

INJECTING FENTANYL - MINIMISING THE RISKS

NOT FOR GENERAL DISTRIBUTION



Disclaimer

The information contained in this resource is offered in good faith. However we would like to highlight that injecting fentanyl, from patches or otherwise, is **highly hazardous** and can result in permanent injury or death. Despite these risks, the injecting of fentanyl from patches is increasing. The aim of this resource is to ensure that people who are injecting fentanyl, particularly from patches, have the information they need to reduce potential harms as much as possible.

This resource neither condemns nor condones intravenous drug use. It should not be read as encouraging anyone to participate in unlawful activities. The authors take no responsibility for any actions taken, or not, based on the information contained in this resource. Nor does it indemnify readers against any harms incurred.

Acknowledgements

This is a peer education harm reduction resource that has been produced by and for injecting drug users in response to an identified need for harm reduction information in relation to fentanyl injecting within our community.

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About fentanyl

Fentanyl is a very powerful synthetic opioid that is used in medicine to treat chronic pain or as an anaesthetic during surgery. It will often be prescribed when other strong pain killers (such as morphine or oxycodone) are unsuitable or ineffective. Fentanyl is being used by injecting drug users in Australia as a substitute for heroin, methadone, oxycodone, and other opioids.

Fentanyl is about **100 times stronger** than morphine and over 50 times stronger than pure heroin. Fentanyl dissolves in your body fat. This means that your body absorbs it quicker than other similar drugs and the effects can come on much faster. When injected fentanyl gives a rush and a high similar to other opioids.



Injecting fentanyl carries a significant risk of overdose.

In Australia fentanyl is available in injectable form (Sublimaze®), as lozenges (Actiq®), as a nasal spray, and in transdermal patches (Durogesic® and generic versions). It is most commonly prescribed as a patch. For this reason most of the information in this resource deals with the use of patches and minimising the potential harms associated with injecting fentanyl.

Transdermal patches

A transdermal patch is a medicated patch designed to stick to a person's skin where it releases a drug at a controlled and consistent rate. The drug is absorbed through the skin and into the bloodstream. A common example of a transdermal patch is the nicotine patch that is used to reduce cravings in people who are giving up smoking.

The patch is made up of three layers. There is a disposable protective plastic liner over the front of the patch. Behind this is the fentanyl containing layer that is in direct contact with the person's skin. It contains a "store" of fentanyl that is released into the person at a constant rate over a period of up to three days. On the back of the fentanyl containing layer is a protective backing layer that remains on the patch when it is applied.

How much fentanyl is in a patch?

In Australia fentanyl patches come in five different strengths: 12.5 µg, 25 µg, 50 µg, 75 µg, and 100 µg. Because of fentanyl's strength doses are measured in micrograms (µg). A microgram is one thousandth of a milligram.

Fentanyl Conversion Table*

Patch strength (microgram)**	Total quantity of fentanyl	Equivalent quantity in morphine	No. of equivalent 50 mg morphine doses per patch
12.5 µg	2.1 mg	210 mg	4
25 µg	4.2 mg	420 mg	8
50 µg	8.4 mg	840 mg	16
75 µg	12.6 mg	1260 mg	24
100 µg	16.8 mg	1680 mg	32

**This table is a guide only and should be viewed with caution*

***Released hourly over 168 hours*

Remember that the equivalent doses shown in the third column refer to the total quantity of fentanyl in the patch. When you extract fentanyl from a patch for injection you will probably not be able to get all of it out. If you are experimenting with fentanyl for the first time it is important to start with small quantities until you have a good idea of your level of tolerance and you have your extraction technique down pat.

The patch strength on the label indicates the dosage that the fentanyl patch releases each hour when worn. This should not be confused with the total amount of fentanyl in the patch. The patches are designed to be worn for three days before being replaced. In fact the patches contain enough fentanyl to maintain the consistent hourly dose for seven days.

This cannot be emphasised too strongly. As shown on the table on the previous page, a 100 µg patch contains enough fentanyl to release 100 µg every hour for a week.



Even the weakest of the fentanyl patches contains enough fentanyl to cause an overdose in someone who doesn't have a high tolerance for opioids.

When using the conversion table for injecting fentanyl from patches it is important to consider three things:

1. How much morphine do you usually have in a shot?
2. How much morphine equivalent is in the patch?
3. How big a piece of patch do you need to CUT OFF to get the right dose?

Risks associated with fentanyl

People who don't have a tolerance to opioids

Due to its strength fentanyl is associated with a high risk of overdose. This is especially relevant to people who don't already have a tolerance to other drugs like heroin, morphine, or oxycodone. In health services fentanyl is generally only prescribed to patients who already have a tolerance to opioids. The symptoms of fentanyl overdose are similar to the symptoms of heroin overdose. These include depressed breathing, weak erratic pulse, grey lips, unable to be aroused, confusion, slurred speech, 'snoring'. Administering first aid to someone who has had a fentanyl overdose should be the same as for any other opioid. Fentanyl overdoses can be reversed by the administration of naloxone (Narcan®) either by a paramedic or by an overdose witness.

Confusion in dose size

As mentioned earlier, it is easy for people to assume that a 100 µg patch contains 100 µg of fentanyl, the equivalent of about 10mg of IV morphine – not a large dose. In fact, **a 100 µg patch delivers 100 µg of fentanyl per hour and contains 168 hours worth of fentanyl, the equivalent of 1.68 grams of IV morphine – an extremely large dose.** If you are going to inject fentanyl it is vitally important that you know how much you are taking.



Remember that every patch contains a potentially lethal quantity of fentanyl.

Using fentanyl in combination with other drugs

As with other opioids, using fentanyl can be dangerous when it is combined with other drugs. Mixing drugs can dramatically increase the risk of overdose. Fentanyl is particularly dangerous if it is used with alcohol or benzodiazepines such as valium, xanax, serepax etc., or people already have these other drugs on board. This is especially true for first-time or inexperienced fentanyl users who might not have a clear idea of their level of tolerance.

Rapid effect

The effects of fentanyl can be extremely fast when it is injected. A fentanyl injector may suffer sudden loss of breathing and black out almost immediately after shooting up.



It is strongly recommended that if you are injecting fentanyl for the first time you make sure you have a friend with you who can seek help in case you suddenly drop.

Extracting fentanyl for injection – a harm reduction approach

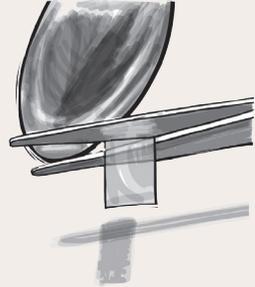
Because of the large quantities of fentanyl contained in patches it is important to divide the patch into several shots. The following method explains the simplest and safest way to prepare fentanyl for injection. Note that the quantities given in this method are for a 50µg patch. If you are cooking a different size patch (e.g. 25µg or 100µg patch) you should adjust the quantities of water used in the mix accordingly.

You will need:

- A large stainless steel spoon or small mixing cup.
- A sachet of vitamin C powder (vinegar or citric acid will be ok, however vitamin C is cleaner and easier on your veins) – these can be purchased from chemists.
- A 3ml or 5ml barrel plus needles and/or butterflies.
- Tweezers.
- Scissors.
- Sterile water and alcohol swabs.
- A bacterial wheel filter – preferably 0.2 micron blue wheel filter.

Method

1. Swab down the pair of scissors and use them to cut the fentanyl patch into evenly sized pieces. Do this before you remove the protective liner from the patch. Try not to let the fentanyl come into contact with your skin or other surfaces.
2. Use the conversion table to work out the amount of doses or shots you can extract from the patch (e.g. a 50 μ g patch will yield about 16 shots of 50mg morphine. For a shot that is equal to 50mg morphine you should cut the patch into 16 equal-sized pieces - 1 shot per piece). The fentanyl should be evenly distributed throughout the patch.



3. Sprinkle a few drops of dissolved vitamin C onto your spoon and roll it around so that it coats the bottom of your spoon. If you do not have vitamin C then you could use white vinegar or citric acid - but vitamin C is best.

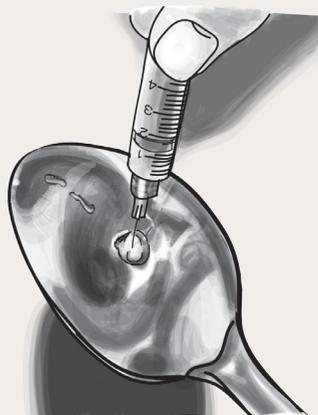
4. Carefully remove the disposable liner from the patch and place the piece into the spoon with the sticky side of the drug containing layer facing down. The thin film of acid on the spoon should prevent the patch from sticking to the spoon - if it doesn't, carefully lift the patch with a clean pair of tweezers, pour a little more acid underneath the patch and try again.





5. Using the barrel, add 1.5ml of water slowly around the edges of the patch so that it floats on top of the water leaving the back of the patch dry. Use a small gas burner or jet lighter to heat the spoon.

6. At this point the piece of patch will appear cloudy. As the mixture approaches boiling point the patch will quickly become see-through. When this happens, slowly add another 1.5ml of water and continue to heat the mixture. When the mixture boils remove the heat and allow the mixture to cool for a few minutes. Remove the remains of your piece of patch and draw the mix into a 3ml or 5ml barrel. The mixture is now ready to inject. Before injecting fentanyl, filter with a 0.2 micron blue wheel filter.



Injecting fentanyl – risks and responses

The method outlined previously is suggested to minimise the risks of injecting fentanyl. It is important to remember that there is no safe way to inject fentanyl. When you're shooting up a drug as strong as fentanyl even a small mistake can have fatal consequences. Because of its strength overdose is the major risk faced by people who inject fentanyl. This risk is even greater when the user is unsure how much fentanyl they are taking or how much their body can tolerate.

It is always better to take a small dose at first. Remember you can always use more later. If you haven't been using fentanyl for long or you are using it for the first time it is better to take small amounts until you are confident about the cooking method and your own tolerance. New users should try to have a friend with them who will provide first aid and call an ambulance if anything goes wrong. If you are able to get a prescription for the overdose reversal drug naloxone (Narcan®), you should do so before injecting fentanyl as naloxone can reverse fentanyl overdoses.

If you believe a friend or family member has suffered a fentanyl overdose you should attempt to wake them up. If they cannot be roused, you should first check their airway, breathing, and circulation.



If they aren't breathing you should call an ambulance and commence CPR. If you have naloxone present administer this as well.

Other hazards and side-effects

Injecting fentanyl from used patches

The cooking method outlined above is intended for use with new, unused fentanyl patches. However, as pointed out earlier, fentanyl can still be extracted from used patches using the same method. If you are injecting fentanyl from a used patch it is important to remember that the patch has spent up to three days stuck on somebody's skin. The used patch can have skin, hair, dirt, bacteria or fungus stuck to it. To reduce the risks of a dirty hit from using a 'dirty' patch it is essential that the fentanyl be filtered correctly using a 0.2 micron blue bacterial wheel filter.

Because it is hard to know how much fentanyl is left in a used patch it is best to assume that they still contain the maximum amount (e.g. 8.4mg in a 50µg patch etc.). This way you avoid the danger of underestimating the size of your shot.

General side effects

As with most powerful opioids, fentanyl has a number of common side effects. These include:

- Nausea.
- Constipation.
- 'Dry mouth'.
- Feeling 'bloated' after meals.
- Drowsiness.
- Erratic pulse and blood pressure.
- Sweating.
- Itchiness.
- Pins and needles.
- Confusion.
- Anxiety.
- Hallucinations.

It is also very common for people using fentanyl to suffer sudden respiratory depression (i.e. stop breathing). Some people can even have rare allergic reactions including hives or skin rash, swelling of the lips and tongue, shortness of breath, confusion, irritability, and non-responsiveness; and in some cases it can be life-threatening.



If you, or someone you know, have taken fentanyl and believe that you/they may be suffering an allergic reaction, call an ambulance immediately. If you are with someone who has taken fentanyl and they stop breathing or appear to have difficulty breathing you should treat it as an overdose. CALL AN AMBULANCE AND PERFORM CPR. IF YOU HAVE NALOXONE, USE IT!

Tolerance, dependence, and withdrawal

If you use fentanyl on a regular basis, by injection or otherwise, you will almost certainly develop a tolerance to it. This means that as you use more fentanyl, you need to take more fentanyl to get the same effect. It is also very easy to get a habit if you are using fentanyl. This means that if you use fentanyl on a regular, ongoing basis, you will soon find that it is difficult to function normally without it. If you get a fentanyl habit you may find that you suffer from withdrawal symptoms if you stop using it.

Regular users of fentanyl may develop a tolerance and become dependent very quickly – often within the space of a couple of days. The withdrawal symptoms of fentanyl are similar to those

of other opioids and can be extremely severe and unpleasant. Fentanyl withdrawal can cause bouts of extreme anxiety or panic. The onset of withdrawal from fentanyl can be as little as two hours after your last shot. Pharmacotherapies such as methadone and buprenorphine have been shown to be effective in treating fentanyl dependence.

Fentanyl analogues

There are a number of chemical analogues of fentanyl that have similar names, e.g. carfentanil, remifentanil etc. These drugs are only used in hospitals to induce general anaesthesia or similar. Fentanyl analogues are not available on prescription in Australia and they are extremely fast acting and extremely hazardous to use. The effects of fentanyl analogues differ from one drug to the next. At present there is little evidence of widespread recreational use of fentanyl analogues in Australia.

If you are thinking of using a fentanyl analogue it is strongly recommended that you get some information about the potential risks associated with the drug that you are using. You can get information from trusted internet sites or you can contact your local drug user organisation.