

# Vaccine Administration

## Needle Gauge and Length for Intramuscular (IM) Injection

Vaccines must reach the correct tissue to provide an optimal immune response and reduce the likelihood of injection-site reactions. Needle selection should be based on the route, age, gender and weight for adults (19 years and older), and injection site. The following table outlines recommended needle gauges and lengths for IM injections. In addition, clinical judgment should be used when selecting needles to administer injectable vaccines.

Age group	Needle length	Injection site
<b>Children (birth-18 years)</b>		
Neonates <sup>(a)</sup>	5/8 inch (16 mm) <sup>(b)</sup>	Anterolateral thigh
Infants, 1-12 months	1 inch (25 mm)	Anterolateral thigh
Toddlers, 1-2 years	1-1.25 inch (25-32 mm)	Anterolateral thigh <sup>(c)</sup>
	5/8 <sup>(b)</sup> -1 inch (16-25 mm)	Deltoid muscle of arm
Children, 3-10 years	5/8 <sup>(b)</sup> -1 inch (16-25 mm)	Deltoid muscle of arm <sup>(c)</sup>
	1-1.25 inches (25-32 mm)	Anterolateral thigh
Children, 11-18 years	5/8 <sup>(b)</sup> -1 inch (16-25 mm)	Deltoid muscle of arm <sup>(c)</sup>
	1-1.5 inches (25-38 mm)	Anterolateral thigh
<b>Adults (≥19 years)</b>		
Men and women, <60 kg (130 lbs)	1 inch (25 mm) <sup>(d)</sup>	Deltoid muscle of arm
Men and women, 60-70 kg (130-152 lbs)	1 inch (25 mm)	
Men, 70-118 kg (152-260 lbs)	1-1.5 inches (25-38 mm)	
Women, 70-90 kg (152-200 lbs)		
Men, >118 kg (260 lbs)	1.5 inches (38 mm)	
Women, >90 kg (200 lbs)		
Men and women, any weight	1.5 inches (38 mm) <sup>(e)</sup>	Anterolateral thigh

<sup>(a)</sup> First 28 days of life.

<sup>(b)</sup> If skin is stretched tightly and subcutaneous tissues are not bunched.

<sup>(c)</sup> Preferred site.

<sup>(d)</sup> Some experts recommend a 5/8-inch needle for men and women who weigh <60 kg, if used, skin must be stretched tightly (do not bunch subcutaneous tissue).

<sup>(e)</sup> Some experts recommend a 1-inch needle if the skin is stretched tightly and subcutaneous tissues are not bunched.

For more information on needle gauge and length visit [www.cdc.gov/vaccines/hcp/acip-recs/general-recs/administration.html](http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/administration.html)



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## The “7 Rights” of Vaccine Administration

It is easy to make a vaccine administration error. Follow the “7 Rights” of vaccine administration outlined below to prevent errors.

<b>Right patient</b>	Verify the patient’s name, date of birth, and contraindications or precautions.
<b>Right time</b>	Review the patient’s immunization history. Ensure the patient is the right age and the right interval has passed between doses.
<b>Right vaccine and diluent</b>	Double check the labels for both the vaccine and diluent before drawing them up and before administering vaccine.
<b>Right dosage</b>	Confirm you are giving the right dose for the patient’s age. Check the package insert or an appropriate guidance document such as an Emergency Use Authorization (EUA) to confirm the appropriate dose for the patient’s age.
<b>Right route, needle, and technique</b>	Always follow the appropriate route of administration. Use the right needle and injection technique.
<b>Right injection site</b>	Always use the appropriate injection site for the vaccine you are administering. See below for recommended IM injection techniques.
<b>Right Documentation</b>	Make sure to fully document each immunization in the patient’s permanent medical record and Wisconsin Immunization Registry (WIR).

## Recommended Intramuscular Injection Techniques

It is important to administer vaccine correctly to ensure an optimal immune response and prevent unintended injuries. The middle third of the vastus lateralis or anterolateral thigh is the recommended injection site for infant and children less than 3 years old. The deltoid (upper arm) is the recommended injection site for persons 3 years and older.



Find more information on the seven rights of vaccine administration and recommended injected techniques visit [www.cdc.gov](http://www.cdc.gov).

Images courtesy of the Melbourne Vaccine Education Centre.