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 (see figure below) 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 because, being so small, they are highly likely to burst. They are also next to milk ducts which can accidentally
fill with fluid. Because 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. 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 about 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)
errection. 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 life-threatening 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 following diagram 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 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.

For further information on femoral injecting you can also click here for the AIVL Femoral Injecting resource.

**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!