

## Better Vein Care/Safer Injection Guide

-- Text to Explain the Images --

Purpose: The 23 images on the poster and postcards represent opportunities for initiating and developing discussions on various aspects related to taking better care of one's veins and reducing the likelihood of disease transmission through the process of injection. These two protective pursuits are complementary and synergistic in the spirit of reducing drug-related harm. Please use these materials to engage people in discussions about positive changes they may choose to make. These images are not meant to be prescriptive or exhaustive about the practice of injection, merely a beginning to what is a bountiful set of options for improvement and a tool for overcoming the damage caused by silence and shame around injection.

Note: You are encouraged to take this material as your own and add to it through your experiences and those of others around you. If translation, in any of the ways imagined, can contribute to the effective use of these images please do it! Please share your improvements with us so we may share them with others...

**Image #1: Cultivation of Good Veins** -- Everybody has veins and, although of different sizes and shapes, they serve the same function -- to carry blood as it flows back to the heart. How easy it is to see or feel your veins in your arms is due to many factors such as genetics, your size, the level of activity with your arms, and how well you've taken care of your veins. The more prominent your veins are the easier it is to see or feel them and access them through injection. One way you can control the ease of access to the veins in your arm is by controlling the size of the muscle fibers in your arms.

In short, the bigger the muscle fibers in your arms the more the veins in your arms will stand out and the easier the access you'll have to these veins. The more you exercise your arms the bigger your muscle fibers will get. As the muscles get bigger they will both push up and make the veins more prominent and also as the veins get more traffic in blood returning to the heart they will be easier to see and inject into.

Regardless of what condition your veins are in now, exercising your muscles will make accessing your veins easier.

The type of exercise doesn't matter so much as you keeping it up. One heavy session of exercise will not do as much to stimulate the growth of your muscles as ongoing smaller efforts. Even squeezing a ball or making a clenched fist over weeks or months can make a noticeable difference in the appearance and/or accessibility of your veins.

**Image #2: Learn More About Your Veins** -- As veins carry blood back to your heart it is important for them to not allow the blood to flow backwards - away from the heart. To prevent this veins have valves in them which allow blood to flow only toward the heart. You can find these valves by running your finger along a vein until you notice, by its shape or by its color, that the blood has stopped following your finger. When you let up your finger the blood fills up this space. The place where the blood stops flowing away from the heart is the location of a valve. You have to get to know your own veins to learn where your valves are.

Why are valves important? The better condition you valves are in the shorter the space you need to plump up in preparation for injecting. For example, if you had a piece of hose that was three feet long and one that was one foot long and you could only squeeze these two different lengths of hose with one hand, which one would you be able to get larger and thus more ready to make a successful injection into? In other words, by protecting your valves you are allowing greater ease and less destruction to your veins in injecting.

By learning to identify and then injecting above or below the valves in your veins you make it much easier to access the vein with a needle. Easier access equals less damage, less infections, and quicker healing.

**Image #3: Clean Surfaces** -- With Hepatitis B and C, which can live on surfaces for many months, you are at risk of diseases from surfaces. Therefore, it is possible to reduce or eliminate risks from surface contagions by use of clean hands and clean surfaces.

This image shows the making of a new, clean surface for preparing and injection. By turning to the middle of a paper pad or to an unread section of a newspaper you are likely avoiding possible sources of previous contamination. Preparing and making a shot with clean hands (washed in soap and water) and clean/new surfaces should greatly reduce hepatitis risks.

**Image #4: Filters** -- All filters are not created equal! The ideal filter would be sterile, require no manipulation to get it the right size, and have fibers which would not easily break off nor carry poisons (or flavorings as they are sometimes called).

Each of the filters on the bottom of this card require manipulation by hand, ideally just washed had, but nevertheless hands, From left to right, a tampon, cigarette filter, cotton ball, and Q-tip. All have to be screwed with to obtain the proper size thus giving an opportunity for contamination. As well, the cigarette filter is composed of relatively inflexible fibers which break off as the right size filter is formed. These small particles and the poisons in the cigarette filter are drawn up into the syringe and become part of the shot. Ultimately, these fibers get caught up somewhere in the body, probably the lungs where they can cause infections (cotton fever) and obstructions.

The four sizes of cotton pellets shown above are pre-sized so they don't need to be fooled with and they are made of flexible natural cotton fibers. Under ideal circumstances they would be sterilized too!

**Image #5: Sterile Drugs of Known Purity and Sterile Water** -- Each of these images shows three vials of water on the top. The one on the left is distilled water which is not sterilized and usually distributed because of cost limitations in many places. It allows one to have a clean source of their own water so they don't have to use someone else's. The other two vials on top are sterile water or sterile normal saline (salt water made from one part salt and 100 parts water) and ideal for preparing a clean shot. Saline is more like our blood and therefore less shocking to our system when it is injected. Having sterile water definitely gives a cleaner injection. You can also boil water for 10-15 minutes (at sea level) and this will kill all germs in it.

The two vials on the bottom of each panel in this image are sterile drugs of known purity. On the left is a 100mg vial of heroin and on the right a vial of methylamphetamine. Both these vials contain sterile drugs on known purity and thus can greatly contribute to a safer injection. While such drugs are not usually in this sterile and known purity form it is important to show the possibilities. In reality, the contaminates and unknown purity of drugs can be known through testing and purification but this is beyond what we're showing here.

**Image #6: Syringes and Needles** -- While there are a bunch of different syringes both in manufacturers and in sizes and function there are important features to consider about each. First and most importantly, is your syringe sterile and new? Every injection should be made with a sterile new syringe, just like in the hospital to maximally prevent disease and tissue damage which comes from using a syringe a second time. In general, the smaller the needle you can use the less vein and other tissue damage you will cause via injection but there are other considerations in choosing the best syringe for you as well.

On the lower right of the card are two different syringes. One, on the bottom, which has a separate needle and the other, on top, which has the needle and syringe as one piece. While there are advantages and disadvantages to both of these syringes it is important to note how much blood is left in the syringe on the bottom compared to the used syringe above it. On the other hand, insulin syringes are not designed for IV injections nor is it possible to draw from the cooker with the needle removed thus avoiding possible damage to the needle.

Which syringe is right for any given person depends on them, what they are injecting, where they are injecting and how they are preparing their shot. Talking about all the options and coming to use what you feel is the best syringe for you is the goal.

**Image #7: Injecting Solids (pills, crack, etc.)** -- If you will be injecting something which is solid it is crucial to do your best to get it into a liquid as much as possible (duh!). Using a technique like crushing solids between two spoons is a way of doing this which gives good control and can make a fine powder. The finer the powder the easier it is to dissolve.

**Image #8: Ties for Plumping Up Veins** - The top image shows several types of things that can be used as ties or tourniquets. They are (from left): a piece of rope, a leather belt, a terry cloth belt, a rubber hose, and a piece of bicycle inner tube. The bottom photo shows the steps in turning a popped bicycle inner tube into a nice tie.

Some things to think about with a tie:

- is it so thin that it will hurt your skin when you pull it tight?
- does it stretch? If so, it will be much easier to pull it tight and easier to release, an important part of a gentler injection (see image #19).
- Is it easy to make, cheap, available, and does it come in various lengths and widths so it can be fit to the person?
- Can you clean it? This is critical especially if you and someone else use the same one. Blood on a tie can be a source of infection.

**Image #9: Safer Places to Inject** - While it is possible to find a vein in many parts of the body with enough knowledge and experience, the arms offer an easily accessible and relatively uncomplicated point to find a vein. This image illustrates several places one can tie off and maybe find a decent vein to inject into.

As the center image illustrates, no matter which way you turn your arm you are better off always injecting in the direction of the flow of blood -- which, in veins, is always towards the heart. By injecting with the flow of blood you may avoid problems caused by creating scar tissue or clots which disturbs the blood flow -- kinda like putting your hand against the flow of water versus the smoothness when with the flow.

Veins are usually nearer the surface and their blood is a darker red and under less pressure than arteries. If you decide to inject in your neck be especially careful of cleanliness because infections there can go directly to the brain and be deadly. If you choose to inject in your groin know that a large nerve and artery lie right next to the vein.

The warmer your body the more blood will be flowing through your veins. This is your bodies way of cooling you off. The colder you are the less blood will be flowing through your accessible veins. This is your bodies way of keeping you warm.

**Image #10: A Typical Process for Preparing an Injection of Salt Heroin** - Salt heroin refers to a type of heroin which is usually easier to dissolve in water than base heroin. Base heroin needs to be acidified with an acid, such as ascorbic acid (vitamin C), before it can be adequately dissolved in water. Generally, base heroin is more common in Europe and salt

heroin is more common in North America. Both types of heroin are usually heated to assist with dissolving them.

From left to right

- Using a syringe to measure an amount of water or saltwater to add to the heroin.
- Heating the cooker (in this case a bottle cap but could also be a spoon, etc.) to help dissolve the drug and water. This heating does not kill all germs. You would have to boil it for at least ten minutes to kill all germs and at this point all the liquid would be gone...
- Taking a single cotton pellet, with minimal contact with your, hopefully washed, fingers and dropping this into the cooker as your filter. A filter is needed because there is usually some stuff that would not dissolve and it will clog the syringe.
- Drawing the liquid up through the filter.
- Tapping the upright syringe to force air to the top then pushing out the air.
- Letting the liquid cool down prior to injection.

**Image #11: Some Other Preparation Considerations** - On the left is adding dry powdered ascorbic acid - an additional step needed for injecting base heroin. Powdered ascorbic acid is less damaging to use than vinegar (too strong) or lemon juice (can contain a fungus which infects your eyes) or lemon-flavored drinks (which also have other stuff in them). Adding dry ascorbic acid allows you to take some out if you add too much by mistake. Using as little as possible will save your veins damage when injecting it.

On the right is drawing up cooked heroin from a spoon used as a cooker through the barrel of a syringe. This is best done using a larger cotton pellet than that used to draw through a needle. One advantage of using the barrel without a needle to draw with is the needle will not be dulled in this process and thus make for a less painful and damaging injection.

**Image #12: Overdose Management** - The most critical thing to do if someone overdoses on heroin is to keep them breathing! Knowing and using rescue breathing/cardio-pulmonary resuscitation (CPR) will save lives as might naloxone, the drug shown here. Although naloxone has no effects on its own it dramatically reverses the effects of opiates. If given intravenously naloxone reverses an overdose almost instantly, injecting it into a muscle takes only a little longer to work and is usually much easier and quicker to do. While 1ml (0.4mg/ml) IV/IM is the suggested initial dose more can be given if there is no response up to 10ml, at which point the overdose is probably not opiate induced. If you only give a naloxone shot under the skin, and not into the muscle it takes longer to have an effect and unless you are breathing for the person they could die. Breathing for them until they do it on their own is always a good idea.

In addition to possibly performing miracles in case of overdose, naloxone also stimulates withdrawal in those who are opiate addicted. Also, naloxone's effects only last 60 to 90 minutes and so, depending on the length of action of the opiate used, the overdose can return after the naloxone wears off. Clearly, learning about naloxone's benefits and limitations is very important to using it helpfully. Discussing 911, rescue breathing/CPR, naloxone and other overdose management techniques with the people you inject with is critical to being prepared for effective action in case of an overdose.

**Image #13: More Liquid = More Dilute = Less Damaging to Your Veins** - Regardless of the drug, or the mix, the more water or saltwater (one part salt-100 parts water) there is in your shot the less damage it will cause to your veins when injected.

**Image #14: Having Something Clean to Stop the Bleeding** - Finding some clean cloth or tissue paper and putting it next to you before you inject will help prevent the spread of hepatitis B and C. Make sure the material hasn't been used or otherwise handled and that it

is thick enough for you to put strong pressure on the injection site after you inject to stop the bleeding without soaking through.

Since hepatitis B and C can live on surfaces for months this step is critical in avoiding infections -- a finger or cloth which has been in contact with an unclean or unknown surface can easily pass germs.

**Image #15: - Clean Hands and Injection Sites** - Soap and water are very effective at both killing and loosening and washing away all kinds of germs which can cause infections including HIV and hepatitis B and C.

Washing your hands and potential sites of injection prior to preparing your shot will greatly reduce the amount of germs around and thus their potential for getting into your body.

It doesn't appear to matter what kind of soap you use as long as you make a lather (rubbing well) and rinse well. It even appears than soap and water make for cleaner skin than wiping with an alcohol pad prior to injection. As well, warmer water may help make it easier to find a vein.

**Image #16: Using a Tourniquet or Tie Effectively** - This image shows a set of pictures about one way to use a tourniquet which allows you to be gentle on your arm (making it flat against your skin) and be able to release the tourniquet very easily with a tug of your mouth after you get a hit.

Using a tourniquet or tie well can greatly ease access of your veins and reduce the amount of damage injection causes. In addition to the points about the tourniquet mentioned in image #8, there are some points to tourniquet use which make injection less damaging:

- If you use a tourniquet (even if you can find a vein well without one) you make your vein fatter and thus easier to hit. The easier to hit your vein is the less damage you will do to your vein and surrounding tissues.
- If you tie the tourniquet in a way you can release it with a slight tug of your mouth (so you are less likely to lose your hit) you can inject into a vein under less pressure and thus have less leakage of blood and drug outside of the vein. As well, you will be more able to taste your shot as you are injecting it and be able to stop or proceed based on how it tastes.
- Finally, if you are injecting alone and do not release the tourniquet after you get a hit and your shot is really powerful it may prevent you from releasing it after your shot and your tissue might die from lack of blood flow.

**Image #17: Wiping with an Alcohol Pad Before Injecting** - While soap and water probably work better, sometimes they are not available so using an alcohol pad or a piece of clean material with alcohol on it can help clean your skin prior to injection. If you tie a tourniquet on and find and wipe several spots you may try to inject into you may be better off than just thinking one spot will do it. Obviously, if the alcohol is dry the shot will sting less.

**Image #18: The Orientation and Position of the Needle** - For minimal tissue damage and more effective drug delivery you should put the syringe, needle hole up, in your skin at a sharp angle like described here. Hole up gives you more control and this angle makes it easier to get the needle point inside the vein.

**Image #19: Getting a Hit and Releasing the Tourniquet** - This image shows a way to minimize vein damage and limit the ingestion of bad drug. On the left - he gets a register/hit as blood enters the barrel as he pulls back on the plunger. On the right - after the register/hit he pulls slightly with his mouth to release the tourniquet and then injects the

drug. With the tourniquet released there is less pressure in the vein and a more immediate feeling of the impact of the drug. This is a critical overdose/poison prevention technique -- while tasting the shot you can stop it if it is something you do not want.

If he waited until he injected the drug before releasing the tourniquet he would have no chance to get the drug back if it was too much or nasty and by injecting into a vein with alot of pressure he would likely loose some drug and bleed more into his tissues which will more likely lead to bruising, slower healing and infections.

**Image #20: Controlling Your Shot** - This image shows a process of injection which allows greater control over your shot. A getting a hit he injects a small amount of drug, stops to taste/feel it (first highlighted picture), injects some more, stops to taste/feel it (second highlighted picture), and then injects the rest. This extra measure of safety can prevent overdoses and other harmful experiences while injecting. Use of this procedure is especially useful when you are not sure of your tolerance and/or are using a newer source or different type of drug.

**Image #21: Stopping the Bleeding** - On the left is a exaggerated image of what using an alcohol pad after injection does -- it stops the blood from clotting and prolonged bleeding leads to more bruising, more infections, and slower healing. The juice under the alcohol pad in this picture is really catsup but it makes the point doesn't it?

On the right is the hard pressure applied to the injection site with a clean material immediately after withdrawing the needle that reduces bruising, excess bleeding and reduces infections and promotes healing. The sooner an injection site heals the quicker you can use it again (after the redness is gone) without making scarring and track marks.

**Image #22: Caring for Injection Sites** - While it is unclear how much putting lotions, creams, or ointments on a site of injection, or other skin wounds, helps promote healing or eases scarring - it can't hurt if you wait for the bleeding to stop. The act of massage and caring for our bodies is never out of place. It also appears true that warm/hot water speeds circulation and thus healing and infection fighting potential. See Josh Bamberger's Guide to abscess identification and treatment at <http://www.anypositivechange.org/joshABpro.pdf>

**Image #23: Capping and Safekeeping** - Placing your used syringes, without recapping in some kind of container which will not allow needles to stick through protects everyone. Your needle exchange should take these containers and a mutually agreeable estimate as to the number inside instead of making you count them -- minimal touching of used syringes is in every one's interest. Breaking off the point leaves a needle, the business end of a stick, floating around somewhere very hard to see. It is always easy to find the point on the end of the syringe. If the needle does break off think about putting the point inside the barrel and putting the plunger back in.

If you do need to re-cap a syringe, one way to do it, with minimal risk of a stick, is to do it with one hand against a surface such as shown here. Ideally, everyone will recap their own syringe.

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Josh Steinmetz