

IM Injection Sites and Max mL

● SKILL SNAPSHOT**Purpose**

- Delivers medication deep into skeletal muscle for reliable absorption while avoiding nerves, vessels, and bone.

When to use

- Vaccines and medications specifically ordered for intramuscular administration.

Supplies needed

- MAR/order; medication; 1-3 mL syringe as appropriate; correct gauge/length needle; antiseptic; gauze; gloves; sharps container.

● PREP + PATIENT SETUP

- Verify rights, allergies, medication volume/viscosity, and manufacturer instructions.
- Select site by age, muscle mass, medication, volume, mobility, and injury risk.
- Common adult guide: deltoid usually up to 1 mL;

● VAULT TIP

- Choose the site before drawing the dose. If the ordered volume exceeds that site's safe capacity, clarify or divide it.

● STEP-BY-STEP

1. Hand hygiene; identify patient with two identifiers; explain procedure.
2. Confirm exact medication, dose, route, time, indication, and maximum volume for the chosen site. Split large doses if required.
3. Choose needle gauge and length based on muscle, adipose depth, medication viscosity, age, sex/weight, and site.
4. Landmark the site: deltoid center 2-3 fingerbreadths below acromion; vastus lateralis middle outer thigh; ventrogluteal between index and middle fingers over gluteus medius.
5. Avoid dorsogluteal site when safer sites are available because of sciatic nerve and variable adipose depth.
6. Position and relax the muscle. Inspect skin; do not inject into infection, bruising, scars, edema, or poor perfusion.
7. Apply gloves. Clean with approved antiseptic and allow it to dry.
8. Stretch skin taut. Use Z-track for irritating/staining medication when indicated; bunch muscle only when age/body habitus requires.
9. Insert needle quickly at 90 degrees into muscle.
10. Follow medication and policy guidance about aspiration; do not aspirate for vaccines.
11. Inject slowly and steadily. Wait about 10 seconds for Z-track medication, then withdraw at the same angle and release displaced skin.
12. Apply gentle pressure; do not massage when contraindicated. Activate safety device and discard intact in sharps container.
13. Reassess for bleeding, pain, immediate reaction, and expected medication response.

● SAFETY REMINDERS

- Maximum volume is not universal: use drug manufacturer, age/site, muscle size, and facility policy.
- For vaccines, use CDC age/weight-based needle and site guidance.
- Avoid deltoid injections too high or too low.
- Have emergency response supplies available for medications with anaphylaxis risk.

● COMMON MISTAKES

- Treating a memorized mL limit as universal.
- Using the dorsogluteal site without considering safer options.
- Wrong needle length causing subcutaneous deposition.
- Injecting too near the acromion.

● DOCUMENTATION

- Medication, dose, route, date/time.
- Exact site and side; needle if required.
- Assessment and patient tolerance.
- Teaching and observation period.
- Adverse effects and interventions.