

Subcutaneous Injections

What are subcutaneous injections?

A subcutaneous injection is a medicine that is injected into the subcutaneous layer, which is the fatty layer between the skin and muscle. The injection is given with a single-use needle and syringe.

Choosing an Injection Site

The injection site depends on your child's age, subcutaneous tissue mass, amount of medication, and previously used injection sites.

The most common subcutaneous injection sites include: the back part of the upper arms, front outer area of the thighs, abdomen and the top of the buttocks.

Only give an injection in a site that is safe for your child. The injection site that is recommended for your child is: _____. Your health care provider will highlight and review the section below that is appropriate for your child.

Birth to 12 months

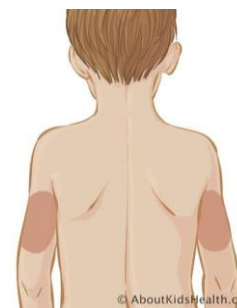
- For newborns and infants, use the middle of the front, outer top of the thigh where there is a lot of fatty tissue.



© AboutKidsHealth.ca

12 months and older

- For children older than 12 months, use the back part of the upper arm where there is a lot of fatty tissue.



© AboutKidsHealth.ca

Depending on your child's condition and the frequency of injections, your health care provider may instruct you to rotate injection sites. When rotating sites, ensure to separate each injection by at least one inch. Avoid any areas that are bruised, swollen or tender.

Giving a Subcutaneous Injection

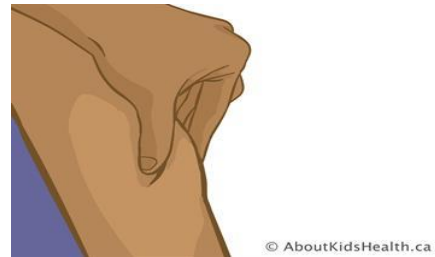
Supplies Needed

- Needle: Length _____ Gauge (diameter size) _____
 - Insert the needle at: 90-degree angle 45-degree angle
 - Medication _____
- | Name | Dose | Amount to draw up in syringe (ml) |
|------|------|-----------------------------------|
| | | |
- Syringe
 - Alcohol wipes
 - Gauze or cotton swab
 - Bandage
 - A container for syringe disposal. This may be a puncture-proof sharps container or a hard-sided plastic container that has a secure lid, such as an empty laundry detergent bottle.

Steps to Give a Subcutaneous Injection Using Medicine From A Vial

1. Wash your hands with soap and water, or an alcohol-based hand sanitizer.
2. Gently roll the medicine vial between your hands to mix it. **Do not** shake the vial.
3. Remove the plastic cover on top of the vial. Use an alcohol wipe to clean the top of the vial.
4. Remove the plastic cover from the needle on the syringe, being careful not to let it touch anything.
5. Pull the plunger of the syringe back to draw air into the syringe. Draw back the same amount of air as your medicine dose.
6. Without turning the vial over, push the needle through the rubber on the top of the vial.
7. Push the plunger down to push all of the air into the vial.
8. Flip the vial and syringe upside down, while leaving the needle in the vial.
9. Slowly pull back the plunger of the syringe to draw the correct amount of medicine into it.
10. Slowly remove the needle from the vial.
11. Hold the syringe with the needle pointing up. Look for any air bubbles in the syringe. If there are any air bubbles, flick the syringe with your finger. This will help air bubbles move to the top of the syringe. Then, slowly push on the plunger to push any air out of the syringe. Stop when you see a drop of medicine at the tip of the needle.

12. Use an alcohol wipe to clean the injection site and let the site dry.
13. Hold the syringe in your dominant hand.
14. Use your other hand to pinch about an inch of skin, around the area you cleaned. **Do not** touch the area of skin you cleaned.



15. Determine if you are injecting at a 90-degree or 45-degree angle, as instructed by your healthcare provider. If you are inserting the needle at a 90-degree angle, insert the entire needle straight into the area of pinched skin. If you are inserting the needle at a 45-degree angle, think of the 45-degree angle like the letter "V" and insert the needle into the pinched area of skin.



16. Once the needle is completely inserted into the skin, continue to hold the syringe and release the skin you are pinching.
17. Push the plunger until the syringe is empty.
18. Pull the needle straight out of the skin.
19. Use a piece of gauze to apply gentle pressure to the injection site until bleeding stops. **Do not** rub the area.
20. Cover the injection site with a bandage.
21. Dispose of the needle and syringe in an appropriate puncture proof container.

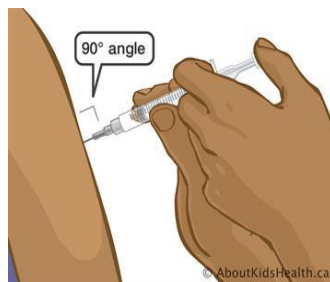
Steps to Give an Subcutaneous Injection Using A Prefilled Syringe

1. Wash your hands with soap and water, or an alcohol-based hand sanitizer.
2. Use an alcohol wipe to clean the injection site and let the site dry.
3. Remove the plastic cover from the needle on the syringe, being careful not to let it touch anything.

4. Hold the syringe with the needle pointing up. Look for any air bubbles in the syringe. If there are any air bubbles, flick the syringe with your finger. This will help the air bubbles move to the top of the syringe. Then, slowly push on the plunger to push any air out of the syringe. Stop when you see a drop of medicine at the tip of the needle.
5. Hold the syringe in your dominant hand.
6. Use your other hand to pinch about an inch of skin, around the area you cleaned. **Do not** touch the area of skin you cleaned.
7. Determine if you are injecting at a 90-degree or 45-degree angle, as instructed by your healthcare provider. If you are inserting the needle at a 90-degree angle, insert the entire needle straight into the area of pinched skin. If you are inserting the needle at a 45-degree angle, think of the 45-degree angle like the letter "V" and insert the needle into the pinched area of skin.



© AboutKidsHealth.ca



© AboutKidsHealth.ca



© AboutKidsHealth.ca

8. Once the needle is completely inserted into the skin, continue to hold the syringe and release the skin you are pinching.
9. Push the plunger until the syringe is empty.
10. Pull the needle straight out of the skin.
11. Use a piece of gauze to apply gentle pressure to the injection site until bleeding stops. **Do not** rub the area.
12. Cover the injection site with a bandage.
13. Dispose of the needle and syringe in an appropriate puncture proof container.

How to Safely Dispose of Used Supplies After Your Injection

Follow the disposal regulations for the area where you live. **Do not** use any syringe or needle more than once.

Complications

Sometimes your child may get a bruise at the injection site. It is not harmful. It usually means the needle has come into contact with a tiny blood vessel. Applying gentle pressure to the site with a dry piece of gauze or cotton swab after injecting and being careful not to pinch the skin too tightly may help reduce the chances of bruising.

If your child develops swelling and redness at the injection site that does not go away, or fever and chills, contact your doctor.

Contact A Health Care Provider If:

- You have difficulty giving the injection.
- You think that the injection was not given correctly.
- You have difficulty with any of the supplies.
- The medicine causes side effects.
- Rashes develop on the skin.
- A fever develops.
- The condition that is being treated gets worse.

Get Help Right Away If:

- Any of these symptoms develop after the injection is given:
 - Difficulty breathing.
 - Chest pain.
 - A rash over most or all of the body.
 - Swelling of the lips or tongue.
 - Difficulty swallowing.
 - Fever or chills.
 - Swelling or redness at the injection site that does not go away.

Keeping Track of your Injections

Your nurse will discuss the importance of keeping track of the injections that you give your child. Please bring this record with you to your appointments.

References

- Mosby's Skills. (2022). Medication Administration: Subcutaneous Injection (Pediatrics)
- Mosby's Skills. (2022). Patient Education: Subcutaneous Injection Instructions Using a Prefilled Syringe
- Mosby's Skills. (2022). Patient Education: Subcutaneous Injection Instructions Using a Syringe and Vial
- Sick Kids Staff. (2010). Subcutaneous injections: Injecting at home.
<https://www.aboutkidshealth.ca/Article?contentid=998&language=English>