

Dermal/Capillary Puncture

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Master in Analytical Chemistry

- Capillary/dermal puncture is used for blood collection from infants, small children, and adults in whom veins may be difficult to find, such as elderly patients, obese patients, or severely burned patients.
- Dermal puncture procedures include a series of detailed steps that must be performed safely and accurately.
- Properly identify patients and prepare them for blood collection by explaining the procedure and positioning them in a supported seated or lying position.
- Select an age-appropriate site on the fingers or the heel of the foot.

- Equipment needed for dermal puncture is the same as that used for venipuncture with the exception of the puncture device and the collection containers.
- Properly cleanse the puncture site using an alcohol prep pad or other appropriate antiseptic; wipe in a circular motion from the center outward. Be sure the site is dry before collecting blood.
- It is essential to follow aseptic technique and Standard Precautions and to collect the specimen in the appropriate microcontainers.

- Complications of dermal puncture include infection, osteochondritis, and osteomyelitis.
- It is important to draw the correct amount of blood—no less than the minimum and no more than the maximum amount. Drawing less than needed for tests requires an additional puncture; drawing too much may result in exsanguination, especially in infants and small children.
- After the puncture is complete, dispose of the contaminated safety lancet, label the microcontainers, check the puncture site, apply a bandage if indicated and appropriate, dispose of used supplies, clean the area, and thank and dismiss the patient.

Dermal/Capillary Puncture

- Preferred method for young patients
 - Infants
 - Very small children
- May also be used for other patients
 - Obese
 - Elderly
 - Severely burned

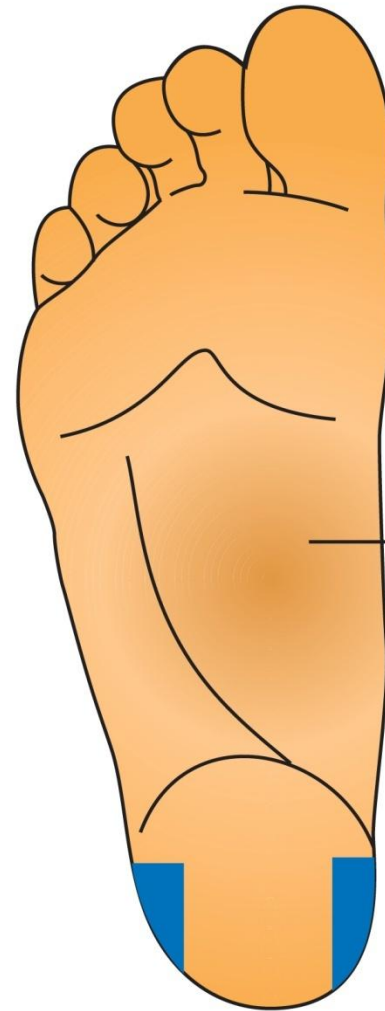
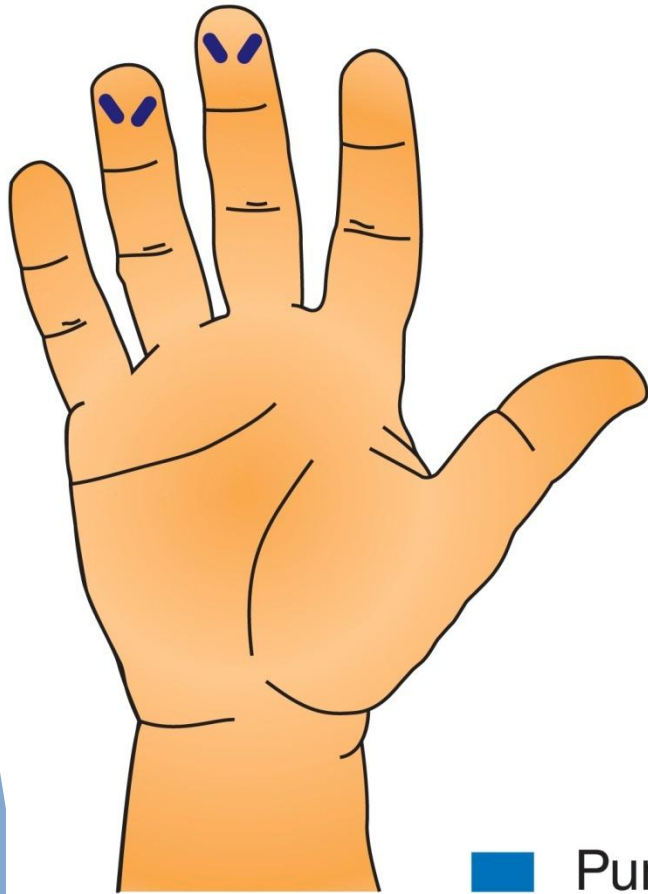
Preparing for Dermal Puncture

Competency Check: Dermal Puncture Preparation

1. Acquire and examine the requisition slip.
2. Greet and identify the patient.
3. Explain the procedure.
4. Verify any dietary restrictions.
5. Wash your hands.
6. Put on gloves.

Selecting a Dermal Puncture Site

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Plantar surface

■ Puncture sites

Assembling Dermal Puncture Equipment

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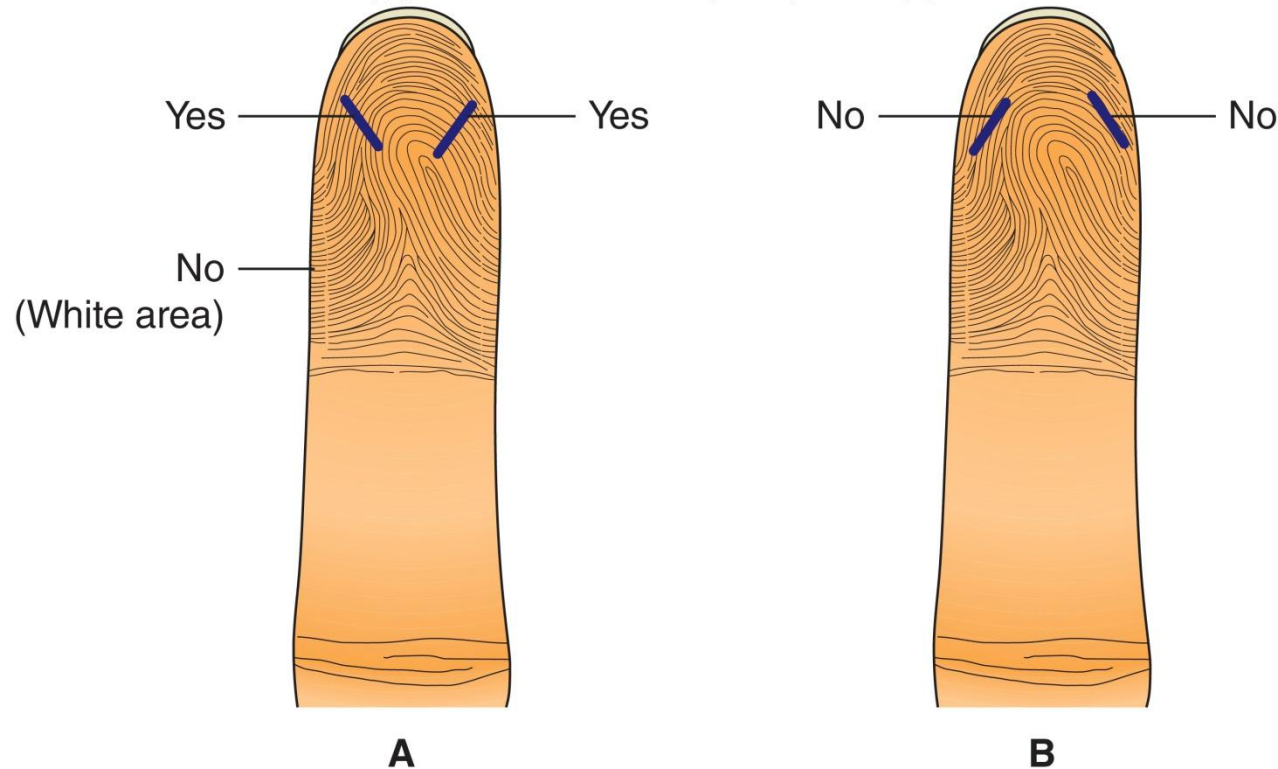
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Performing a Dermal Puncture

Planning the Dermal Puncture

- Examine the fingers
- Choose a finger for the puncture
- Plan to cut across the fingerprint

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Performing the Puncture

- Clean the site with alcohol
- Allow to dry completely
- Hold the finger to stretch skin tightly
- Puncture the finger

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Collecting the Capillary Specimen

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A

Wipe away first
drop



B

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Apply steady
pressure



C

Collect specimen

Complications of Dermal Puncture

- Infection
- Osteochondritis
- Osteomyelitis

Minimum and Maximum Blood Volumes

- Collecting the correct volume is important
 - Enough for tests to be performed
 - Do not exceed maximum allowed for day or over short time
- Most containers are marked with acceptable minimum and maximum fill levels

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After the Dermal Puncture

- Place used lancet in sharps container
- Label the microcontainers
- Check patient's finger and apply bandage if necessary
- Collect and dispose of supplies appropriately
- Thank and dismiss the patient
- Remove gloves
- Transport specimen to the laboratory

Any Questions???