

How to Administer IM (Intramuscular) Injections

Vaccines given IM (intramuscular) route: DTaP, DT, Hib, hepA, hepB, HPV, IIV, MCV, PCV, rabies, Td, Tdap and RZV (Shingrix).

Administer IPV and PPSV vaccines either via IM or SQ (subcutaneous) route.

| Patient's age | Site (see illustrations) | Needle size* |
|---|---|--|
| Newborn/infant (Birth -1 year) | <ul style="list-style-type: none"> Anterolateral thigh | <ul style="list-style-type: none"> 1" needle 5/8" in premies or newborns (0-28 days old) if muscle mass inadequate¹ 23-25 gauge needle |
| Toddler (1-3 years) | <ul style="list-style-type: none"> Anterolateral thigh preferred Deltoid when adequate mass developed | <ul style="list-style-type: none"> 1" – 1¼" needle for thigh 5/8" – 1" needle for deltoid 23-25 gauge needle |
| Children (3-11 years) | <ul style="list-style-type: none"> Deltoid Anterolateral thigh | <ul style="list-style-type: none"> 5/8" – 1" needle for deltoid 1" – 1¼" needle for thigh 23-25 gauge needle |
| Adolescents/adults ² (11 years and older) | <ul style="list-style-type: none"> Deltoid preferred Anterolateral thigh may be used if necessary | <ul style="list-style-type: none"> 1" – 1½" needle² 23-25 gauge needle |

¹ A ¾" needle may be used only if the skin is stretched tight, the subcutaneous tissue is not bunched, and injection is made at a 90° angle.

² A ¾" needle is sufficient in adults weighing less than 130 lbs (60 kg).

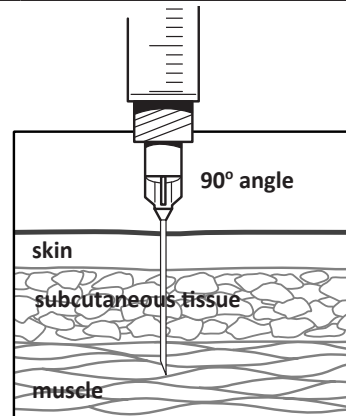
A 1" needle is sufficient in adults weighing 130–152 lbs (60–70 kg).

A 1–1½" needle is recommended in women weighing 152–200 lbs (70–90 kg) and men weighing 152–260 lbs (70–118 kg).

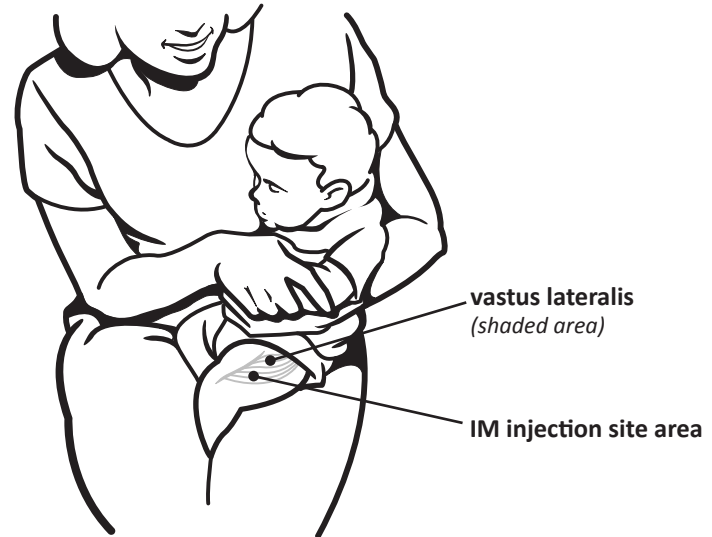
A 1½" needle is recommended in women weighing more than 200 lbs (90 kg) or men weighing more than 260 lbs (118 kg).

Needle insertion

- Use a needle long enough to reach deep into the muscle.
- Identify the thickest part of the deltoid muscle by having the person raise their arm to define the muscle. Once defined, have patient relax arm and proceed.
- Insert needle at a 90° angle to the skin with a quick thrust.
- Retain pressure on skin around injection site with thumb and index finger while needle is inserted.
- Aspiration is not necessary.
- Multiple injections given in the same extremity should be separated as far as possible (preferably at least 1" apart).

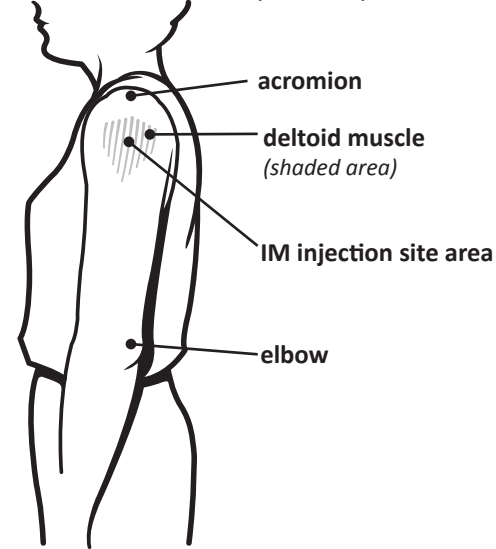


IM site for infants and toddlers (birth to 3 years of age)



Insert needle at 90° angle into vastus lateralis muscle in anterolateral aspect of middle or upper thigh.

IM site for older toddlers, children, adolescents, and adults



Insert needle at 90° angle into densest portion of deltoid muscle above armpit and below acromion.

Sources: Red Book 2018, American Academy of Pediatrics & CDC, General Best Practices for Immunization, accessed 2018

How to Administer SQ (Subcutaneous) Injections

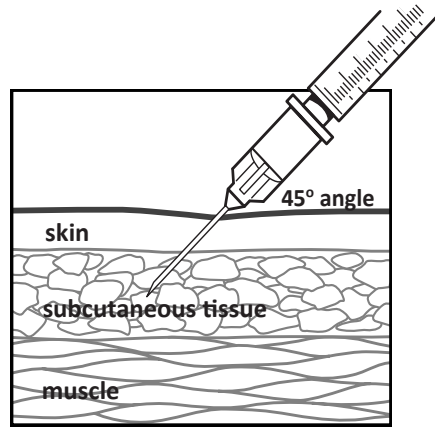
Vaccines given SQ (subcutaneous) route: MMR, MMRV, VAR, and ZVL (Zostavax).

Administer IPV and PPSV vaccines either via IM (intramuscular) or SQ route.

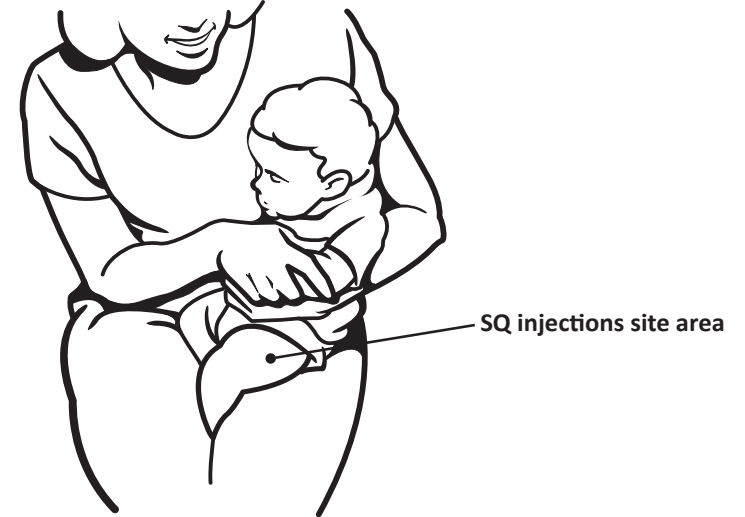
| Patient's age | Site (see illustrations) | Needle size* |
|---|--|--|
| Infants (Birth -1 year) | <ul style="list-style-type: none"> Fatty area of the thigh | <ul style="list-style-type: none"> 5/8" needle 23-25 gauge |
| Toddlers (1-3 years) | <ul style="list-style-type: none"> Fatty area of the thigh or outer aspect of upper arm | <ul style="list-style-type: none"> 5/8" needle 23-25 gauge |
| Children (3 -11 years) | <ul style="list-style-type: none"> Fatty area of the thigh or outer aspect of upper arm | <ul style="list-style-type: none"> 5/8" needle 23-25 gauge |
| Adolescents/adults (11 years and older) | <ul style="list-style-type: none"> Outer aspect of upper arm | <ul style="list-style-type: none"> 5/8" needle 23-25 gauge |

Needle insertion

- Insert needle at an 45° angle to the skin.
- Pinch up on SQ tissue to prevent injecting into muscle.
- Aspiration before injection is not required.
- Multiple injections given in the same extremity should be separated as far as possible (preferably at least 1" apart).

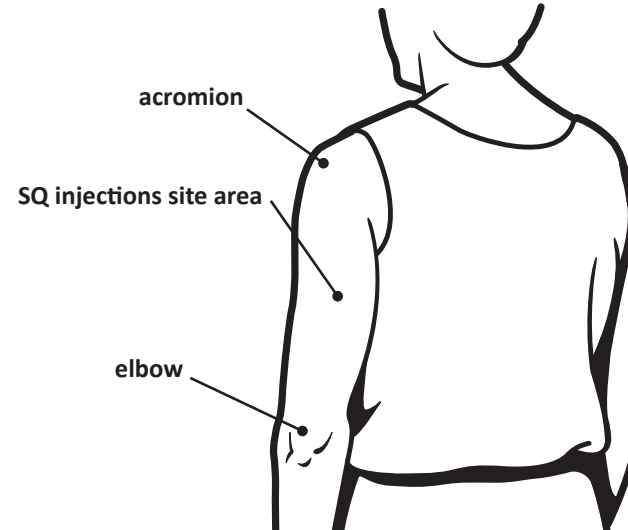


SQ site for infants and toddlers (birth to 3 years of age)



Insert needle at 45° angle into fatty area of anterolateral thigh. Make sure you pinch up on SQ tissue to prevent injecting into muscle.

SQ site for older toddlers, children, adolescents and adults



Insert needle at 45° angle into outer aspect of upper arm. Make sure you pinch up on SQ tissue to prevent injecting into muscle.

Sources: Red Book 2018, American Academy of Pediatrics & CDC, General Best Practices for Immunization, accessed 2018