

## Beaumont Laboratory

# GERIATRIC PHLEBOTOMY TIPS

## BLOOD COLLECTION VIA VENIPUNCTURE

Geriatric patients often have medical conditions that make blood collection difficult, such as arthritis, hearing loss, atherosclerosis, dementia, etc. In addition, as we age skin commonly becomes thinner and looser; the muscles also become smaller, causing veins to roll easier; and they are also at an increased risk of hypothermia. Most importantly, their veins become less elastic and can be easily injured or collapse during a venipuncture.

Proper preparation and modifications to the standard venipuncture procedure are necessary to collect blood safely on the elderly. Described below are some recommended tips for successful venipuncture on an elderly patient.



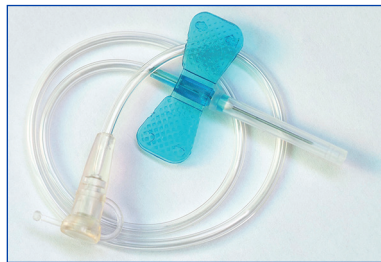
## SELECTING THE PROPER EQUIPMENT

The use of smaller gauge needles helps prevent trauma to small, fragile veins that frequently collapse in the geriatric patient.

- **ARM VEINS:** A smaller 22-gauge straight needle (black cap) is best for small or difficult **arm veins**.



- **HAND VEINS:** A winged blood collection set with a 23-gauge needle (also referred to as the butterfly with pale blue wings) is the better choice for **hand veins** since it lets the phlebotomist control the access to fragile veins a little easier. This butterfly has a luer adapter that easily attaches to the vacuum tube holder.



## APPLICATION OF THE TOURNIQUET

Elderly patients are prone to bruising when applying the tourniquet.

- Place the tourniquet over the patient's sleeve of the patient shirt sleeve if drawing an arm vein.
- Apply the tourniquet one to two inches above the wrist if drawing a hand vein.
- Do not apply the tourniquet too tightly as it could cause injury or collapse the vein.
- The tourniquet should remain tied for no more than one minute at a time. If the tourniquet is on longer than one minute, release and reapply prior to venipuncture to avoid hemoconcentration.
- After completing the venipuncture, **gently** release the tourniquet. Do not snap it against the patient's skin; this could result in bruising of the area.

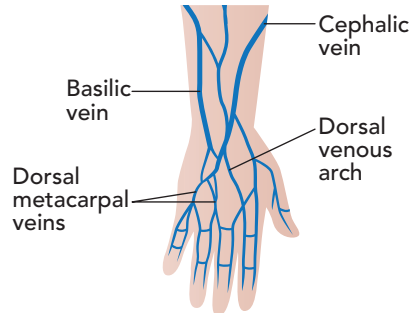
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## LOCATING THE BEST VEIN

The veins in the arm may not be the best site selection because of the difficulty in finding and anchoring these veins as well as possible hematomas from prior venipunctures.

### Veins in the hand or forearm may be a better choice.

To make these veins more prominent, it may take a little extra time and use of the following techniques:



- Apply a heat compress to the site for three to five minutes.
- Stimulate the site with alcohol to make the veins more prominent.
- Briefly hang the arm in a downward position.
- Do NOT tap the veins. This could bruise the patient.
- Massage the arm upward from the wrist to the elbow if selecting arm veins.

## PERFORMING THE VENIPUNCTURE SUCCESSFULLY

Elderly patients' veins **have a tendency to move** or "roll" very easily. Therefore:

- Use your thumb to gently pull the skin taut and anchor the vein (If the vein disappears, simply release the skin to re-visualize the vein and then gently pull taut again).
- Puncture the vein in a quick, smooth motion.
- Insert the needle at a decreased angle since the veins are close to the surface of the skin.
- Choose a straight section of the hand vein – avoid any "intersection" or "V" where a vein branches into another vein.
- Only use the top of a hand for puncture. Avoid the fingers or the underside of the wrist.
- Avoid drawing from sclerosed or "hardened" veins that have poor blood flow.



## APPLYING PRESSURE AT VENIPUNCTURE SITE

Elderly patients tend to bruise very easily. Many patients may be on anticoagulant therapy for heart problems or stroke making them even more prone to easy bruising.

- Apply pressure on the site for three to five minutes or until the bleeding has stopped.
- This extra time is critical in order to prevent excessive bleeding or formation of a hematoma.

## BANDAGING THE SITE

Older patients also have thin, fragile skin and thus an increased sensitivity to standard adhesive bandages.

- Avoid using adhesive bandages. When removed, they can take off a layer of skin resulting in a raw wound that is susceptible to infection.
- The preferred method is to apply paper tape over folded gauze to make a pressure bandage.
- Reminder: The bandage should **not** be applied until bleeding has stopped.



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