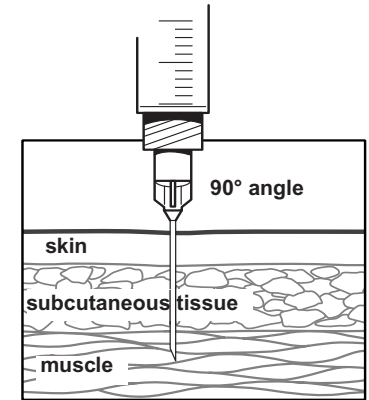


# How to Administer Intramuscular (IM) Vaccine Injections

Administer these vaccines by the intramuscular (IM) route: Diphtheria-tetanus (DT, Td) with pertussis (DTaP, Tdap); *Haemophilus influenzae* type b (Hib); hepatitis A (HepA); hepatitis B (HepB); human papillomavirus (HPV); inactivated influenza (TIV); quadrivalent meningococcal conjugate (MCV4); and pneumococcal conjugate (PCV). Administer inactivated polio (IPV) and pneumococcal polysaccharide (PPSV23) either IM or SC.

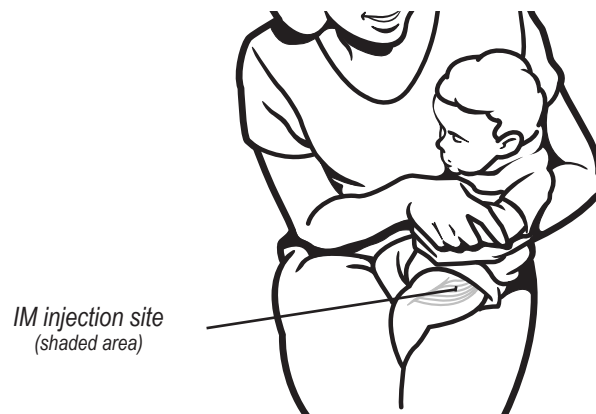
Patient age	Injection site	Needle size	Needle insertion
Newborn (0–28 days)	Anterolateral thigh muscle	5/8" (22–25 gauge)	<p>Use a needle long enough to reach deep into the muscle.</p> <p>Insert needle at a 90° angle to the skin with a quick thrust.</p> <p>(Before administering an injection of vaccine, it is not necessary to aspirate, i.e., to pull back on the syringe plunger after needle insertion.<sup>†</sup>)</p> <p>Multiple injections given in the same extremity should be separated by a minimum of 1", if possible.</p>
Infant (1–12 months)	Anterolateral thigh muscle	1" (22–25 gauge)	
Toddler (1–2 years)	Anterolateral thigh muscle	1–1¼" (22–25 gauge)	
	Alternate site: Deltoid muscle of arm if muscle mass is adequate	5/8–1" (22–25 gauge)	
Children (3–18 years)	Deltoid muscle (upper arm)	5/8–1" (22–25 gauge)	
	Alternate site: Anterolateral thigh muscle	1–1¼" (22–25 gauge)	
Adults 19 years and older	Deltoid muscle (upper arm)	1–1½" (22–25 gauge)	
	Alternate site: Anterolateral thigh muscle	1–1½" (22–25 gauge)	



\*A 5/8" 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.  
 †A 5/8" needle is sufficient in adults weighing <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 >200 lbs (>90 kg) or men weighing >260 lbs (>118 kg).

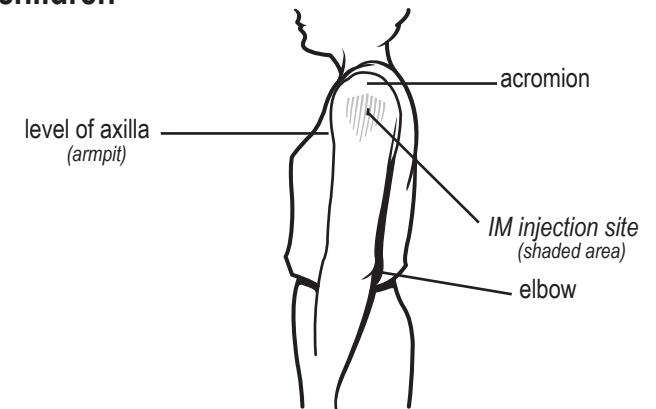
<sup>†</sup>CDC. "ACIP General Recommendations on Immunization" at [www.immunize.org/acip](http://www.immunize.org/acip)

## IM site for infants and toddlers



Insert needle at a 90° angle into the anterolateral thigh muscle.

## IM site for children and adults

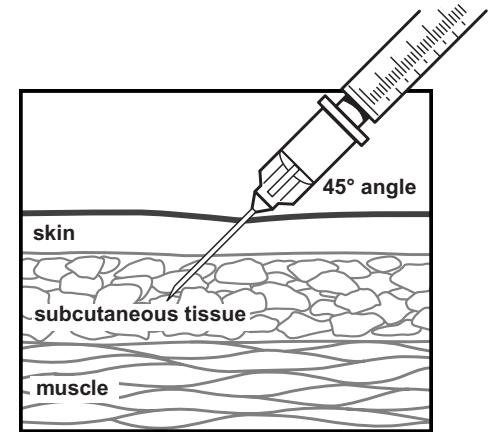


Insert needle at a 90° angle into thickest portion of deltoid muscle — above the level of the axilla and below the acromion.

# How to Administer Subcutaneous (SC) Vaccine Injections

Administer these vaccines by the subcutaneous (SC) route: measles, mumps, and rubella (MMR), varicella (VAR), meningococcal polysaccharide (MPSV4), and zoster (shingles [ZOS]). Administer inactivated polio (IPV) and pneumococcal polysaccharide (PPSV23) vaccines either SC or IM.

Patient age	Injection site	Needle size	Needle insertion
Birth to 12 mos.	Fatty tissue over the anterolateral thigh muscle	5/8" needle, 23–25 gauge	<p>Pinch up on subcutaneous (SC) tissue to prevent injection into muscle.</p> <p>Insert needle at 45° angle to the skin.</p> <p>(Before administering an injection of vaccine, it is not necessary to aspirate, i.e., to pull back on the syringe plunger after needle insertion.*)</p> <p>Multiple injections given in the same extremity should be separated by a minimum of 1".</p> <p>*CDC. "ACIP General Recommendations on Immunization" at <a href="http://www.immunize.org/acip">www.immunize.org/acip</a></p>
12 mos. and older	Fatty tissue over anterolateral thigh or fatty tissue over triceps	5/8" needle, 23–25 gauge	

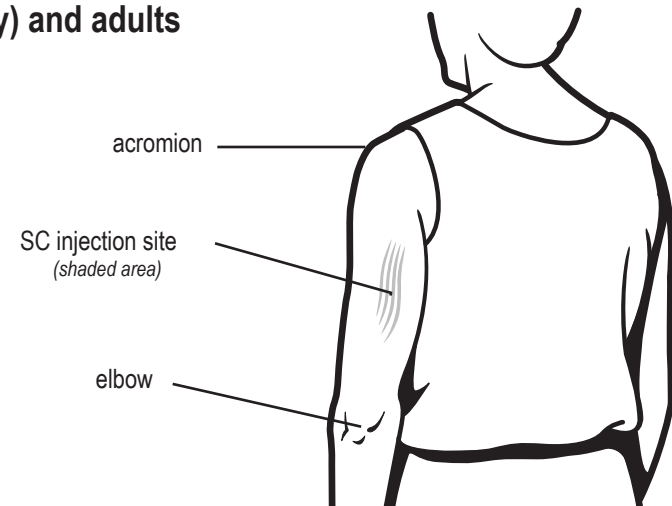


## SC site for infants



Insert needle at a 45° angle into fatty tissue of the anterolateral thigh. Make sure you pinch up on SC tissue to prevent injection into the muscle.

## SC site for children (after the 1st birthday) and adults



Insert needle at a 45° angle into the fatty tissue over the triceps muscle. Make sure you pinch up on the SC tissue to prevent injection into the muscle.