous to try to inject into them, being so small, they are highly likely to burst. They are also next to milk ducts which can accidentally fill with fluid. There is no direct blood supply to the inside of these ducts, the fluid stays there and there is a high risk of developing mastitis or abscesses. We strongly recommend that you talk to a medical professional and your local drug user organisation about the high risks associated with using this site. You should think about finding a more appropriate site or choose another way of using.

Deep Veins

Sometimes, when all of the more accessible veins are no longer viable, it can be tempting to 'look' for deep veins by simply 'digging around.' If you find yourself doing this, you should speak with someone from your local drug user organisation about alternative injecting sites and about the risks associated with this practice. Perhaps you might want to consider choosing another way of using.

Neck

Self-injecting in the neck is extremely dangerous and difficult to do. It is strongly discouraged. Arteries, veins, tendons and nerves are all very close together in the neck, and this means multiple risks are present.

One particular risk is that self-injection in the neck requires the use of a mirror, and this increases the degree of difficulty, so much so that you may need someone else's help. Involving someone else increases the risk of both BBV transmission (HIV, hep C and hep B) and also the risk of local injury because you lose control over the process and have to trust the skills of the person helping you.

Common complications linked to neck injecting are the same as complications arising elsewhere, and include cellulitis and abscess formation. These can be far more disastrous if they occur in the neck. An abscess, or cellulitis, in the neck can cause dangerous pressure on nerves, it may obstruct the airway, and the infection can easily infect the whole body (septicaemia).

Other problems include:

- Accidental injection into an artery - if this occurs, then the drug and any other matter in the solution will go directly to the brain, potentially causing a range of neurological problems, including stroke;
- Weakening of the blood vessel wall (aneurysm); and
- Nerve damage, including vocal chord paralysis.

We strongly recommend that you talk to a medical professional and your local drug user organisation about the high risks associated with injecting in the neck. You should think about finding a more appropriate site or choose another way of using.

Penis

Injecting in the penis is usually only contemplated when other veins can no longer be found. The penis is a very dangerous injection site, and complications such as local infections are commonly reported. If you do inject into the penis, you should speak to your local drug user organisation about identifying all of the risks involved and how to inject as safely as you can.

Injecting into the penis can result in a condition called priapism - a painful, long lasting (and sometimes permanent) erection. This is caused by the veins becoming smaller and restricting the flow of blood out of the penis. For the penis to return to its normal size the veins must be able to re-open. If this is not possible because of damage from injecting, the erection may not subside.

Some people mistakenly think that 'groin' injecting refers to injecting in the penis. This is not the case, and groin injecting is discussed elsewhere in "Femoral Injecting" below.

We strongly recommend that you think about finding a more appropriate injecting site or choose another way of using.

Groin/femoral injecting

Femoral injecting is considered highly dangerous because of the way in which the femoral vein, femoral artery and femoral nerve are situated – close to each other, yet potentially different for everyone (see diagram below).

In some people these blood vessels can actually cross over each other, while in others they don't.

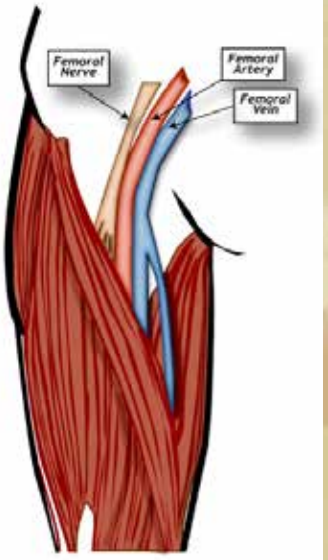
There is a very real risk of hitting the femoral artery when attempting to inject in the groin, so it is important to be prepared to stem excessive blood flow. If you feel a pulse you're likely near the femoral artery – do not attempt to inject there. Accidental arterial injection can sometimes cause weakening of the artery wall (pseudo aneurysm), fungal infection of the artery wall or formation of an abscess over the injection site. These conditions can lead to life-threatening arterial bleeding and infection.

If you do hit the femoral artery, bright red, frothy blood can rush into the barrel of its own accord, as it is subject to arterial pressure. If this happens, STOP IMMEDIATELY & DO NOT GO ANY FURTHER!

Before you gently remove the syringe, reach for something clean and sterile to help stem the bleeding, as blood may spurt from the site when the syringe is removed. Gently apply firm pressure to the injection site until the bleeding stops – this will usually take at least 10-15 minutes. You may need to seek medical help if the bleeding does not stop within this time.

Remember, if you hit an artery, ***DO NOT INJECT!*** Blood in the artery is being pumped down the leg and injecting into it can cause the blood supply to be blocked which can cause tissue 'downstream' to die (e.g. your toes), gangrene in the leg or foot, and eventual amputation of part or all of the leg. If you hit an artery, gently remove the syringe, lie down, raise the limb and apply firm pressure to the site until the bleeding stops. If you are bleeding heavily, if your pulse quickens, if you go pale or feel faint, call 000 for an ambulance.

The diagram on the right shows where the femoral nerve, artery and vein commonly lie – BUT, this is not the case for everyone, and over time, frequent injecting (and scarring) can change their position.



The femoral nerve. arterv and vein

The femoral artery, vein and nerve are very close together although their relative position varies from person to person. The femoral nerve controls the muscles that help bend the knee. It also supplies feeling to the front of the thigh and part of the lower leg. Hitting the femoral nerve causes a sharp pain that radiates down the whole of the leg. If this happens, you will instinctively remove the needle, but do so slowly and be ready to stem any blood flow. If you damage the femoral nerve, it can cause weakness, difficulty with walking and problems with mobility generally, as well as loss of feeling in the leg. Sometimes, slight nerve damage can self-repair, but nerve damage can also be permanent.

Once people have located their femoral vein, they tend to inject in the same place over and over again. Injecting in the same place will cause a hole to form down to the vein which never gets a chance to heal. Eventually, a deep cavity (or sinus) can form at the injection site. Sinuses are permanent tracks from the vein to the skin surface and are caused by persistent use or infection. Recent research suggests that almost everyone with such a 'trackmark' (or sinus) from repeated groin injecting will have scarring in their femoral vein, and will have a deep vein thrombosis (DVT), which clots on the inside of the vein wall. This increases the risk of:

- Infection at the injection site;
- Infection in the general blood stream (septicaemia); and
- Parts of the clots breaking off, and travelling to the lungs (causing a pulmonary embolus) and/or heart (causing infective endocarditis), or brain (stroke).

We strongly recommend that you talk to a medical professional and your local drug user organisation about the high risks associated with femoral injecting. You should think about finding a more appropriate site or choose another way of using.

Blood Borne Viruses (BBVs) and Dangerous Injection sites

It cannot be said enough: whenever you inject, there is blood around, and where there is blood, there is more risk of transmitting and contracting BBVs such as hep C.

If the more accessible veins aren't cared for and get damaged over time, injectors may move on to other areas of the body to find other injection sites, sites that are harder to reach. This often means repeated attempts to inject, more wounds or 'holes', more blood, and an increased risk of hitting an artery. This means even more blood, and probably more chance of needing some help to get a vein, with more touching involved, and, of course, even more chance of BBV transmission.

But remember, if you inject in these more dangerous sites you can still protect yourself and others from BBV transmission and/or re-infection. Hep C and other BBVs are preventable!

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INJECTING MYTHS AND BAD HABITS

This section looks at some of what we call 'injecting myths' and what you should know about them.

Research and experience has shown that the majority of injecting drug users learn their 'injecting technique', or 'how to inject' information, from other (often older) drug users. This can be both a 'good' and a 'not so good' thing. Learning from other drug users shows that injecting drug users want to keep their friends and loved ones safe by teaching them how to use as safely as possible. However, in doing so, sometimes people who inject drugs pick up some 'not so good' habits, things that older or more experienced drug users may have been doing for years without even thinking about it. Some habits (practices or rituals) can not only lead to damaged veins, but also to the spread of bacteria and/or blood borne viruses (BBVs) such as hepatitis C (hep C).

Strokes from air bubbles

You've probably heard the one about how injecting an air bubble can cause a stroke. Whilst it's true that injecting air is generally 'not a good thing', it tends to be somewhat overstated as a risk, especially when compared to other more immediate risks. While some people who inject drugs pay little or no attention to hygiene or cross-infection risks whilst injecting, they display infinite patience in getting rid of the tiniest of air bubbles from their shot.

Compared to the size of the 'average' air bubble in a syringe, it would take a **gigantic** volume of air to cause any real circulatory problems.

People who inject drugs really need more information about much higher priorities such as hygiene and avoiding contact with blood so as not to risk BBV transmission.

'New' veins

Sometimes you'll hear someone say "I thought I was out of veins, but I found a new one here". However, these veins never last because they are not in fact 'new' veins.

What happens is, as veins collapse and circulation gets restricted, the blood is 're-routed' through smaller and smaller veins. If the pressure in a small vein gets too great, it can 'blow up' like a balloon. The walls of these veins are very thin and fragile - sticking a needle into them usually results in a painful bruise. If you (or someone you know) are at the stage of finding these 'new' veins, seriously think about alternative routes of administration, because carrying on injecting can lead to serious, life-long, circulation damage.

Licking the needle tip

It is not uncommon for people who inject drugs to lick the tip of the needle before injecting. While it is understandable that people would want to avoid losing or wasting any of their drug, this will add large numbers of bacteria to the needle and will greatly increase the risk of infection (especially fungal infections such as thrush). The amount of drug in the droplet that is 'saved' will be tiny, and because many drugs are not very effective when taken orally, it will make no noticeable difference whatsoever to the 'shot'. This is one habit or practice that is definitely unhealthy. You should **not lick the needle tip**.

Licking the injecting site

Licking the injection site either before or after injecting (or both) is a common practice among people who inject drugs, and it may be part of an attempt to 'clean' the site. However, licking the injection site will increase the risk of bacterial infection, and could result in the formation of abscesses. Licking the injection site, either before or after injecting is unhealthy. After injecting, you should stop the bleeding with a clean sterile cotton ball or tissue, and you should wash your hands and the injection site both before and after injecting. You should **not lick the injection site**.

'Jacking back'

'Jacking back' refers to drawing blood back into the syringe after the drug solution has been injected. One reason people do this is to make sure that no drugs are wasted by being left in the tip of the syringe. As a small amount of the drug solution will be retained in the tip of the syringe (how much depends on the type of needle and syringe being used), this can make sense in terms of maximising the amount of drug getting into the body.

But, the small gains you get from doing this should be weighed against the extra damage you can do to the vein, including increasing the chance of vein damage and collapse through the increased suction that results. In fact, this practice heavily contaminates your injecting equipment with blood, making the transmission of BBVs like hep C much more likely if, say, the equipment is re-used by another person. It will also make cleaning your equipment (if you later find you need to re-use it) much more difficult. Jacking back increases the risk of vein damage, and increases the risk of BBV transmission.

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VEIN CARE AND SAFER INJECTING

Injecting safely and looking after your veins is incredibly important to your overall health. By following the information on this site you can help keep your veins in as good a condition as possible, and it will also help you avoid blood borne viruses such as hepatitis C (hep C).

Preparation

Choose a safe place to inject, one that is private, clean, well lit, and has running water available.

Make sure the surface you are going to mix up on is clean. You can use soapy water or swabs to wipe down the surface.

Make sure you have everything you need within reach: **new sterile syringes, new sterile water (or cooled boiled water in a clean glass), new swabs, a new filter, clean spoon and a clean tourniquet**.

Wash your hands and arms thoroughly in warm soapy water. This helps remove viruses, bacteria and plain old dirt. You can also use the pure alcohol hand cleansing gels that are readily available in supermarkets and chemists. They are a handy alternative, or addition to your hand washing routine.

If you can't wash your hands or don't have access to the alcohol cleansing gels, then use new swabs (wiping once, in one direction) to clean them. Concentrate particularly on the parts of your fingers and hands that will be in contact with any injecting equipment. Going back and forwards with swabs just spreads the dirt and bacteria around. Allow the swabbed area to dry (It is actually the drying process that kills bacteria). Pay close attention to the tip of the index finger and thumb of the hand you are going to use to make up a filter.

Mixing up

Clean the spoon by wiping once, in one direction, with a new swab and let it dry before you put the drugs in the spoon. Use your sterile syringe to draw up water from a newly opened ampoule of sterile water, or cooled boiled water in a clean glass.

Add the water and use the blunt end of your syringe to mix.

Depending on which drug you intend to use, you may be able to access wheel filters at a local needle and syringe program (NSP). If possible, always use wheel filters, especially for filtering pills or large quantities of liquid. For drugs like heroin and speed (or ice), add a small cotton filter to the mix to draw up through. The best filters are the (freshly opened) sterile cotton balls in your 'fit pack' or a piece of a new, unopened tampon. Also, filters for 'rollies' don't have fibreglass in them (unlike some tailor made cigarette filters), so they're okay too. Use your fingers, not your teeth, to pull apart the filter (the mouth is full of germs).

Gently lay the hole, or eye, of the needle on the filter and draw up the mix.

Remove air bubbles by pointing the needle skywards and tapping the side of the syringe with your finger. The bubbles will rise to the top - push the plunger slowly until all the bubbles have escaped through the eye of the needle.

Injecting

Place the tourniquet above your injection site, but don't tighten it yet.

Wipe the injection site in one direction once, with a new swab.

Tighten the tourniquet, but don't leave it tightened too long. If you are having trouble finding a vein, release it and try again. Opening and closing your hand in a pumping motion can also help raise a vein. As well as this, warm water over your arm or other injecting site can help bring veins up - a clean wash cloth that you wet with hot water and place on the site often works well, but you'll need to re-swab the site after doing this.

Put the needle into your arm at a shallow angle with the eye facing up.

Blood will sometimes appear in the barrel when the needle is inserted in the vein. Slowly pull back the plunger and blood will appear if you are in the vein. If no blood appears, loosen the tourniquet and remove the needle. Keep your arm outstretched and add pressure to the injection site with a clean cotton ball, tissue or toilet paper to stop any bleeding.

Re-swab your new injection site, take a deep breath and start again. When you are sure the needle is in the vein, loosen the tourniquet and slowly push the plunger in. If you feel any resistance or pain you may have missed or 'popped' the vein and will have to start again, preferably using a new needle, and using a different site to give the 'popped' vein time to heal. When finished, slowly remove the needle, keep your arm outstretched and apply pressure to the injection site for a couple of minutes using a cotton ball, tissues or toilet paper. Raising your arm for a minute or so will help stop the bleeding.

Cleaning up

If you think you might have to reuse your own syringe you should rinse it immediately in clean, cold tap water. This will remove most of the blood and help reduce the likelihood of HIV and hep C (and hep B) transmission if someone accidently sticks themselves with the used needle.

Recap your own syringe, mark it and store in a safe place.

Dispose of the water you used to rinse your syringe. If you're sure you won't be reusing your syringe, dispose of it straight after use, without recapping, into a disposal container or a puncture proof, child proof container (one with a lid that can be securely closed). Wherever possible, return your disposal container to the nearest needle and syringe program (NSP). Wipe down the area where you mixed up with soapy water. Where there is the possibility of contact with blood, the area should be wiped down with household bleach. Don't reuse swabs, filters or open water ampoules as they become contaminated once opened. Dispose of this used material in your disposal container or double bag it and dispose of it with, or in, your household rubbish. When you have cleaned up, wash your hands and arms with warm soapy water. If this is not possible, use new swabs to clean them.

Using in groups

When you are injecting with other people you have to be even more blood aware. This includes having your own sterile equipment - syringe, sterile water, swabs, clean spoons, filters and tourniquets. Keeping your own equipment separate and marked will help reduce the risk of mix-ups which can result in the transmission of HIV and/or hep C or B. If you have to divide a mix, everyone will need sterile syringes. Make sure the spoon, water, and filter are all clean or new.

Follow all the steps outlined in 'Mixing Up' and when it comes to drawing up, as long as the syringes are sterile they can go into the spoon and you can pull up your hit.

If you only have one sterile syringe, that's the only one that can go into the spoon. That syringe can divide the other hits into separate clean spoons and people can then draw up their own. It might take a few extra minutes but it can save someone from contracting BBVs.

If there are no sterile syringes the powder should be divided while dry.

Injecting pills

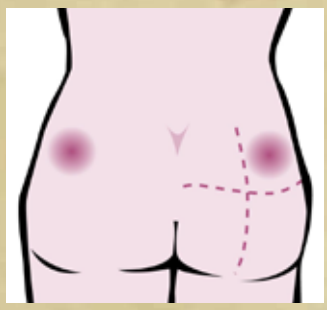
If you are injecting pills, use pill filters (wheel filters) if you can get them. If you can't, filter your mix at least three times to remove the impurities that can cause problems to your veins and blood flow.

Intramuscular Injecting

Injecting speed, cocaine, pills or methadone into muscle can cause abscesses. Some material used to cut gear can do the same. The safest muscle-injecting site is your bum. If you try to inject into your bum or thigh, be particularly careful to avoid hitting the sciatic nerve. Damage to this nerve can be irreversible and can cause chronic pain, even paralysis. For intramuscular injecting, follow this procedure:

1. Keep the site straight and as relaxed as possible;
2. Only inject in the upper and outer area of the buttocks as shown below;
3. Using a new swab, clean the injection site with a single wipe;
4. Holding the barrel of the syringe, push the needle in with one swift jab, not quite up to the hilt;
5. Draw back. If you get blood in the syringe, you have hit a vein or an artery. Pull the needle back a centimetre and try again; and
6. As long as the syringe remains free of blood, inject slowly and continue to relax.

Injecting into muscle requires longer needles - at least 2.5 centimetres long and 23-gauge or 21-gauge are both suitable. The effects may take 10 to 20 minutes to come on so you need to be patient and wait a while before thinking about using more.



Skin-popping (injecting under the skin)

Skin-popping speed, cocaine, pills or methadone can cause abscesses. Some material used to cut gear can do the same. The most common sites for skin popping are the forearms, thighs and stomach. As with intramuscular injection, the effects take 10 to 20 minutes to come on, and the following procedure is recommended:

1. Wash & dry the injection site;
2. Wipe the injection site in one direction with a new swab;
3. Relax and slide the needle under the skin at a shallow angle; and
4. Inject a maximum of 0.5 mL (50 units on a 1mL. syringe). This will create a little bubble under the skin. If you have more than 0.5 mL of liquid, withdraw and repeat the whole process at a new site (with a new needle).

Sharing equipment and tastes, helping others, or being helped to inject, all pose risks for the transmission of BBVs (hep C, hep B, HIV), as well as bacteria and germs. The surest way to avoid the transmission of BBVs is not to inject.

There may come a time when you can't access veins anymore, but are unable to stop using drugs altogether. If this happens, the following alternatives to injecting might be useful for you.

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ALTERNATIVES TO INJECTING

Smoking or 'chasing'

The smoking of commonly injected drugs clearly offers lower risks than injecting, both in terms of BBV transmission and risk of overdose. However smoking can cause other harms such as throat and lung problems as well as cracked and bleeding gums and lips. When compared with injecting, though, smoking your drugs poses:

- A lower risk of viral transmission;
- A lower risk of overdose;
- Fewer health risks;
- An alternative for those who are finding veins difficult to locate; and
- An alternative route of administration whilst injecting sites are given time to heal.

Smoking heroin

Smoking heroin - 'chasing the dragon' - gives your veins a break and it's safer because there's no way of exchanging blood. While pink and brown rocks or brown powder are best for smoking, any kind of heroin can be used this way, although white powder, because it doesn't burn as well as the others, may lose some of its potency. It takes about 5 minutes for the effects to come on. This is the procedure:

1. Use a small piece of foil, about 8 centimetres square, which makes it easier to hold;
2. Roll up a bank note or a piece of card into a tube;.
3. Smear a bit of cooking oil on the foil to prevent the gear from burning too quickly. Then put a small amount of heroin on the foil; and
4. Hold the foil in one hand, and with the tube in your mouth, light the underside of the foil. As the smoke appears, inhale it sharply through the tube. You have to be quick to make sure the smoke doesn't rise and escape before you are ready.

You should wait at least five minutes before smoking more.

Smoking crystal meth/ice

Smoking crystal means breathing in toxic chemicals that can damage the lungs and cause respiratory problems. Be aware that smoking ice, especially with dry lips and mouth, can lead to small cuts, and some users have reported that the ice smoke has caused small abrasions on the gums and in the throat. If these bleed and you're sharing a pipe, there's the possibility of transmitting hep C or other BBVs like HIV or hep B. Over time, gargling salt water will help heal any abrasions.

The best way to smoke crystal is to use a glass pipe. A gas (jet) lighter will make more heat than a regular lighter, which will melt the crystal faster and mean less goes to waste. Gas lighters don't leave black marks around the pipe, so you also get a better idea of what's happening in the pipe. Make sure the crystal is melted before inhaling slowly. Let the pipe cool down once in a while. With continuous use, pipes can get very hot and burn the skin. They can also get brittle and break.

Snorting

As with smoking, snorting (or sniffing) drugs is usually safer than injecting as the risk of BBV transmission is lower. Transmission can occur, though, if straws, etc, are used by more than one person. Prolonged, frequent snorting of drugs (especially cocaine) can lead to damage to the mucous membranes in the nose and can also cause, or exacerbate, sinus problems.

Make sure the drug you are going to snort is well chopped up (powdered): rough crystals can tear the nasal lining, which means risking the presence of blood. You can use a cleaned razor blade or a cleaned knife to get rid of lumps and then to make a line on a clean surface. Clean the blade of the knife or razor blade with a new swab, wiping in one direction only. Insert a straw or a rolled up bank note (or card) into one of your nasal cavities and then inhale the line in one go. Be careful not to exhale before you've snorted the whole line, if you have damaged mucous membranes in the nose you risk transmitting hep C and other BBV's, as well as wasting the drugs you have just snorted. After you've snorted wait at least 10 minutes to see how strong the effect is before deciding whether to use more.

Swallowing

Of the most commonly injected drugs, swallowing is most effective for amphetamines, which are often taken in this way, either by mixing the drug in a drink, or by 'bombing' (wrapping it in a cigarette paper to reduce the unpleasant taste).

If you are contemplating using a 'risky' substance (e.g. what is left on a spoon after filtering), swallowing usually represents the safest way of getting it into the body.

For those who inject benzos (benzodiazepines) - often as crushed tablets - taking them by mouth or dissolving them under the tongue is by far the safer alternative and the effect, although slower to 'come on,' will pretty much be the same.

Rectal administration: 'shafting'

The functions of the rectum are to store faeces and reabsorb fluid in order to prevent dehydration. It has an excellent supply of blood, and this means that anything introduced to the rectum is quickly absorbed. This includes your drugs.

If you're considering this method, the following is recommended:

For liquids -

1. Mix and draw up into a syringe. Make sure the needle is removed from the syringe (essential!);
2. Insert the tip of the syringe into the rectum; and
3. Push the plunger in.

For solids -

1. Wrap drugs in cigarette paper;
2. Use lubricant if necessary; and
3. Insert by pushing the wrapped drugs inside your rectum.

Stopping drug use

There are many different options for people who want to stop using drugs. Often people will need to try more than one option to find the one that works for them best. The different options available include:

- Pharmacotherapy treatments (i.e. methadone and buprenorphine);
- In-patient and Out-patient detoxification programs;
- Residential rehabilitation;
- Self-help groups (i.e. NA, AA, Smart Recovery etc); and
- Counselling and Support.

If you want to stop your drug use seek advice from a medical practitioner or your local drug user organisation listed in the contact section at the back of this resource.

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AIVL VEIN CARE GUIDE

VEIN CARE AND THE CIRCULATORY SYSTEM

The circulatory system plays an important role in relation to understanding vein care, blood borne viruses and injecting drug users' health, so it's important to understand how it works and how we can help care for our own systems.

Basics of the circulatory system

- The circulatory system aids the flow of blood to all tissues in the body;
- The transfer of oxygen and nutrients between the cells and the blood takes place through microscopic vessels called 'capillaries'; and
- The heart is the pump that drives this flow of blood to the capillaries in the body's tissues, to facilitate oxygen transfer through the body and then back to the lungs to be re-oxygenated.

Arteries and veins

Arteries take oxygenated blood from the lungs to the rest of the body. They progressively branch out, getting smaller in size until they reach the capillaries.

The blood then passes through the capillaries in the tissue, releases its oxygen, and is collected in small veins, which by joining together progressively increase in size. The veins return de-oxygenated blood to the lungs via the heart.

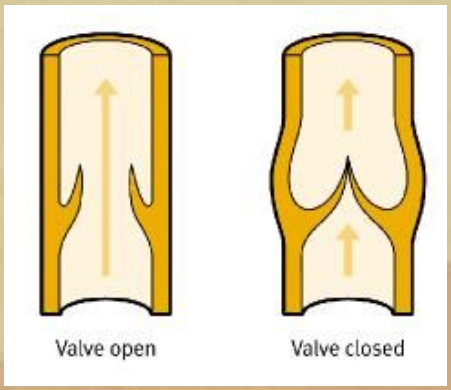
Injecting drugs and the circulatory system

All drugs injected into veins must follow a route back, through veins of increasing size, to the heart.

From the heart, the drugs are pumped the short distance to the lungs where the blood passes through the capillaries of the lungs to be re-oxygenated, and then returns to the heart to be pumped to the brain.

When a drug is injected into a vein, it reaches the brain via the lungs in seconds to minutes. The drug is diluted across the whole blood stream, but a large proportion of blood goes directly to the brain causing the experience of the 'rush' or 'hit'.

Valves are only present in veins, and assist the flow of blood back to the heart by preventing back flow (see below).



The fact that all venous blood must pass through capillaries in the lungs before going to the arteries means that solid matter and air bubbles that are injected into veins cannot reach the brain, except in very rare circumstances - it is only possible if someone has a hole between the chambers of the heart - they will instead get trapped in the capillaries of the lungs. The idea that they can cause strokes (damage to the blood vessels in the brain) is untrue for the vast majority of people.

Differences between arteries and veins

General differences between arteries and veins have been summarised below;

Arteries

- Carry blood away from the heart;
- Carry oxygen-rich blood (except between the right side of the heart and the lungs);
- Hold bright red blood;
- Blood is carried at high pressure;
- Bleed profusely - spurt blood;
- Served by many nerves;
- Have thick walls;
- Are very elastic/muscular;
- Have no valves;
- Are less numerous;
- Have a recognisable pulse; and
- Are mostly deep.

Veins

- Carry blood towards the heart;
- Carry oxygen-depleted blood (except between the lungs and the left side of the heart);
- Hold dark red blood;
- Blood is carried at lower pressure;
- Do not bleed profusely - ooze blood;
- Served by fewer nerves;
- Have thin walls;
- Are not as elastic/muscular;
- Have valves;
- Are more numerous;
- Have no pulse; and
- Are deep and superficial.

Injecting in the same direction as blood flow to the heart

When injecting, it's very important to inject with the flow of blood – ie towards the heart. While it can be difficult to self-inject in the correct direction in the legs and backs of the forearms, it's important that it's done in this way. If you inject with the needle pointing in the wrong direction, more damage is done to the vein (and to the valves in the vein), and the fluid being injected is forced in against the flow of the blood. If drugs are injected too fast, or against the flow of the blood, the veins will not be able to cope with the pressure of the extra fluid. When this happens, fluid can escape from the vein, around the needle, causing a 'missed hit.' This can be reduced by injecting slowly, and by injecting in the correct direction.

Injecting in the wrong direction can also lead to swelling, bruising, and decreased (or lost) circulation – and could ultimately lead to the potential loss of extremities (such as fingers).

Consequences of blocking arteries and veins

Injecting increases the risk of blocking veins and arteries. There is only one arterial route to each area of tissue in our bodies. If an artery is blocked for a length of time, the tissue it supplies will die.

Venous blood tends to be more adaptable. Veins form a complex network with many junctions. If a vein becomes blocked, blood can find its way through a smaller vessel further back down the system. It is when these smaller vessels become overloaded with blood that swelling occurs in the hands or feet.

Collateral circulation

When a vein becomes thrombosed or obstructed, blood can no longer flow through it to return to the heart. The blood will therefore take an alternative route, using other smaller blood vessels to get around the blockage.

This diversionary circulatory route is called 'collateral circulation.'

If most of your veins become obstructed, collateral circulation may result in the appearance of 'new' superficial veins on or near the skin's surface. However, you should avoid injecting into these 'new' veins. They will most likely be small veins engorged with the extra blood they are forced to circulate through your body. They tend to have really thin walls making them difficult to inject into. The most likely result of injecting into these veins is that within a few injections they, too, will become damaged and will no longer be viable.

If the remaining veins are also damaged, then the return of venous blood from the affected limb is likely to be even more severely restricted. This will lead to slower blood flow out of the arm and lead to the limb becoming swollen and blue, becoming more vulnerable to infections, abscesses and ulcers.

Artery injecting

The message is really simple: if you can feel a pulse, you've found an artery and you should NEVER inject there. Arterial injecting can happen accidentally, usually when someone is trying to find a deep vein (such as the femoral vein). The potential to hit an artery is one of the main reasons that deep vein injecting is so risky and should be avoided.

Although most arterial injections are accidental, occasionally people attempt arterial injection deliberately. Deliberate arterial injection should be avoided at all costs. Injecting drugs (especially poorly dissolved drugs such as crushed tablets) can easily cause blockages 'downstream' in the capillaries (for instance in toes and fingers), resulting in tissue death and possible amputation.

If you hit an artery by mistake, or otherwise, you should:

- Immediately withdraw the needle - do not complete the injection;
- Put strong pressure on the site for at least 15 minutes;
- Raise the affected limb if possible; and
- Seek medical advice.

Arterial injection can sometimes cause weakening of the artery wall (pseudo aneurysm) or fungal infection of the artery wall. Both conditions can lead to life-threatening arterial bleeding.

AIVL Australian Injecting & Illicit Drug Users League

AIVL VEIN CARE GUIDE

AIVL AND AIVL MEMBER ORGANISATIONS

National

AIVL
Australian Injecting and Illicit Drug Users League
Unit 26, 85 Northbourne Avenue, Turner, ACT 2612
GPO Box 1552, Canberra ACT 2601
(02) 6279 1600
www.aivl.org.au

Australian Capital Territory

CAHMA and The Connection
Canberra Alliance for Harm Minimisation and Advocacy
Level 1, Belconnen Churches Centre, Cnr Cohen St & Benjamin Way, ACT 2617
(02) 6253 3643
www.cahma.org.au

Victoria

HRVic
Harm Reduction Victoria
128 Peel St, North Melbourne, VIC 3051
(03) 9329 1500
www.hrvic.org.au

New South Wales

NUAA
NSW Users and AIDS Association
Level 5, 414 Elizabeth St, Surry Hills NSW 2010
(02) 8354 7300 or 1800 644 413
NSP 345 Crown St, Surry Hills NSW
(02) 8354 7343
www.nuaa.org.au

Tasmania

TUHSL
Tasmanian Users Health Support League
tuhsltaste@gmail.com

Western Australia

Peer Based Harm Reduction WA
Perth Suite, 21-22, 7 Aberdeen St, Perth WA 6000
(08) 9325 8387
www.harmreductionwa.org

Bunbury
97 Spencer St, Bunbury WA 6230
(08) 9791 6699
www.harmreductionwa.org

Queensland

QUIHN
QLD Injectors Health Network
1 Hamilton Place, Bowne Hills, QLD 4006
(07) 3620 8111
Free Call: 1800 172 076
www.quihn.org

Gold Coast
Shop 12/89-99, West Burleigh Rd,
Burleigh Heads, QLD 4220
(07) 5520 7900
Free Call: 1800 172 076
www.quihn.org

Cairns
60 Pease St, Manoora, QLD 4870
(07) 4032 1463
Free Call: 1800 172 076
www.quihn.org

Townsville
47 Thuringowa Drive, Kirwan, QLD 4817
(07) 4735 8828
Free Call: 1800 172 076
www.quihn.org

QuIVAA
QLD Injectors Voice for Advocacy and Action
1 Hamilton Place, Bowen Hills, QLD 4006
(07) 3620 8111
https://qnada.org.au/location/quivaa-queensland-injectors-voice-advocacy-action/

South Australia

Hepatitis SA
Hepatitis South Australia
3 Hackney Rd, Hackney, SA 5069
(08) 8362 8443
Info Line: 1800 437 222
www.hepsa.asn.au

Northern Territory

NTAHC
Northern Territory AIDS and Hepatitis Council
46 Woods St, Darwin, NT 0800
(08) 8944 7777
www.ntahc.org.au