

Crimea State Medical University

Abstract Topic: Intramuscular Injection

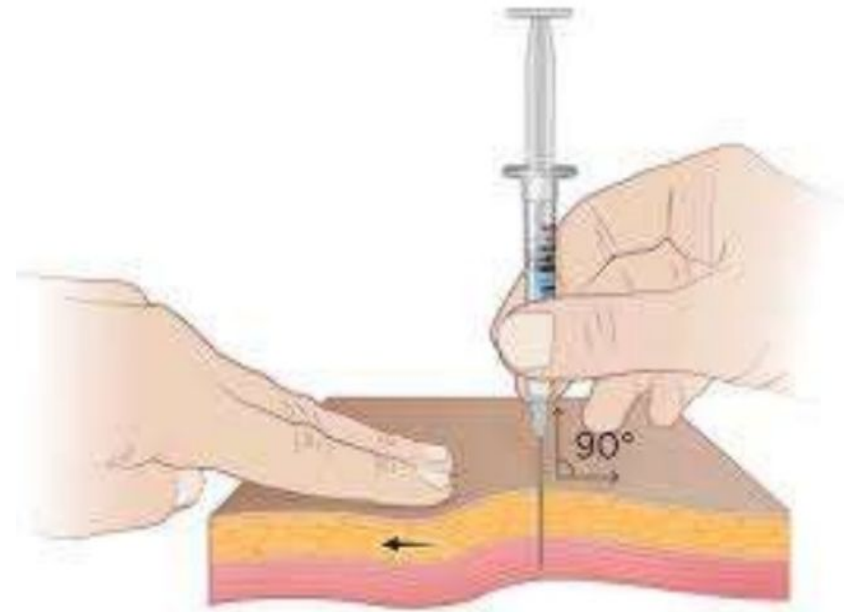
Summer Practice

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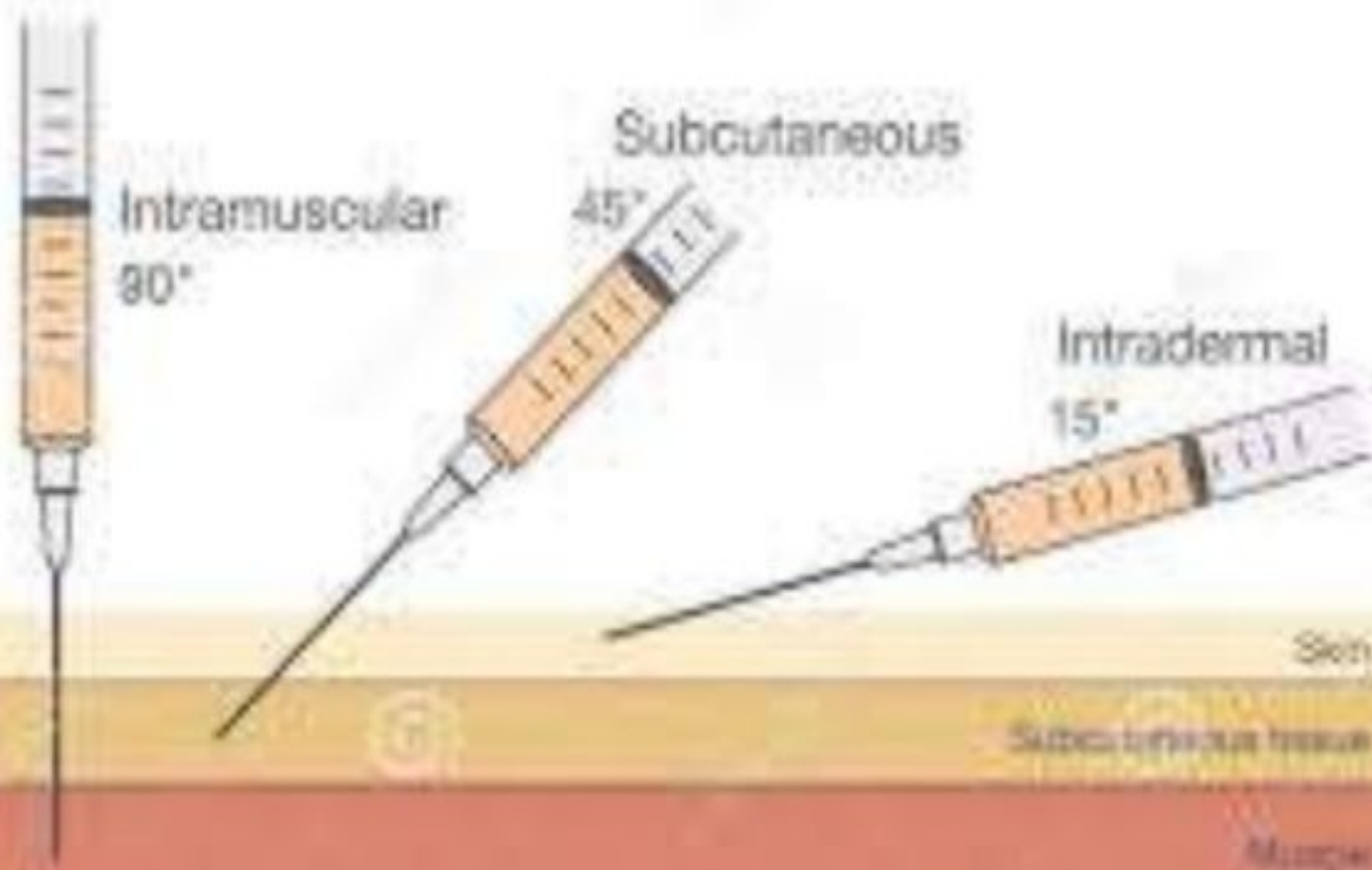


Intramuscular injections



- Technique used to deliver a medication deep into the muscles.
- Self-administration of intramuscular injection
- Always given at 90 degree angle

Comparison of angles of injection.



What are intramuscular injections used for?

- Used to deliver drugs and vaccines
- Used when other types of methods are not recommended
 - ❖ oral
 - ❖ Intravenous
 - ❖ Subcutaneous



Deltoid
muscle of
the arm

Intramus-
cular
injection
sites

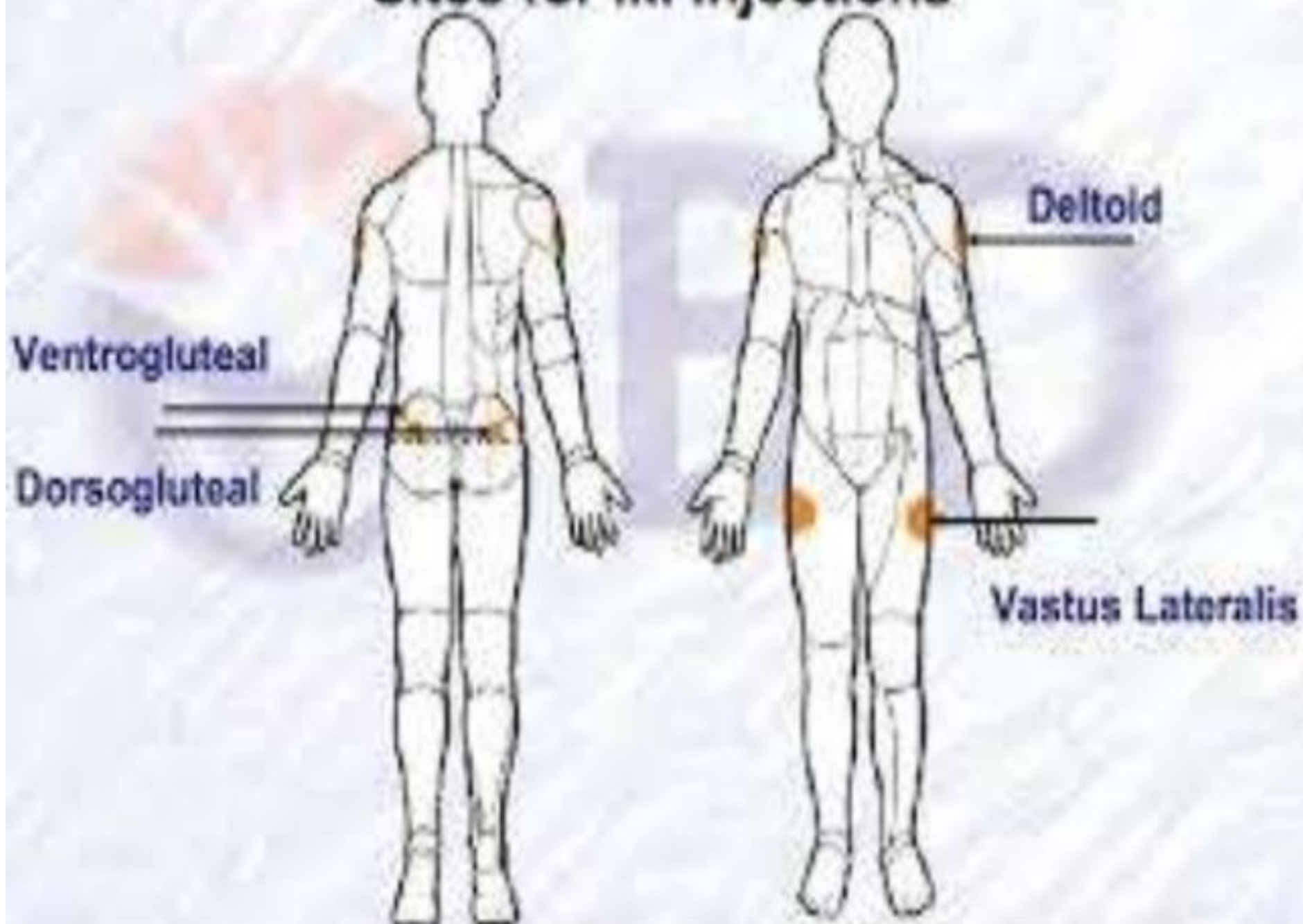
Dorsogluteal
muscles of the
buttocks

Vastus lateralis
muscle of the
thigh

Ventroglu-
teal
muscle of
the hip



Sites for IM Injections



Deltoid muscle of the arm

- Site most typically used for vaccines
- Site not common for self-administration
- Used in adults for rapid absorption
- Close to radial nerve and radial artery



Deltoid site

◎ Clients position : sitting



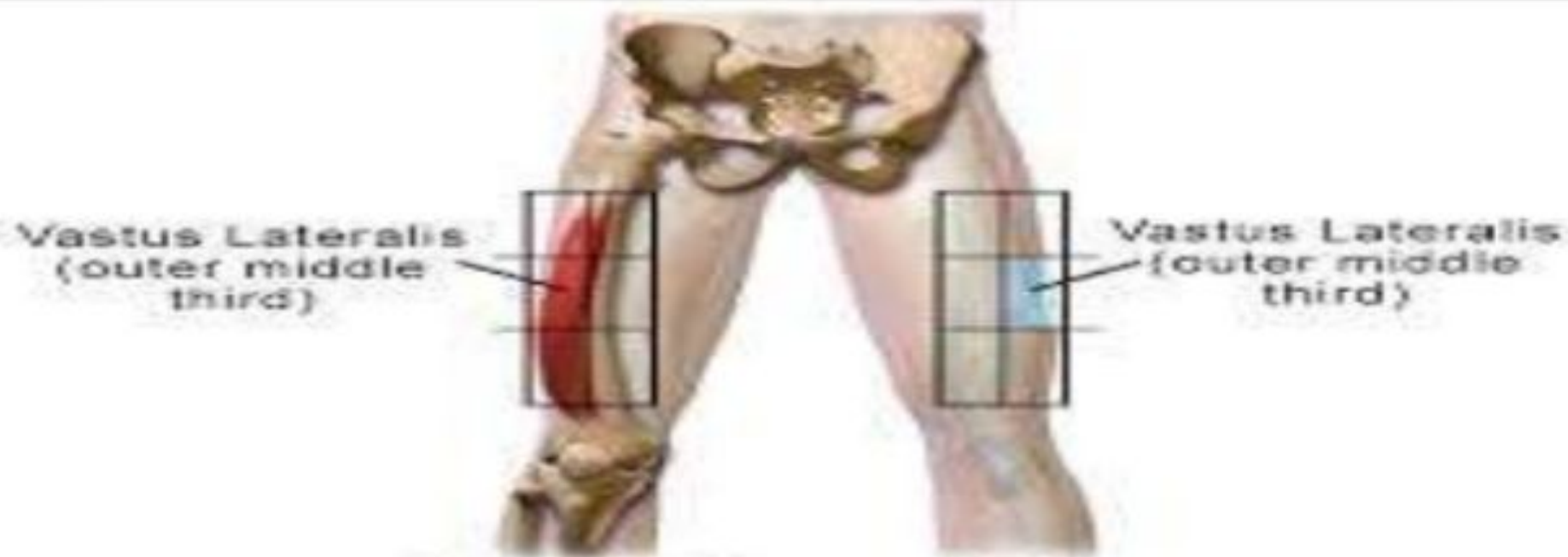
Deltoid site

◉ Procedure

- ❑ Feel the bone
- ❑ Two finger widths below the acromian process
- ❑ At the bottom of fingers, there is upside-down triangle
- ❑ Give the injection in the center of triangle

Vastus Lateralis muscle of the thigh

- IM site of choice for infants ≤ 1 year
- No major blood vessels and nerves



Correct Place to Give Shot in the Thigh Muscle

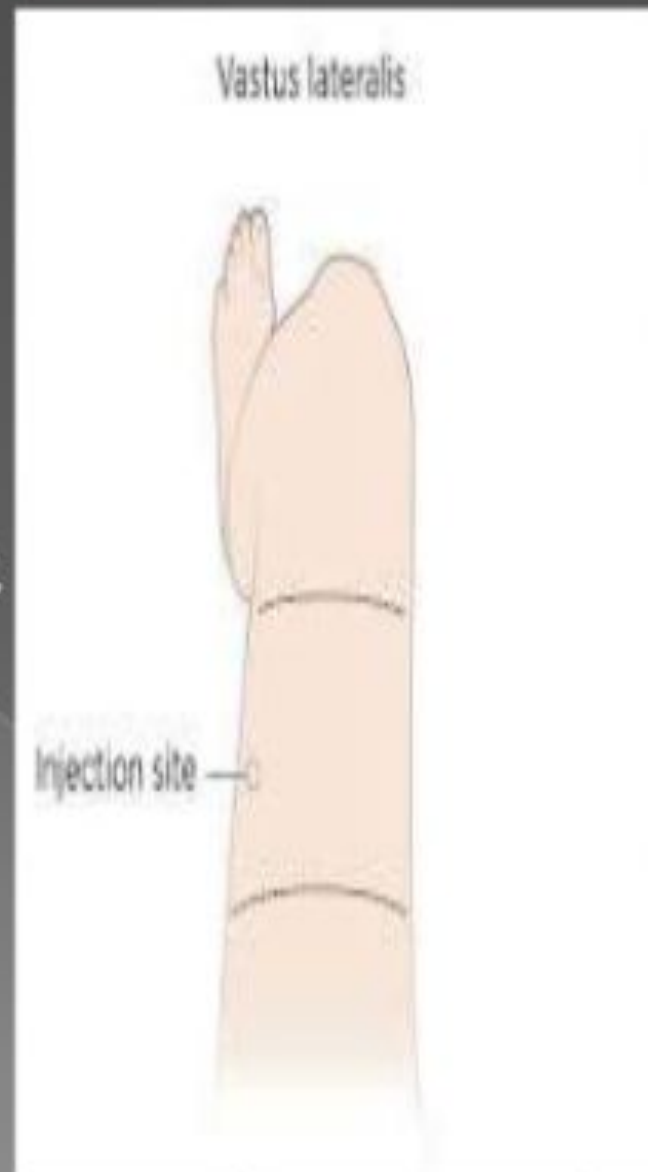
Patients position: sitting or supine



Vastus lateralis site

⦿ Procedure:

- Divide upper thigh into three equal parts
- Outer top portion of middle of these three injections is your injection site

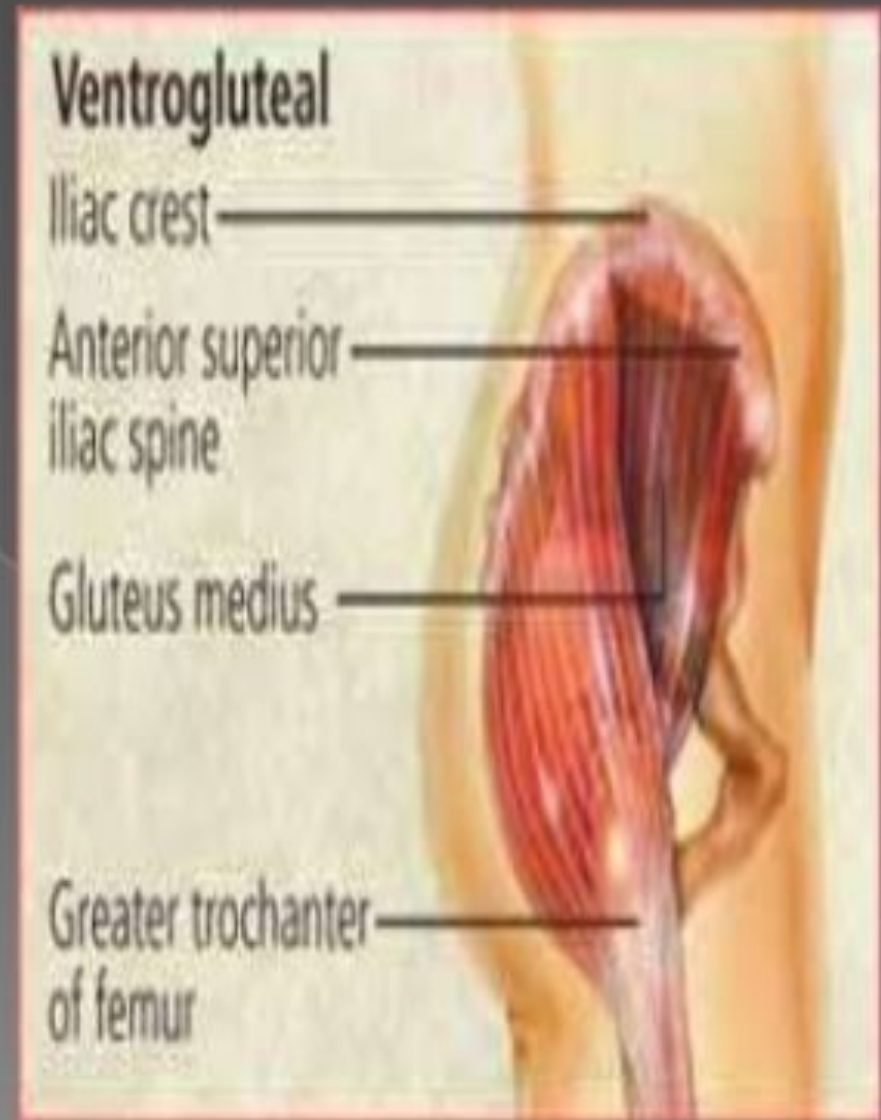


Ventrogluteal muscle of the hip

- Gluteus medius site
- Suitable for children > 1 year and adults
- Less fat, no large nerves/blood vessels

Patient's position :

Side lying or flexed knee



Ventrogluteal site

● Procedure:

- Place palm of hand (right hand for left hip and left hand for right hip) on patients greater trochanter, fingers towards head
- With index finger on patients anterior superior iliac spine, stretch middle finger dorsally
- Inject at the triangle formed (v shaped) by index finger, third finger and iliac crest

Location of Gluteus Medius

Injection Point

(between the knuckle of the
index & middle finger)

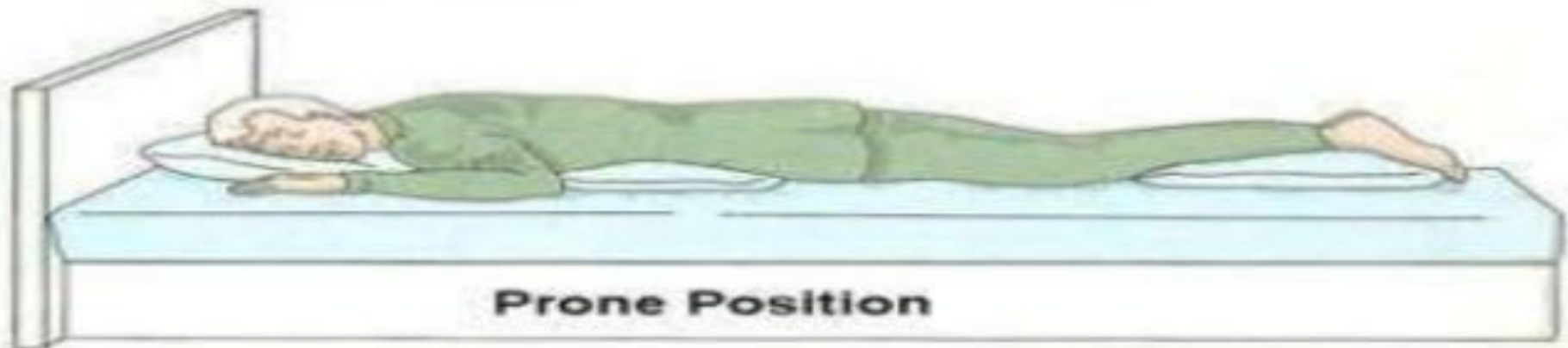
Greater Trochanter



Dorsoqluteal Site

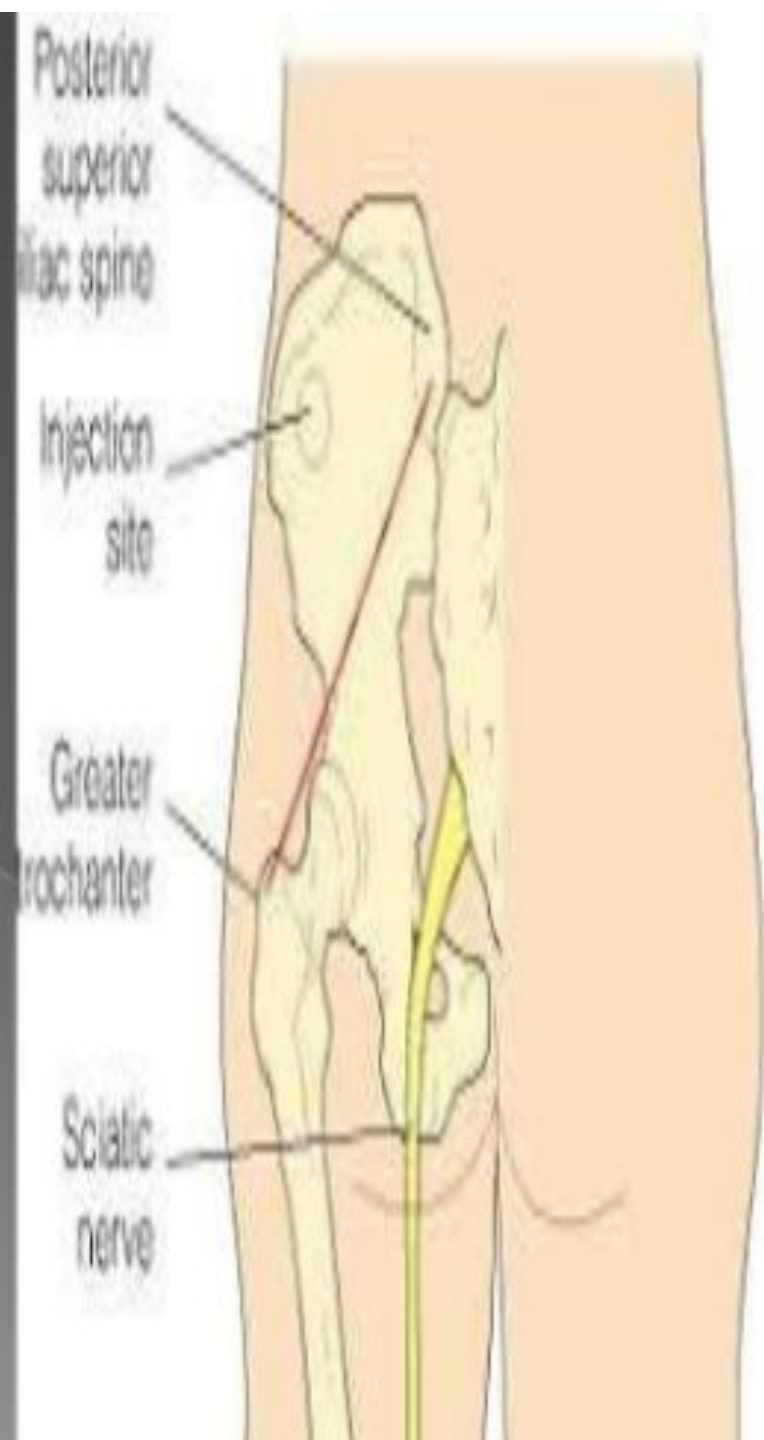
- Used in adults and children with well-developed gluteal muscles
- Avoided in children < 3 years

Clients position: prone, with toes pointing inward or side lying with upper knee flexed



Procedure

- Palpate posterior superior iliac spine
- Draw an imaginary line to the greater trochanter of femur
- Site is lateral and superior to this line to avoid sciatic nerve



Administration of IM



◉ MATERIALS REQUIRED:

- ✓ Gauge 23(32mm) to gauge 21(38mm)
- ✓ If patient is ≥ 91 kg, use gauge 20(50mm)

Needle size and injection site depends on many factors

- ◉ Age and size of person
- ◉ Volume and type of medication

(Needle should be long enough to reach the muscle without penetrating the nerves and blood vessels).



Follow these steps for the safe IM injections

- ✓ wash your hands
- ✓ Gather all needed supplies
- ✓ Locate injection site
- ✓ Clean injection site
- ✓ Prepare syringe with medications
- ✓ Remove air bubble
- ✓ Inject the medication
- ✓ Remove the needle





Medication volume

- Deltoid __ 0.5ml to 1ml
- Ventrogluteal __ upto 5ml

Note:

If pH or tonicity of medication is different than body fluids, choose larger muscle sites

Complications of IM



- Its normal to experience some discomfort after an IM injection
- But certain symptoms may be a sign of more serious complications
 - ❑ Severe pain
 - ❑ Numbness
 - ❑ Redness or swelling
 - ❑ Prolonged bleeding
 - ❑ Drainage at allergic site

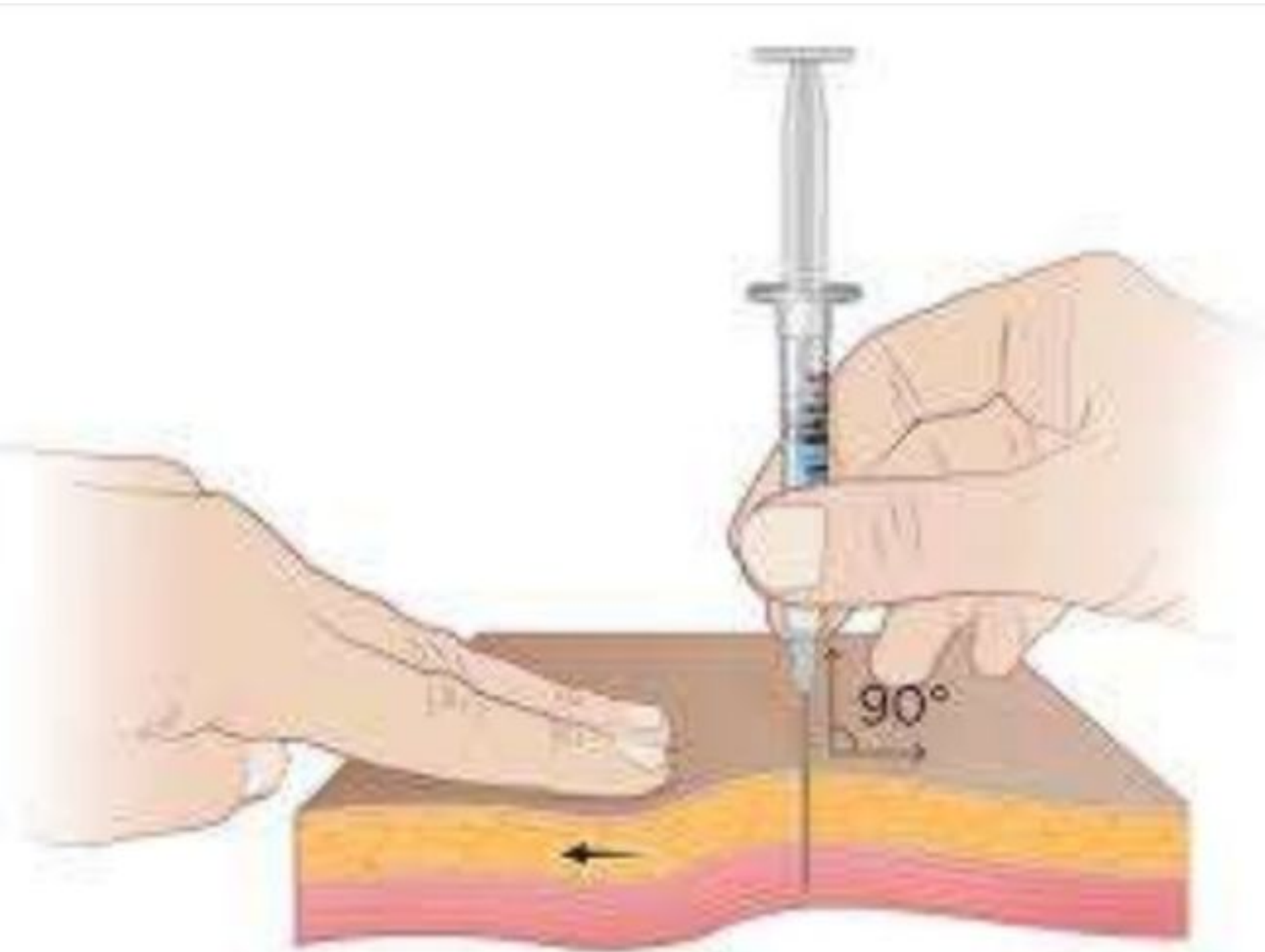


Technique to reduce discomfort

• Z-track method:

- ❑ It is used against irritation, or leakage of the medication in the surrounding subcutaneous tissue
- ❑ IM injection at a 90 degree angle
 - Skin pulled to the site
 - Skin released

(when skin returns to its normal position after needle is withdrawn, a sealed form over the site)



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