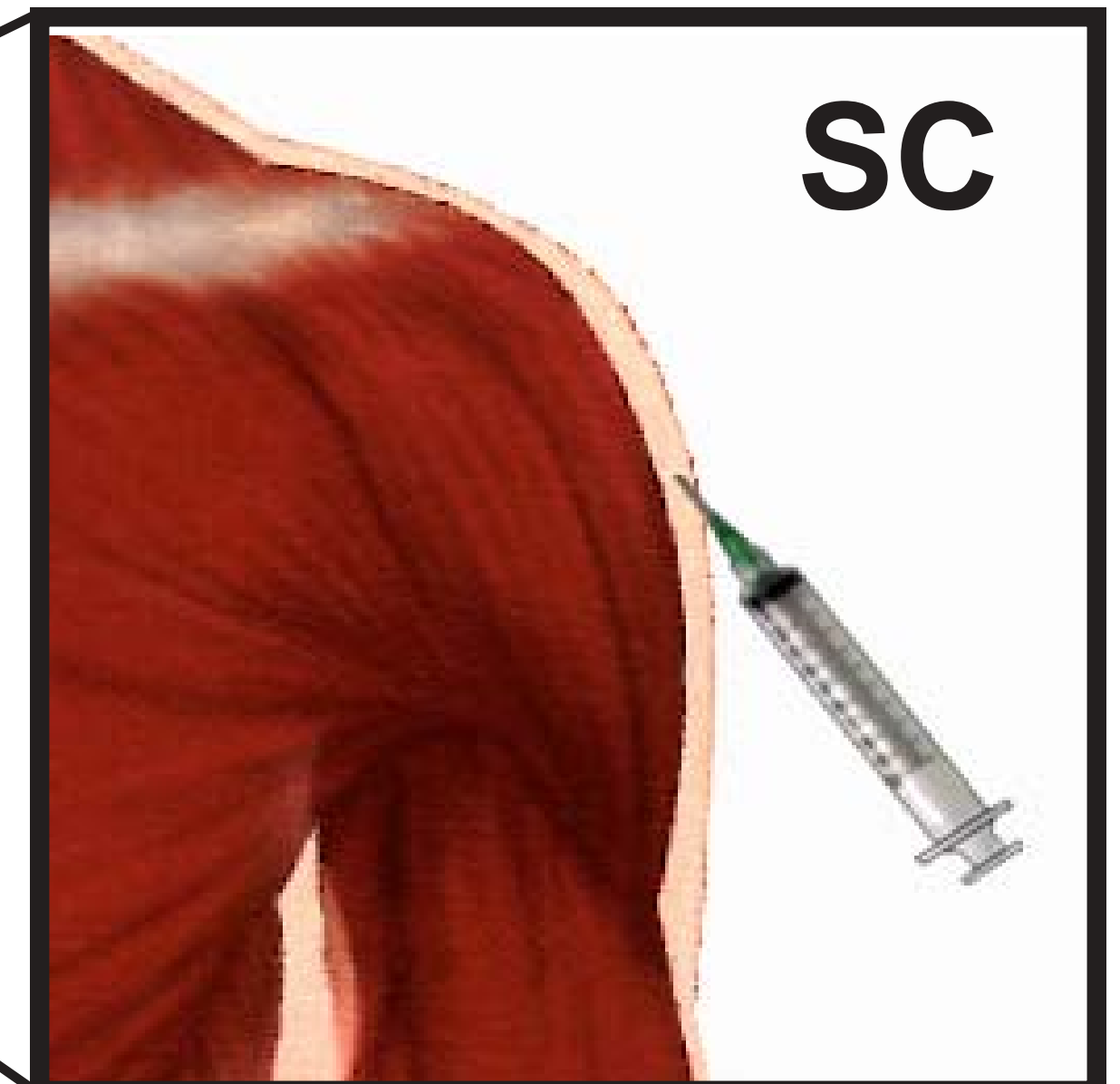
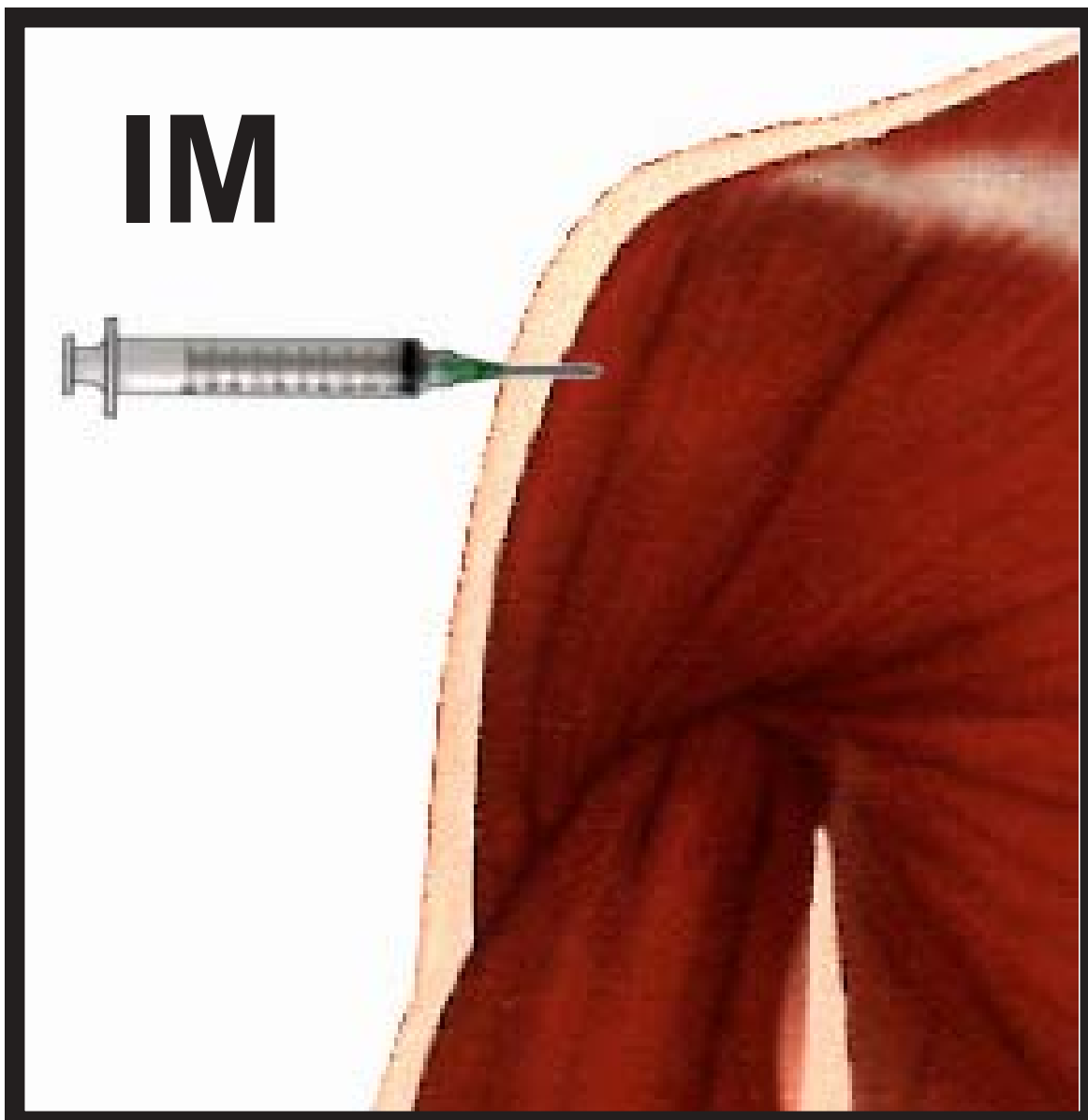
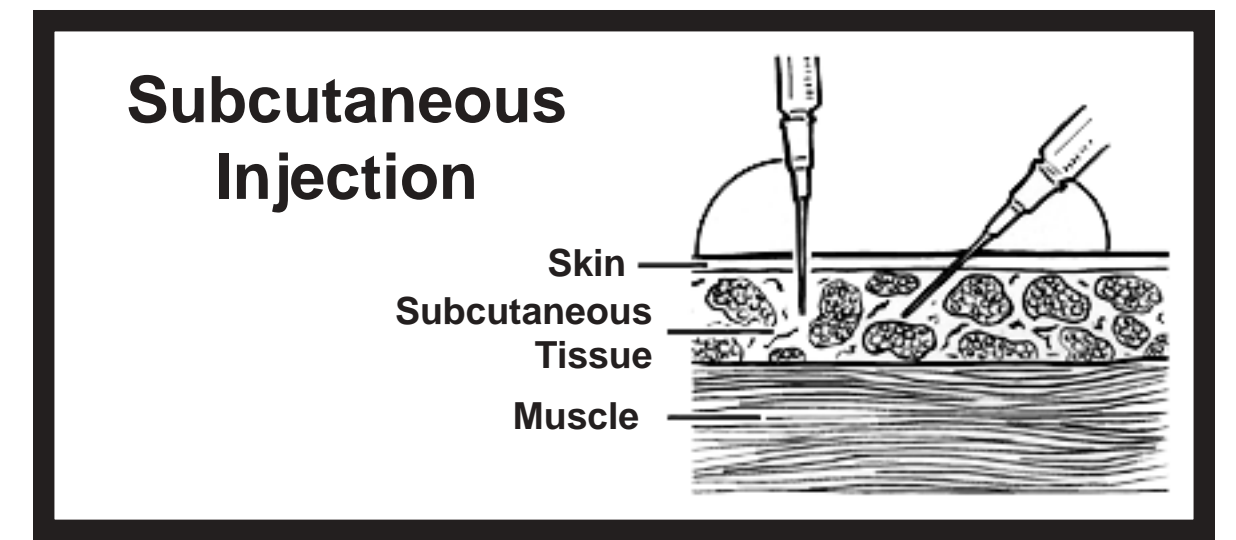
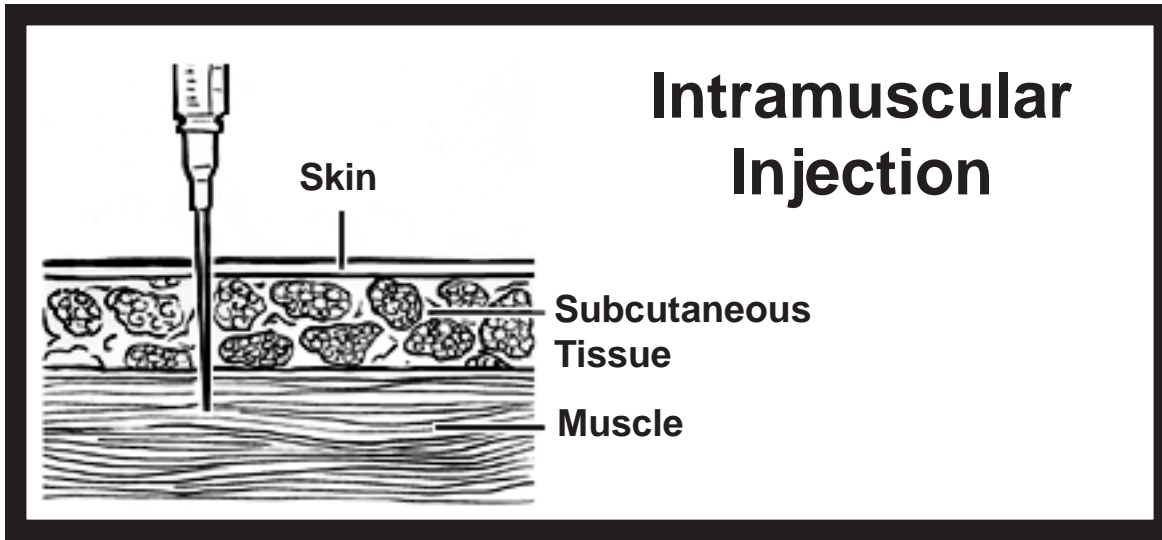


Vaccine Injection Technique

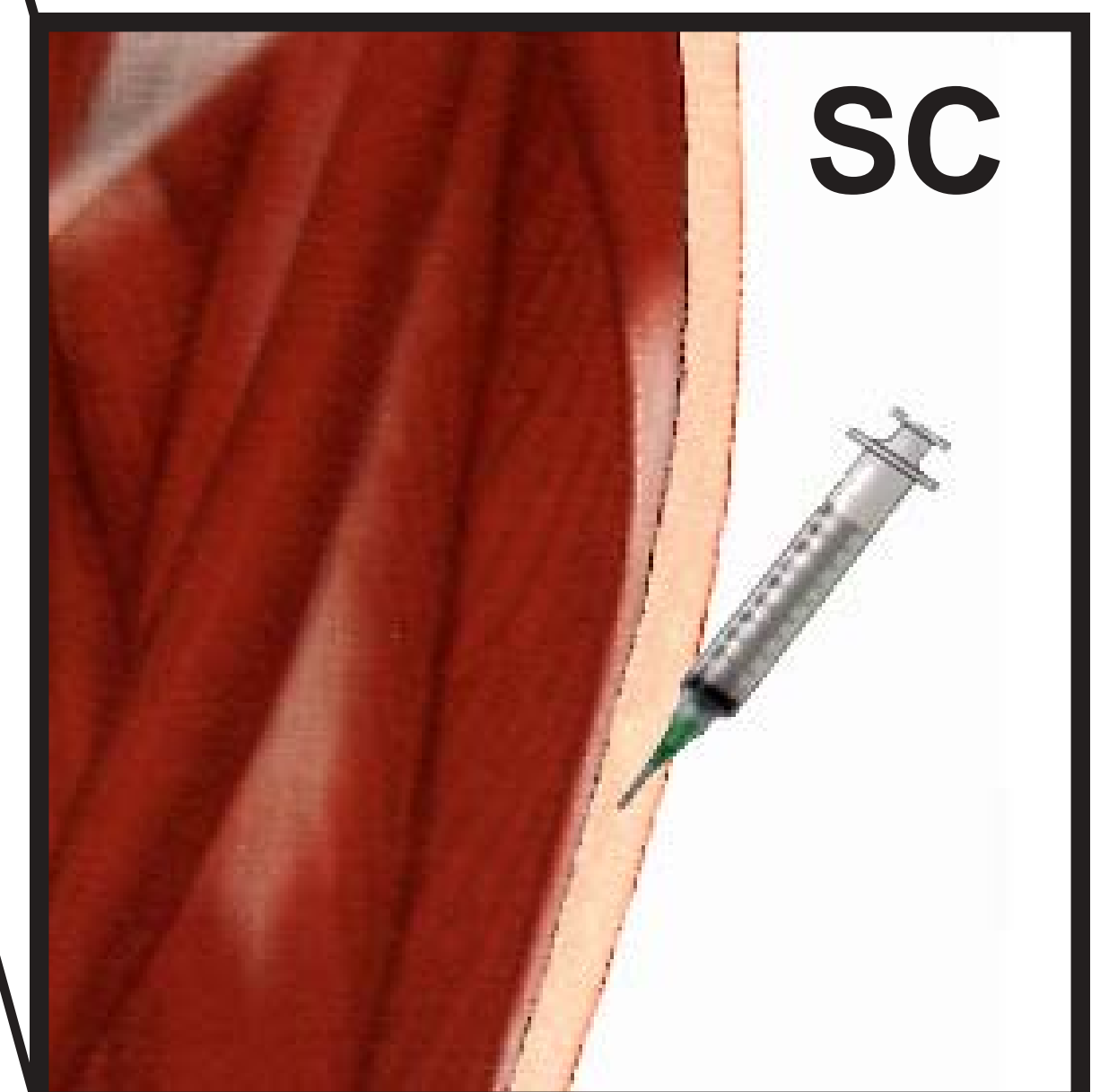
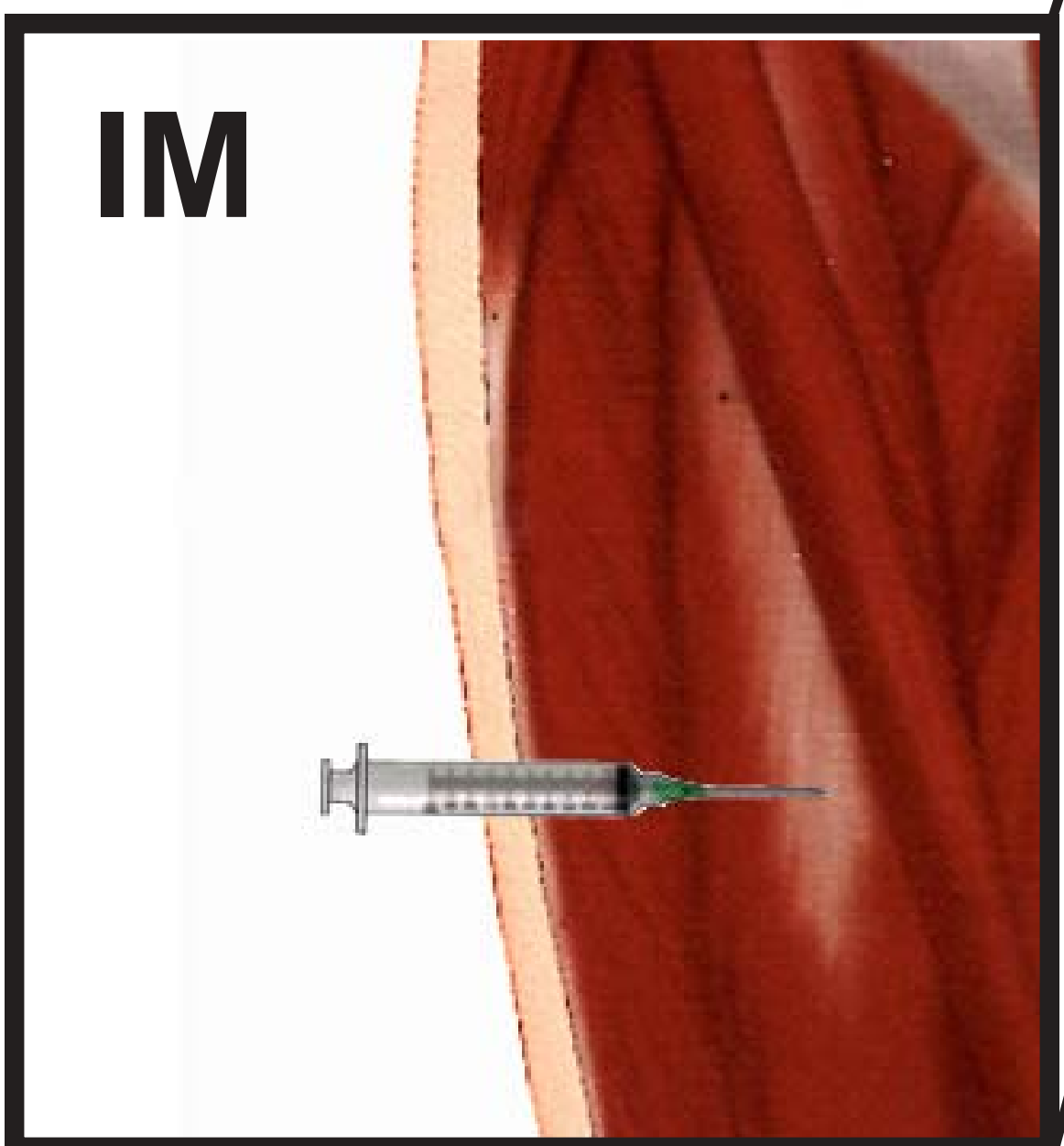


Intramuscular (IM) Injections:

- Wash your hands.
- Preferred sites are the anterolateral aspect of the upper thigh muscle (common for young children) or the middle of the deltoid muscle of the upper arm.
- Use a needle long enough to reach the muscle, but not so deep as to reach underlying nerves, blood vessels, or bone. See the box below.
- Stretch skin between the thumb and forefinger.
- Introduce the needle at a 90-degree angle to the muscle, with a quick thrust, advance the needle as necessary, deep into the muscle - perhaps to the hub of the needle.
- You may pull back on the plunger slightly, to be sure the needle is not placed in a blood vessel.
- Inject the medication slowly, then withdraw the needle. You may massage the injection site.

Subcutaneous (SC) Injections :

- Wash your hands.
- Intended for fatty tissue below the dermal layer of the skin, either the outer aspect of the upper arm (i.e., **overlying the deltoid region**) or the fatty area of the anterolateral thigh.
- Unlike other SC vaccines that can be injected into fatty tissue overlying the triceps muscle, **do NOT inject vaccines prone to cause swelling (e.g., anthrax vaccine) over the triceps** or "back of the arm," to avoid SC swelling that could lead to injuring the ulnar nerve.
- To assure placement of vaccine in SC tissue, pinch up the fatty tissue between finger and thumb. Then insert the needle at an angle of about 45-degrees, piercing the skin quickly, and advancing steadily to minimize the sting.
- Place the tip of the needle well beneath the skin, in subcutaneous tissue, but not as deep as the muscle.
- You may pull back the plunger slightly, to be sure the needle is not placed in a blood vessel.
- Inject the medication slowly, then withdraw the needle. You may massage the skin.



Needle Length for Intramuscular Injection Based on Body Mass

| Age Group | Site | Needle Length | Needle Gauge* |
|-------------------|---------|---------------|---------------|
| Infants | thigh | 5/8-1 | 22-23 |
| Older children | thigh | 7/8-1 | 22-25 |
| | deltoid | 5/8-1 | 22-25 |
| Adult men | deltoid | 1-1 1/2 | 20-25 |
| Women < 60 kg | deltoid | 5/8 | 20-25 |
| Women > 60-90 kg | deltoid | 1 | 20-25 |
| Women > 90 kg | deltoid | 1 1/2 | 20-25 |
| Obese men & women | deltoid | consider 2 | 20-25 |

For viscous medications, use a wider-gauge needle

Scientific Illustration Division
 Armed Forces Institute of Pathology
 Washington, D.C

Developed by:
 DIRECTORATE of HEALTH CARE OPERATIONS
 OFFICE of THE ARMY SURGEON GENERAL
 FALLS CHURCH, VIRGINIA
 JANUARY 2002