

WHAT WORKS?

A comprehensive guide to needle and syringe
selection for people who inject drugs

Third edition

Fully revised and updated

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What works?

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Third edition, 2022

What works? will be regularly updated – if you have any comments or suggestions, please send them to andrew@exchangesupplies.org, or call on 01305 262244

Other titles

If you like ‘What works?’ other titles we stock that might be of interest include:

The safer injecting handbook (product code: P303)

Guide to needle size poster (product code: A300)

Full details, and online ordering at exchangesupplies.org

All the needles and syringes in this book are available online at exchangesupplies.org

– our product code is listed underneath the needle length at the top left of every page.

13mm [1/2"] Yellow

Product code: TY13 | UY

What works?

A comprehensive guide to needle and syringe selection for people who inject drugs.

This booklet is written for people injecting illicit drugs such as heroin, cocaine, crack, and amphetamine.

It does not cover the use of equipment for injecting steroids.

Use it to look up the needle you're using, and see if there are any safer alternatives.

If you are opiate dependent, getting into opiate substitution treatment – such as methadone prescribing – can really help you stop or reduce injecting, and reduce your overdose risk.

If you are going to inject, this guide is designed to help you choose the needle that will cause you least damage.

There are a lot of other things you can do to preserve your veins, and reduce the risks of injecting. We also publish a book called 'The safer injecting handbook' which covers everything from injecting site hygiene to injection technique.

Which needle?

If you are injecting, the best needle to use is the shortest, thinnest one that will reach the site, and inject with as little tissue damage as possible.

You can reduce the risk of harm by:

- not letting go of the syringe once the needle has gone through the skin;
- reducing bending of the needle to a minimum;
- changing needles if finding a vein doesn't happen first time; and
- keeping steady while you inject.

How to use this book

Using the 'alternatives' table

By each needle there is a table with a colour coded guide to the alternatives. The aim of the alternatives listing is to give an at a glance guide to other needles that you could use. **The best needle is the shortest, thinnest needle that can reach the vein, and is strong enough to do so.**

We suggest that you start by looking up the needle you're using now, and seeing what the safer alternatives might be.

Alternatives

12 mm	1/2"	Unisharp TM	30G
13 mm	1/2"	Yellow	30G
12 mm	1/2"	Unisharp TM	29G
12 mm	1/2"	Unisharp TM	27G
13 mm	1/2"	Grey	27G
13 mm	1/2"	Brown	26G
16 mm	5/8"	Grey	27G
◊ 16 mm	5/8"	Orange	25G
16 mm	5/8"	Blue	23G
20 mm	3/4"	Grey	27G

Alternative table for the 16 mm orange (page 22)

The needle size ‘traffic light’ system

We have colour coded the alternative needles according to the level of risk.

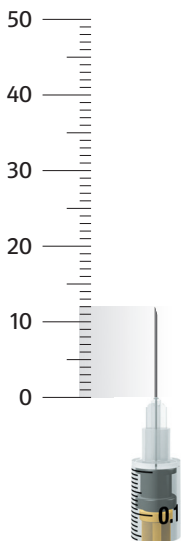
- **Green:** a shorter and/or thinner needle.
- **Light amber:** a needle used for injecting in the groin that is shorter or thinner so may cause less damage, but still has a relatively high risk.
- **Amber:** a thicker needle that is the same length, or a longer needle that is the same thickness: both will cause more damage to the vein and injecting site.
- **Red:** a big step up in risk terms because the needle is significantly thicker and/or longer. It is a needle that people moving to more dangerous injecting sites use. If you are thinking about changing to a needle that is red, please consider stopping injecting.

On the inside back cover is a flap that lists all of the available needles in order of length (then gauge) – if you have this open when reading the book you can see exactly where you are in terms of risk.



12 mm [$\frac{1}{2}$ "] Unisharp^{FIXED} \varnothing 0.30 mm [30G]

Product code: UF30M



The Unisharp 30G fixed is designed for injecting into surface veins.

Being thin, the 30G needle is the best for injecting into small veins, and many injectors have been able to stop injecting in the groin, and use it to inject into very small veins.

The Unisharp 30G fixed is as strong as the yellow detachable Luer slip needles, and other insulin type syringes.

Plungers in a range of colours to prevent accidental sharing.



All thin needles should be used with care – don't let go of the syringe once the needle has gone through the skin, and keep steady during the injection. If you can't find a vein straight away, change the syringe before the needle gets blunt.

FIXED

For many years 1mL syringes have been available with a needle that is attached during manufacture.

Because they were made for diabetics, they are also known as 'insulin syringes'.

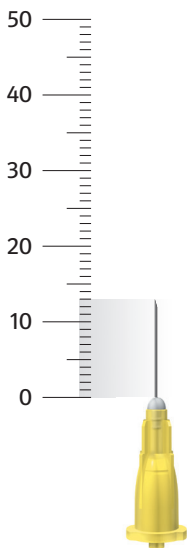
Exchange Supplies fixed needle syringes are made for people who inject drugs, have markings in mL instead of units, and plungers in a range of colours.

Alternatives

▼ 12 mm	1/2"	Unisharp^{FIXED}	30G
13 mm	1/2"	Yellow	30G
12 mm	1/2"	Unisharp^{FIXED}	29G
12 mm	1/2"	Unisharp^{FIXED}	27G
13 mm	1/2"	Grey	27G
13 mm	1/2"	Brown	26G
16 mm	5/8"	Grey	27G
16 mm	5/8"	Orange	25G

13 mm [1/2"] Yellow Ø 0.30 mm [30G]

Product code: TY13 | UY



The yellow needle is designed for injecting into surface veins.

Being thin, the 30G needle is the best for injecting into small veins.

Many people who inject into their groin have been able to use it to find, and use, very small veins.

If you're changing from a thicker needle to a thinner one, you may need to pull back more carefully, pause to see if you're in the vein, and inject more slowly. It's worth being patient – it's causing less damage to your veins.

AVAILABLE AS A TOTAL DOSE
LOW DEAD SPACE NEEDLE



All thin needles should be used with care – don't let go of the syringe once the needle is through the skin, and keep steady until you've finished injecting.

The advantage of a 'detachable' needle is that if you can't find a vein straight away, you can change the needle before it becomes blunt.

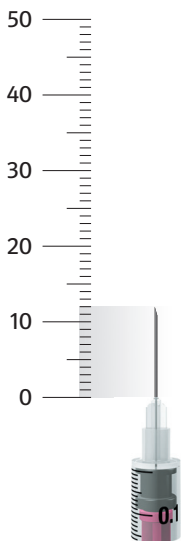
The Unisharp 30G fixed and Luer slip yellow needles are the least harmful to use for injection into surface veins.

Alternatives

12 mm	1/2"	Unisharp^{FIXED}	30G
◆ 13 mm	1/2"	Yellow	30G
12 mm	1/2"	Unisharp^{FIXED}	29G
12 mm	1/2"	Unisharp^{FIXED}	27G
13 mm	1/2"	Grey	27G
13 mm	1/2"	Brown	26G
16 mm	5/8"	Grey	27G
16 mm	5/8"	Orange	25G

12 mm [$\frac{1}{2}$ "] Unisharp^{FIXED} Ø 0.33 mm [29G]

Product code: UF29M



Insulin / Unisharp 29G fixed needle syringes are widely used for injecting into the small veins of the arms, hands, and also sometimes legs and feet.

Plungers in a range of colours to prevent accidental sharing.



If you can find a vein with a 29G or insulin syringe, then you should consider switching to the Unisharp 30G fixed syringe because it has a thinner needle. There is less tissue damage with a thinner needle, and less risk of accidental sharing when using a syringe with coloured plungers.

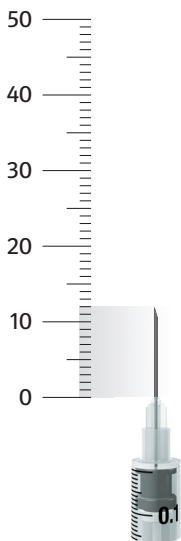
If you have difficulty finding a vein consider switching to a 1mL Luer slip or Luer lock syringe (although see page 58 for more information about the extra risks) and changing the needle before it gets blunt. If you do this pick up more needles than syringes from the needle exchange.

Alternatives

12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	30G
13 mm	$\frac{1}{2}$ "	Yellow	30G
◆ 12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	29G
12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	27G
13 mm	$\frac{1}{2}$ "	Grey	27G
13 mm	$\frac{1}{2}$ "	Brown	26G
16 mm	$\frac{5}{8}$ "	Grey	27G
16 mm	$\frac{5}{8}$ "	Orange	25G

12 mm [$\frac{1}{2}$ "] Unisharp^{FIXED} \varnothing 0.40 mm [27G]

Product code: UF27M



Insulin / Unisharp 27G fixed syringes are widely used for injecting into the small veins of the arms, hands, and also sometimes legs and feet.

Plungers in a range of colours to prevent accidental sharing.



If you can find a vein with a 27G or insulin syringe, then you should consider switching to the Unisharp 29G or 30G fixed syringe because they have thinner needles. There is less tissue damage with a thinner needle, and less risk of accidental sharing when using a syringe with coloured plungers.

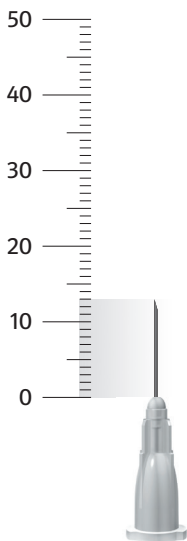
If you have difficulty finding a vein consider switching to a 1mL Luer slip or Luer lock syringe (although see page 58 for more information about the extra risks) and changing the needle before it gets blunt. If you do this pick up more needles than syringes from the needle exchange.

Alternatives

12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	30G
13 mm	$\frac{1}{2}$ "	Yellow	30G
12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	29G
◆ 12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	27G
13 mm	$\frac{1}{2}$ "	Grey	27G
13 mm	$\frac{1}{2}$ "	Brown	26G
16 mm	$\frac{5}{8}$ "	Grey	27G
16 mm	$\frac{5}{8}$ "	Orange	25G

13 mm [1/2"] Grey Ø 0.40 mm [27G]

Product code: USE



A slightly thinner and shorter (and therefore safer) alternative to the commonly used orange needle.

The 13 mm and 20 mm grey needles are widely used for injecting into the small veins of the arms, hands, and sometimes into the legs and feet.

If you need a thicker needle than the Unisharp fixed or yellow needle so that you can inject through scar tissue, or into deeper riskier veins, the 13 mm grey needle is less of a step up the risk ladder than a move to the 16 mm orange needles.

The 13 mm grey needle isn't stocked by all needle exchanges, so you may have to ask yours to order it for you.

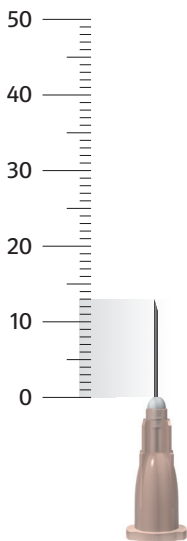
If you're changing from a thicker needle to a thinner one, you may find you need to pull back more slowly and carefully, pause to see if you're in the vein, and inject more slowly. It's worth being patient – it's causing less damage to your veins.

Alternatives

12 mm	1/2"	Unisharp^{FIXED}	30G
13 mm	1/2"	Yellow	30G
12 mm	1/2"	Unisharp^{FIXED}	29G
12 mm	1/2"	Unisharp^{FIXED}	27G
◆ 13 mm	1/2"	Grey	27G
13 mm	1/2"	Brown	26G
16 mm	5/8"	Grey	27G
16 mm	5/8"	Orange	25G

13 mm [1/2"] Brown Ø 0.45 mm [26G]

Product code: USN



A slightly thinner and shorter (and therefore safer) alternative to the commonly used 16 mm orange needle.

The 13 mm brown needles are mainly used for injecting into the small veins of the arms, hands, and sometimes into the legs and feet.

If you need a thicker needle than the Unisharp fixed or yellow needle so that you can inject through scar tissue, or into deeper riskier veins, the 13 mm brown needle is less of a step up the risk ladder than a move to the 16 mm orange needles.

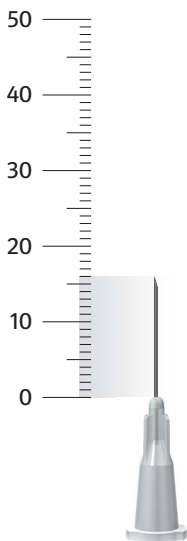
The 13 mm brown needle isn't stocked by all needle exchanges, so you may have to ask yours to order it for you.

Alternatives

12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	30G
13 mm	$\frac{1}{2}$ "	Yellow	30G
12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	29G
12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	27G
13 mm	$\frac{1}{2}$ "	Grey	27G
◆ 13 mm	$\frac{1}{2}$ "	Brown	26G
16 mm	$\frac{5}{8}$ "	Grey	27G
16 mm	$\frac{5}{8}$ "	Orange	25G
16 mm	$\frac{5}{8}$ "	Blue	23G
20 mm	$\frac{3}{4}$ "	Grey	27G

16 mm [5/8"] Grey Ø 0.40 mm [27G]

Product code: A234



For injection into surface veins, the 16 mm grey offers a thinner, less damaging alternative to the widely used orange needle.

Anyone using the 16 mm grey needle for injecting into surface veins could consider one of the shorter or thinner needles.

The 16 mm grey may also be suitable for injecting in the groin by people who are thin, and whose femoral vein has not been pushed back by long term injecting.

Great care must be taken when using a grey needle for injection in the groin to avoid movement or bending of the needle that could break it.

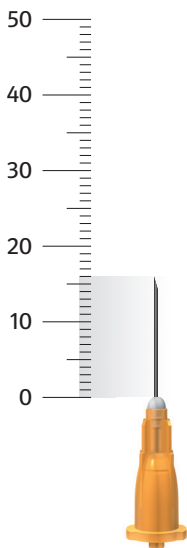
The 16 mm grey needle isn't stocked by all needle exchanges, so you may have to ask yours to order it for you.

Alternatives

12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	30G
13 mm	$\frac{1}{2}$ "	Yellow	30G
12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	29G
12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	27G
13 mm	$\frac{1}{2}$ "	Grey	27G
13 mm	$\frac{1}{2}$ "	Brown	26G
◆ 16 mm	$\frac{5}{8}$ "	Grey	27G
16 mm	$\frac{5}{8}$ "	Orange	25G
16 mm	$\frac{5}{8}$ "	Blue	23G
20 mm	$\frac{3}{4}$ "	Grey	27G

16 mm [5/8"] Orange Ø 0.50 mm [25G]

Product code: T016 | US0



Mainly used for injecting into the veins of the arm and hands.

Some groin injectors, especially those of light build, where the femoral vein is just below the surface and not scarred or pushed back by long term injecting, may be able to use a 16 mm orange needle to reach the vein.

Care must be taken when using an orange needle for injection in the groin to avoid movement or bending of the needle that could break it.

AVAILABLE AS A TOTAL DOSE
LOW DEAD SPACE NEEDLE



Alternatives

If you are switching from a fixed needle syringe to separate needles and syringes, you will probably be able to use a thinner grey or yellow needle rather than orange.

The orange needle used to be the most commonly used detachable needle, although the grey and yellow needles are a better choice for many injectors.

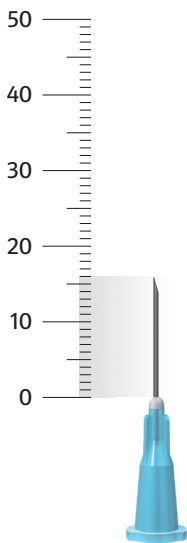
12 mm	1/2"	Unisharp^{FIXED}	30G
13 mm	1/2"	Yellow	30G
12 mm	1/2"	Unisharp^{FIXED}	29G
12 mm	1/2"	Unisharp^{FIXED}	27G
13 mm	1/2"	Grey	27G
13 mm	1/2"	Brown	26G
16 mm	5/8"	Grey	27G
◆ 16 mm	5/8"	Orange	25G
16 mm	5/8"	Blue	23G
20 mm	3/4"	Grey	27G

Although most insulin syringes come with orange caps, they are not orange needles. Insulin syringe needles are thinner than the orange detachable Luer slip needle.



16 mm [5/8"] Blue Ø 0.60 mm [23G]

Product code: A228



The 16 mm blue can be used by groin injectors whose femoral vein hasn't been pushed too far back to be reached by it.

A shorter, and therefore potentially less damaging, alternative to the 25 mm blue needle.

For injectors who have scarring at the femoral injecting site, it offers a slightly stronger alternative to the grey and orange needles of the same length, but it will leave a bigger hole.

Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

If you are injecting into the groin, it would be much safer to use a yellow needle or Unisharp fixed to inject into small veins – if you can.

Alternatives

12 mm	1/2"	Unisharp^{FIXED}	30G
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13 mm	1/2"	Yellow	30G
--------------	-------------	---------------	------------

16 mm	5/8"	Grey	27G
--------------	-------------	-------------	------------

16 mm	5/8"	Orange	25G
--------------	-------------	---------------	------------

◆ 16 mm	5/8"	Blue	23G
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20 mm	3/4"	Grey	27G
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25 mm	1"	Brown	26G
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25 mm	1"	Orange	25G
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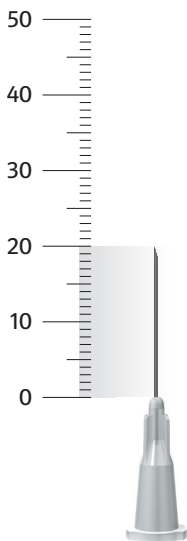
25 mm	1"	Purple	24G
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25 mm	1"	Blue	23G
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25 mm	1"	Green	21G
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20 mm [$\frac{3}{4}$ "] Grey \varnothing 0.40 mm [27G]

Product code: A235



Some groin injectors, especially those of light build, where the femoral vein is not too far from the surface and not scarred, may be able to use a 20 mm grey needle to reach the vein.

Using a 20 mm grey needle will cause less damage to injecting sites and veins than blue or orange needles.

Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

The 20 mm grey needle offers a slightly thinner alternative to the brown and 'long orange' needle.

If you are injecting into the groin, it would be much safer to use a yellow needle or Unisharp fixed to inject into small veins instead.

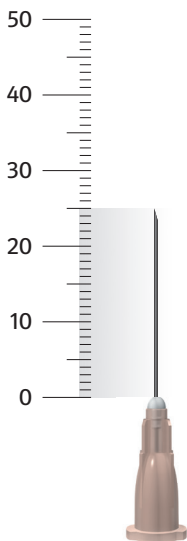
Alternatives

12 mm	1/2"	Unisharp^{FIXED}	30G
13 mm	1/2"	Yellow	30G

16 mm	5/8"	Grey	27G
16 mm	5/8"	Orange	25G
16 mm	5/8"	Blue	23G
◆ 20 mm	3/4"	Grey	27G
25 mm	1"	Brown	26G
25 mm	1"	Orange	25G
25 mm	1"	Purple	24G
25 mm	1"	Blue	23G
25 mm	1"	Green	21G

25 mm [1"] Brown \varnothing 0.45 mm [26G]

Product code: UN



The 25 mm brown is too long for injecting into surface veins.

It is used by some groin injectors instead of a 25 mm orange needle because it is a little thinner, and so makes a smaller hole, and causes less scarring.

Care must be taken when using it to inject into the groin to avoid movement or bending of the needle that could break it.

Alternatives

Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

The 25 mm brown needle is not stocked by all needle exchanges, but it is worth asking for if you're currently using the 'long orange', and don't need the extra strength of the thicker needle to push through scar tissue.

12 mm	1/2"	Unisharp^{FIXED}	30G
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13 mm	1/2"	Yellow	30G
--------------	-------------	---------------	------------

16 mm	5/8"	Grey	27G
--------------	-------------	-------------	------------

16 mm	5/8"	Orange	25G
--------------	-------------	---------------	------------

16 mm	5/8"	Blue	23G
--------------	-------------	-------------	------------

20 mm	3/4"	Grey	27G
--------------	-------------	-------------	------------

◆ 25 mm	1"	Brown	26G
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25 mm	1"	Orange	25G
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25 mm	1"	Purple	24G
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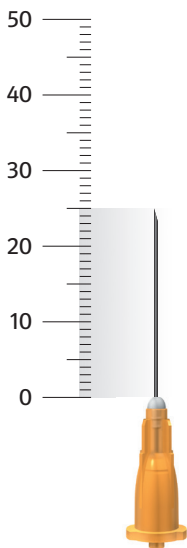
25 mm	1"	Blue	23G
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25 mm	1"	Green	21G
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32 mm	1 1/4"	Blue	23G
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25 mm [1"] Orange Ø 0.50 mm [25G]

Product code: T025 | UO



This needle is too long to use for surface veins.

It can be used to inject into deep veins, including the femoral vein. Whilst still damaging, this will be less damaging than the thicker blue or green needles.

Care must be taken when using an orange needle for injection in the groin to avoid movement or bending of the needle that could break it.

AVAILABLE AS A TOTAL DOSE
LOW DEAD SPACE NEEDLE



Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

This 25 mm orange needle is almost twice the length of a 'short orange' and it is sometimes known as a 'long orange'. However, there is also a 38 mm [1½ inch!] orange available – a seriously long orange.

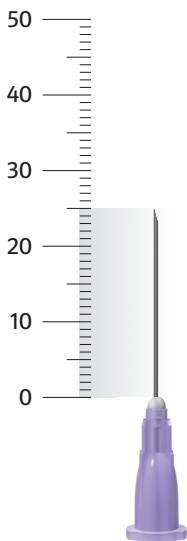
So, if you ask for 'long orange' you should make sure you get this 25 mm / 1 inch needle.

Alternatives

12 mm	½"	Unisharp^{FIXED}	30G
13 mm	½"	Yellow	30G
16 mm	⅝"	Grey	27G
16 mm	⅝"	Orange	25G
16 mm	⅝"	Blue	23G
20 mm	¾"	Grey	27G
25 mm	1"	Brown	26G
◆ 25 mm	1"	Orange	25G
25 mm	1"	Purple	24G
25 mm	1"	Blue	23G
25 mm	1"	Green	21G
32 mm	1¼"	Blue	23G

25 mm [1"] Purple Ø 0.55 mm [24G]

Product code: UP



This needle can be used to inject into deep veins, including the femoral vein. Whilst still damaging, this will be less damaging than the thicker blue or green needles.

Great care must be taken when injecting in the groin to avoid movement or bending of the needle that could break it.

Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

Alternatives

12 mm	1/2"	Unisharp^{FIXED}	30G
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13 mm	1/2"	Yellow	30G
--------------	-------------	---------------	------------

16 mm	5/8"	Grey	27G
--------------	-------------	-------------	------------

16 mm	5/8"	Orange	25G
--------------	-------------	---------------	------------

16 mm	5/8"	Blue	23G
--------------	-------------	-------------	------------

20 mm	3/4"	Grey	27G
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25 mm	1"	Brown	26G
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25 mm	1"	Orange	25G
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◆ 25 mm	1"	Purple	24G
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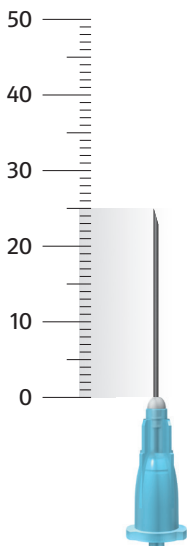
25 mm	1"	Blue	23G
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25 mm	1"	Green	21G
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32 mm	1 1/4"	Blue	23G
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25 mm [1"] Blue \varnothing 0.60 mm [23G]

Product code: TB25 | UB



Some people who inject in the groin use the 25 mm blue needle.

If possible, a move down to the thinner 25 mm purple or orange needle would be preferable.

A thinner needle will cause less damage to the site and the vein. However, if you have a lot of scarring at the injection site, this might not be possible.

AVAILABLE AS A TOTAL DOSE
LOW DEAD SPACE NEEDLE



Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

Injecting in the groin is particularly dangerous and this blue needle is in the middle of the risk range: thinner and shorter than the green or black needles, but slightly thicker than the brown, purple, and orange needles that are available with the same length.

Alternatives

12 mm	1/2"	Unisharp^{FIXED}	30G
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13 mm	1/2"	Yellow	30G
--------------	-------------	---------------	------------

16 mm	5/8"	Grey	27G
--------------	-------------	-------------	------------

16 mm	5/8"	Orange	25G
--------------	-------------	---------------	------------

16 mm	5/8"	Blue	23G
--------------	-------------	-------------	------------

20 mm	3/4"	Grey	27G
--------------	-------------	-------------	------------

25 mm	1"	Brown	26G
--------------	-----------	--------------	------------

25 mm	1"	Orange	25G
--------------	-----------	---------------	------------

25 mm	1"	Purple	24G
--------------	-----------	---------------	------------

◆ 25 mm	1"	Blue	23G
----------------	-----------	-------------	------------

25 mm	1"	Green	21G
--------------	-----------	--------------	------------

32 mm	1 1/4"	Blue	23G
--------------	---------------	-------------	------------

32 mm	1 1/4"	Black	22G
--------------	---------------	--------------	------------

38 mm	1 1/2"	Grey	27G
--------------	---------------	-------------	------------

38 mm	1 1/2"	Orange	25G
--------------	---------------	---------------	------------

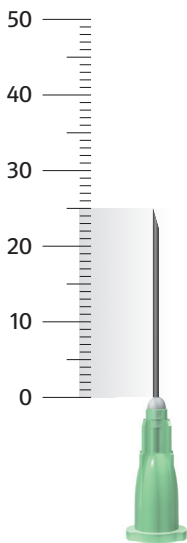
38 mm	1 1/2"	Blue	23G
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38 mm	1 1/2"	Black	22G
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38 mm	1 1/2"	Green	21G
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25 mm [1"] Green Ø 0.80 mm [21G]

Product code: USG



Some people who inject in the groin use the 25 mm needle.

If possible, a move down to the thinner 25 mm blue, purple, or orange needle would be preferable.

A thinner needle will cause less damage to the site and the vein. However, if you have a lot of scarring at the injection site, this might not be possible.

Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

Injecting in the groin is particularly dangerous and this green needle is towards the top of the risk range – shorter than some, but thicker than blue or black needles that are available in the same length.

Alternatives

12 mm	½"	Unisharp^{FIXED}	30G
--------------	-----------	---------------------------------	------------

13 mm	½"	Yellow	30G
--------------	-----------	---------------	------------

16 mm	⅝"	Grey	27G
--------------	-----------	-------------	------------

16 mm	⅝"	Orange	25G
--------------	-----------	---------------	------------

16 mm	⅝"	Blue	23G
--------------	-----------	-------------	------------

20 mm	¾"	Grey	27G
--------------	-----------	-------------	------------

25 mm	1"	Brown	26G
--------------	-----------	--------------	------------

25 mm	1"	Orange	25G
--------------	-----------	---------------	------------

25 mm	1"	Purple	24G
--------------	-----------	---------------	------------

25 mm	1"	Blue	23G
--------------	-----------	-------------	------------

◆ 25 mm	1"	Green	21G
----------------	-----------	--------------	------------

32 mm	1¼"	Blue	23G
--------------	------------	-------------	------------

32 mm	1¼"	Black	22G
--------------	------------	--------------	------------

38 mm	1½"	Grey	27G
--------------	------------	-------------	------------

38 mm	1½"	Orange	25G
--------------	------------	---------------	------------

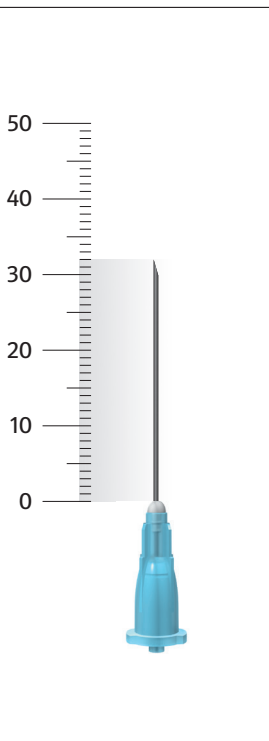
38 mm	1½"	Blue	23G
--------------	------------	-------------	------------

38 mm	1½"	Black	22G
--------------	------------	--------------	------------

38 mm	1½"	Green	21G
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32 mm [1¼"] Blue Ø 0.60 mm [23G]

Product code: TB30 | ULB



Some people who inject in the groin use the 32 mm blue needle.

If it will reach, a move to the shorter 25 mm blue would reduce the risk of going right through the femoral vein. If it will reach the vein, and doesn't bend when hitting scar tissue, switching to the shorter and thinner 25 mm orange would be preferable, as it will make a smaller hole, and cause less damage to the vein.

However, if you have scarring at the injection site, or a vein that has been pushed back by repeated injections, moving to a shorter needle may not be possible, and there isn't a thinner 32 mm needle.

AVAILABLE AS A TOTAL DOSE
LOW DEAD SPACE NEEDLE



Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

Injecting into any deep vein – particularly the groin – is always dangerous.

For deep vein injection, this blue needle is in the middle of the risk range: thinner and shorter than the green or black needles, but slightly thicker than the brown and orange needles.

The extra 7 mm adds additional risk over the 25 mm blue needle: take care.

Alternatives

12 mm	½"	Unisharp^{FIXED}	30G
--------------	-----------	---------------------------------	------------

13 mm	½"	Yellow	30G
--------------	-----------	---------------	------------

16 mm	⅝"	Grey	27G
--------------	-----------	-------------	------------

16 mm	⅝"	Orange	25G
--------------	-----------	---------------	------------

16 mm	⅝"	Blue	23G
--------------	-----------	-------------	------------

20 mm	¾"	Grey	27G
--------------	-----------	-------------	------------

25 mm	1"	Brown	26G
--------------	-----------	--------------	------------

25 mm	1"	Orange	25G
--------------	-----------	---------------	------------

25 mm	1"	Purple	24G
--------------	-----------	---------------	------------

25 mm	1"	Blue	23G
--------------	-----------	-------------	------------

25 mm	1"	Green	21G
--------------	-----------	--------------	------------

◆ 32 mm	1¼"	Blue	23G
----------------	------------	-------------	------------

32 mm	1¼"	Black	22G
--------------	------------	--------------	------------

38 mm	1½"	Grey	27G
--------------	------------	-------------	------------

38 mm	1½"	Orange	25G
--------------	------------	---------------	------------

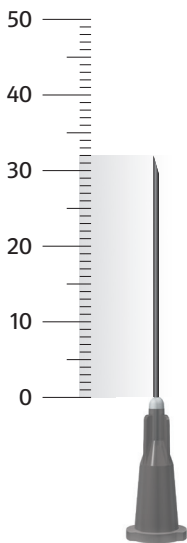
38 mm	1½"	Blue	23G
--------------	------------	-------------	------------

38 mm	1½"	Black	22G
--------------	------------	--------------	------------

38 mm	1½"	Green	21G
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32 mm [1¼"] Black Ø 0.70 mm [22G]

Product code: A226



The 32 mm black needle can be used for injecting in the groin, and is better than a green needle because it is thinner.

If possible, a move down to a thinner and/or shorter 25 mm or 32 mm blue or orange needle would be preferable – the thinner needle will cause less damage to the site and the vein.

However, if you have scarring at the injection site, or a vein that has been pushed back by repeated injections, moving to a thinner or shorter needle may not be possible.

Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

The 32 mm black needle is not available from all needle exchanges, but it offers a slightly safer alternative to the commonly available green needle – so if you think it could reduce your risk, ask them to order it.

Alternatives

12 mm	$\frac{1}{2}$ "	Unisharp^{FIXED}	30G
--------------	-----------------	---------------------------------	-----

13 mm	$\frac{1}{2}$ "	Yellow	30G
--------------	-----------------	---------------	-----

16 mm	$\frac{5}{8}$ "	Grey	27G
--------------	-----------------	-------------	-----

16 mm	$\frac{5}{8}$ "	Orange	25G
--------------	-----------------	---------------	-----

16 mm	$\frac{5}{8}$ "	Blue	23G
--------------	-----------------	-------------	-----

20 mm	$\frac{3}{4}$ "	Grey	27G
--------------	-----------------	-------------	-----

25 mm	1"	Brown	26G
--------------	----	--------------	-----

25 mm	1"	Orange	25G
--------------	----	---------------	-----

25 mm	1"	Purple	24G
--------------	----	---------------	-----

25 mm	1"	Blue	23G
--------------	----	-------------	-----

25 mm	1"	Green	21G
--------------	----	--------------	-----

32 mm	$1\frac{1}{4}$ "	Blue	23G
--------------	------------------	-------------	-----

◆ 32 mm	$1\frac{1}{4}$ "	Black	22G
----------------	------------------	--------------	-----

38 mm	$1\frac{1}{2}$ "	Grey	27G
--------------	------------------	-------------	-----

38 mm	$1\frac{1}{2}$ "	Orange	25G
--------------	------------------	---------------	-----

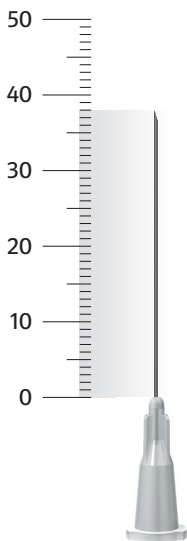
38 mm	$1\frac{1}{2}$ "	Blue	23G
--------------	------------------	-------------	-----

38 mm	$1\frac{1}{2}$ "	Black	22G
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38 mm	$1\frac{1}{2}$ "	Green	21G
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38 mm [1½"] Grey Ø 0.40 mm [27G]

Product code: A237



The 38 mm grey is used by people injecting into the groin who can no longer reach the femoral vein with a 25 mm or 32 mm needle, and who don't have access to the vein restricted by scar tissue.

For those who can use it, the 38 mm grey offers a less damaging alternative to other, thicker, 38 mm needles – although it must always be used with great care to avoid bending the needle.

Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

Using a 38 mm grey needle to inject in the groin must be done with care to avoid breaking the needle.

This means being steady during injection, and being careful to avoid the use of force or bending the needle.

Injecting in the groin is always dangerous. The long term health consequences can be serious but using the thinnest needle possible can reduce the tissue damage and delay problems.

Alternatives

12 mm	½"	Unisharp^{FIXED}	30G
--------------	-----------	---------------------------------	------------

13 mm	½"	Yellow	30G
--------------	-----------	---------------	------------

20 mm	¾"	Grey	27G
--------------	-----------	-------------	------------

25 mm	1"	Brown	26G
--------------	-----------	--------------	------------

25 mm	1"	Orange	25G
--------------	-----------	---------------	------------

25 mm	1"	Purple	24G
--------------	-----------	---------------	------------

25 mm	1"	Blue	23G
--------------	-----------	-------------	------------

25 mm	1"	Green	21G
--------------	-----------	--------------	------------

32 mm	1¼"	Blue	23G
--------------	------------	-------------	------------

32 mm	1¼"	Black	22G
--------------	------------	--------------	------------

◆ 38 mm	1½"	Grey	27G
----------------	------------	-------------	------------

38 mm	1½"	Orange	25G
--------------	------------	---------------	------------

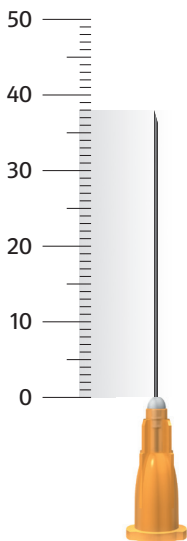
38 mm	1½"	Blue	23G
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38 mm	1½"	Black	22G
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38 mm	1½"	Green	21G
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38 mm [1½"] Orange Ø 0.50 mm [25G]

Product code: ULO



The 38mm orange is used by people injecting in the groin who can no longer reach the femoral vein with a 25mm or 32mm needle, and who don't have access to the vein restricted by too much tough scar tissue.

For those who can use it, the 38 mm orange offers a less damaging alternative to other, thicker, 38 mm needles – although it must always be used with care to avoid breaking the needle.

Alternatives

Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

Using a 38 mm orange needle to inject in the groin must be done with great care to avoid breaking the needle.

This means being steady during injection, and being careful to avoid the use of force or bending the needle.

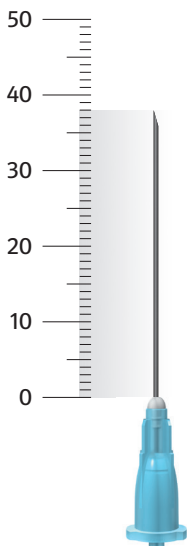
Injecting in the groin is always dangerous. The long term health consequences can be serious but using the thinnest needle possible can reduce the tissue damage and delay problems.

12 mm	½"	Unisharp^{FIXED}	30G
13 mm	½"	Yellow	30G

20 mm	¾"	Grey	27G
25 mm	1"	Brown	26G
25 mm	1"	Orange	25G
25 mm	1"	Purple	24G
25 mm	1"	Blue	23G
25 mm	1"	Green	21G
32 mm	1¼"	Blue	23G
32 mm	1¼"	Black	22G
38 mm	1½"	Grey	27G
◆ 38 mm	1½"	Orange	25G
38 mm	1½"	Blue	23G
38 mm	1½"	Black	22G
38 mm	1½"	Green	21G

38 mm [1½"] Blue Ø 0.60 mm [23G]

Product code: TB40



The 38 mm blue is used by people injecting into their femoral vein, who can no longer reach the femoral vein with a 25 mm or 32 mm needle, and who don't have access to the vein restricted by too much tough scar tissue.

For those who can use it, the 38 mm blue offers a less damaging alternative to other, thicker, 38 mm needles – but needing to move to such a long needle is usually an indication that there is permanent damage to the vein.

AVAILABLE AS A TOTAL DOSE
LOW DEAD SPACE NEEDLE



Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

The risk of needle breakage, and tissue damage can be reduced by being steady during injection, and being careful to avoid the use of force or bending the needle.

The long term health consequences of femoral injecting are often serious, but using the thinnest needle possible can reduce the tissue damage and delay problems.

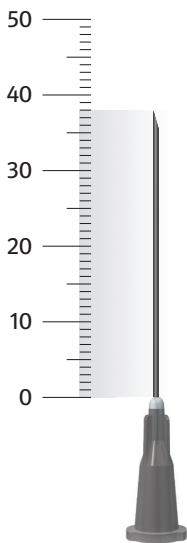
Alternatives

12 mm	½"	Unisharp^{FIXED}	30G
13 mm	½"	Yellow	30G

20 mm	¾"	Grey	27G
25 mm	1"	Brown	26G
25 mm	1"	Orange	25G
25 mm	1"	Purple	24G
25 mm	1"	Blue	23G
25 mm	1"	Green	21G
32 mm	1¼"	Blue	23G
32 mm	1¼"	Black	22G
38 mm	1½"	Grey	27G
38 mm	1½"	Orange	25G
◆ 38 mm	1½"	Blue	23G
38 mm	1½"	Black	22G
38 mm	1½"	Green	21G

38mm [1½"] Black Ø 0.70mm [22G]

Product code: A227



The 38mm black needle can be used for injecting in the groin, and is better than a green needle because it is thinner.

It offers an alternative to the slightly thicker green needle, reducing the tissue and vein damage and so can help slow the progression to serious problems.

If possible, a move down to a thinner and/or shorter black, blue or orange needle would be preferable as the shorter needle will cause less damage to the site and the vein.

Alternatives

Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

Injecting in to any deep vein – particularly the groin – is always dangerous, but using a 38 mm needle leaves a big hole, and increases the risk of damaging the artery or nerve.

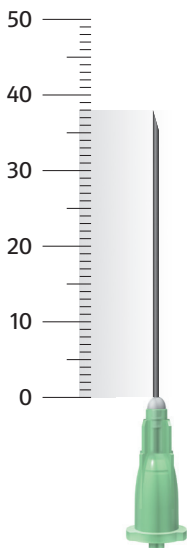
Using the thinnest needle possible can reduce damage, and delay problems so it would be worth carefully trying the orange and grey 38 mm alternatives if you are using this needle.

12 mm	½"	Unisharp^{FIXED}	30G
13 mm	½"	Yellow	30G

20 mm	¾"	Grey	27G
25 mm	1"	Brown	26G
25 mm	1"	Orange	25G
25 mm	1"	Purple	24G
25 mm	1"	Blue	23G
25 mm	1"	Green	21G
32 mm	1¼"	Blue	23G
32 mm	1¼"	Black	22G
38 mm	1½"	Grey	27G
38 mm	1½"	Orange	25G
38 mm	1½"	Blue	23G
◆ 38 mm	1½"	Black	22G
38 mm	1½"	Green	21G

38mm [1½"] Green Ø 0.80mm [21G]

Product code: TG40 | UG



Used by some to reach a femoral vein that has been pushed deep by years of injecting it will cause further tissue damage, and serious damage to the vein.

People injecting into a femoral vein often suffer from clots that form in the vein – known as deep vein thrombosis (DVT). DVTs can break loose and lodge in the lung and heart, which can be life threatening. This complication is very common in people using green needles.

The vein damage can also cause circulation problems in the leg and foot, and injecting with this needle will speed up, and worsen, these problems.

AVAILABLE AS A TOTAL DOSE
LOW DEAD SPACE NEEDLE



Alternatives

Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

Using a 38 mm needle causes serious tissue and vein damage, and also increases the likelihood of damaging the artery or nerve.

Anyone using this needle should consider using a black needle or even, if there's not much scar tissue, an orange or brown needle.

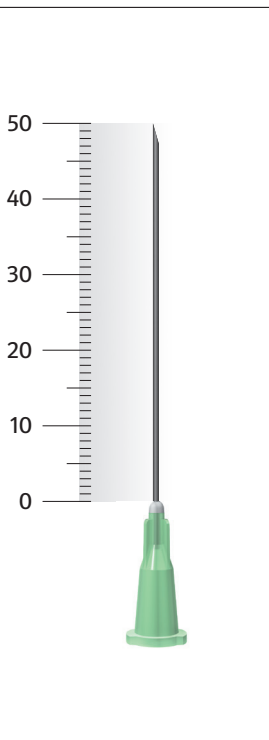
If you need to use a 38 mm green, you should seriously consider a shorter or thinner needle, or switching to other ways of taking drugs such as smoking or sniffing.

12 mm	½"	Unisharp^{FIXED}	30G
13 mm	½"	Yellow	30G

20 mm	¾"	Grey	27G
25 mm	1"	Brown	26G
25 mm	1"	Orange	25G
25 mm	1"	Purple	24G
25 mm	1"	Blue	23G
25 mm	1"	Green	21G
32 mm	1¼"	Blue	23G
32 mm	1¼"	Black	22G
38 mm	1½"	Grey	27G
38 mm	1½"	Orange	25G
38 mm	1½"	Blue	23G
38 mm	1½"	Black	22G
◆ 38 mm	1½"	Green	21G
50 mm	2"	Green	21G

50 mm [2"] Green Ø 0.80 mm [21G]

Product code: A225



Rarely used, this is the longest, thickest needle used for injecting. It is used by some to reach a femoral vein that has been pushed deep by years of injecting. It will cause further tissue damage, and serious damage to the vein.

People injecting into a femoral vein often suffer from clots that form in the vein – known as deep vein thrombosis (DVT). DVTs can break loose and lodge in the lung and heart, which can be life threatening. This complication is common in people using green needles.

The vein damage can also cause circulation problems in the leg and foot. This needle is the most likely to cause these problems.

Injecting in the groin is higher risk: try a short thin needle to find surface veins instead.

Your needle exchange may not stock the 50 mm green, and we can understand why: it causes so many problems.

Anyone considering using this needle should seriously consider a thinner needle, or switching to other ways of taking drugs such as sniffing or smoking, and getting into treatment.

Alternatives

12 mm	½"	Unisharp^{FIXED}	30G
--------------	-----------	---------------------------------	------------

13 mm	½"	Yellow	30G
--------------	-----------	---------------	------------

25 mm	1"	Brown	26G
--------------	-----------	--------------	------------

25 mm	1"	Orange	25G
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25 mm	1"	Purple	24G
--------------	-----------	---------------	------------

25 mm	1"	Blue	23G
--------------	-----------	-------------	------------

25 mm	1"	Green	21G
--------------	-----------	--------------	------------

32 mm	1¼"	Blue	23G
--------------	------------	-------------	------------

32 mm	1¼"	Black	22G
--------------	------------	--------------	------------

38 mm	1½"	Grey	27G
--------------	------------	-------------	------------

38 mm	1½"	Orange	25G
--------------	------------	---------------	------------

38 mm	1½"	Blue	23G
--------------	------------	-------------	------------

38 mm	1½"	Black	22G
--------------	------------	--------------	------------

38 mm	1½"	Green	21G
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▲ 50 mm	2"	Green	21G
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Needles

Dead space

**Cleaning injecting
equipment**

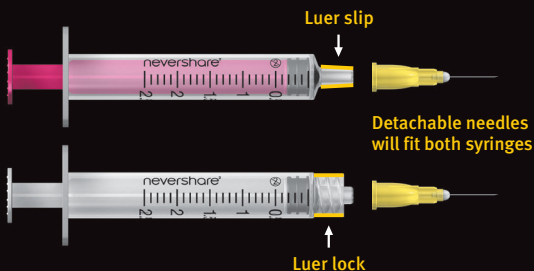
Needles

Needle length

The stated length of the needle can either be the visible length, or the **total** length of the needle from end to end – including the portion of the needle that is in the plastic. This means that the actual needle length can vary, and may be slightly shorter than the measurement stated. Needles are measured in both inches and millimetres, because fractions of an inch can be confusing, we recommend using the millimetres when talking about / asking for needles.

Needle fit

The exact angles inside the hub of needles that allow them to grip onto the syringe with friction alone are known as a Luer slip fitting. Syringes made for detachable needles are called Luer slip syringes.



Luer lock syringes have a threaded collar that screws the needle onto the tapered end, giving extra security.

Needle gauge (the needle diameter [Ø] / thickness)

The gauge number refers to the number of times the steel has been stretched to make it thinner: so the **bigger the number**, the more it has been stretched, and **the thinner it is**.

The word gauge is always shortened to just the letter 'G'.

The gauges used for injecting needles range from • 30G (the thinnest) to ● 21G. Each gauge is allocated a colour so that people can tell which is which.

•	•	•	•	•	•	•	•	•
30G	29G	27G	26G	25G	24G	23G	22G	21G
0.30mm	0.33mm	0.40mm	0.45mm	0.50mm	0.55mm	0.60mm	0.70mm	0.80mm
Yellow	Red	Grey	Brown	Orange	Purple	Blue	Black	Green

Needle bore (the hole down the middle)

The gauge **only** describes the outer diameter, not the hole down the middle (the bore) which can vary.

In general the thicker the needle, the larger the bore but some of the thinner needles have a smaller bore so that the wall thickness, and strength, can be maintained.

Dead space

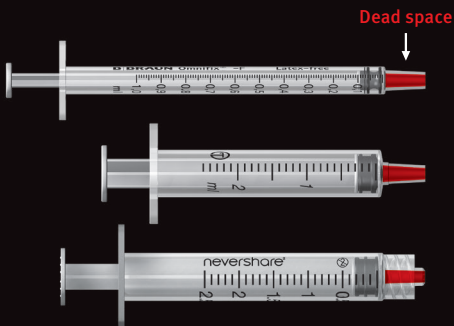
What is dead space?

The dead space is the space beyond the plunger that is filled with blood after the injection. Syringes made for detachable needles have a large dead space that holds more blood, which makes them more dangerous when shared.

High dead space syringes

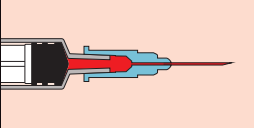
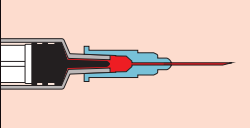
Luer slip and Luer lock fittings allow for needles to be removed and changed during the injecting process.

The price for this is an increased risk of blood-borne virus transmission because the dead space between the plunger and tip stores more blood than an all-in-one syringe, making sharing more risky.



Reduced dead space syringes

Reduced dead space syringes work by having a spike on the end of the plunger that fills most of the tip of the syringe.

High dead space	Reduced dead space
	
Standard syringe	Modified syringe
Standard detachable needle	Standard detachable needle
Dead space typically 92 μL	Dead space typically 59 μL

They are limited in their ability to reduce the dead space because around half of the dead space is in the needle hub.

It is important to note that they are not compatible with low dead space needles (see overleaf) because the plunger spike pushes them off the syringe.



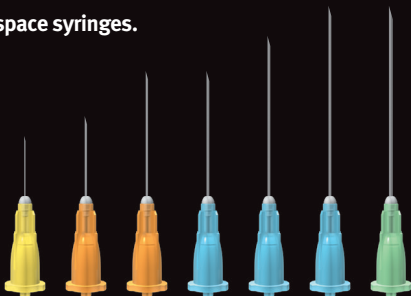
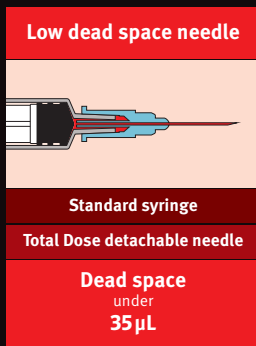
Low dead space needles

Total Dose low dead space needles use a plastic displacement spike to reduce the dead space in the needle hub and syringe barrel.

This reduces the amount of drug left in the tip of the syringe, and the need for flushing.

It means there are fewer viral particles, and it also reduces the length of time the virus can survive and remain infectious.

Total Dose low dead space needles have significantly less dead space than reduced dead space syringes.

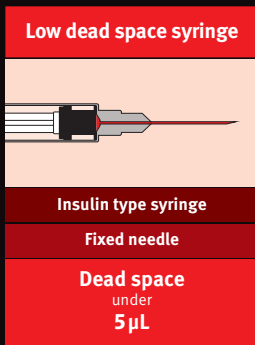


Low dead space syringes

Insulin type syringes – because the needle is fixed during manufacture – have a very low dead space. This means that there is very little blood in them after injecting.

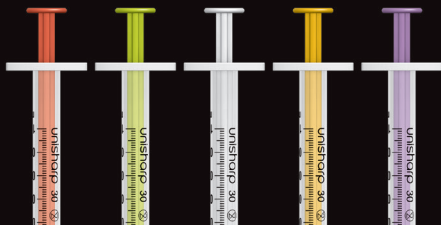
When they have been used by someone who has HIV or hepatitis the reduced amount of blood means that there is less virus in them, and that it will survive for a shorter time.

This is another reason why this type of low dead space syringe is recommended for all injecting drug users.



Unfortunately not all injecting drug users can use low dead space syringes – they are not so good for people who can't get a vein quickly, and so sometimes blunt their needle, and people injecting larger volumes of liquid.

The Unisharp 1mL fixed syringe comes with plungers in a range of colours to help prevent accidental sharing.



Cleaning works

If you can, always use a new sterile needle and syringe. If you are going to re-use a needle or syringe, clean it like this:



Get two clean cups.

Fill them with clean water.

(Do not use boiling water – it can make the blood clot)

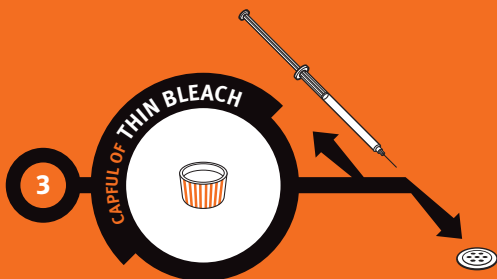
Pour out a capful of thin bleach or drop a chlorine tablet into another mug of clean water.



Draw up water from the first cup.

(Fill the syringe completely to rinse and clean it)

Empty the syringe into the sink.



Draw up the thin bleach.

(Make sure the outside of the needle gets dipped in bleach to kill any virus that is on the outside)

Empty the syringe into the sink.



Draw up water from the second cup.

Empty the syringe into the sink.

Carefully put the cap back on the syringe.

Pour the contaminated water
and bleach down the sink.

Wash both cups.

1 x water 1 x bleach 1 x water

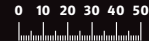
kills

hep **C**

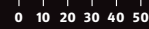
hep **B**

HIV

**But always use a new sterile
needle and syringe if you can.**



UF30M	12 mm	1/2"		• Unisharp ^{FIXED}	30G	Page 8
TY13 UY	13 mm	1/2"		• Yellow	30G	Page 10
UF29M	12 mm	1/2"		• Unisharp ^{FIXED}	29G	Page 12
UF27M	12 mm	1/2"		• Unisharp ^{FIXED}	27G	Page 14
USE	13 mm	1/2"		• Grey	27G	Page 16
USN	13 mm	1/2"		• Brown	26G	Page 18
A234	16 mm	5/8"		• Grey	27G	Page 20
T016 US0	16 mm	5/8"		• Orange	25G	Page 22
A228	16 mm	5/8"		• Blue	23G	Page 24
A235	20 mm	3/4"		• Grey	27G	Page 26
UN	25 mm	1"		• Brown	26G	Page 28
T025 U0	25 mm	1"		• Orange	25G	Page 30
UP	25 mm	1"		• Purple	24G	Page 32
TB25 UB	25 mm	1"		• Blue	23G	Page 34
USG	25 mm	1"		• Green	21G	Page 36
TB30 ULB	32 mm	1 1/4"		• Blue	23G	Page 38
A226	32 mm	1 1/4"		• Black	22G	Page 40
A237	38 mm	1 1/2"		• Grey	27G	Page 42
ULO	38 mm	1 1/2"		• Orange	25G	Page 44
TB40	38 mm	1 1/2"		• Blue	23G	Page 46
A227	38 mm	1 1/2"		• Black	22G	Page 48
TG40 UG	38 mm	1 1/2"		• Green	21G	Page 50
A225	50 mm	2"		• Green	21G	Page 52



What works? is a guide to injecting equipment for people injecting illicit drugs such as heroin, cocaine, crack, and amphetamine.

This booklet does not cover the use of equipment for injecting steroids.

You can use it to look up the needle and syringe you're using, and see if there are safer alternatives that might cause less damage to your injecting site and veins.

You can order copies of this book from exchangesupplies.org, the product code is A299.