



**Pearls**

- Intraosseous access with the appropriate adult or pediatric device.
- External jugular ( $\geq 8$  years of age).
- Any prehospital fluids or medications approved for IV use, may be given through an intraosseous IV.
- All IV rates should be at KVO (minimal rate to keep vein open) unless administering fluid bolus.
- Use microdrips for all pediatric patients.
- External jugular or intraosseous lines can be attempted initially in patients who are hemodynamically unstable or in extremis.
- Any venous catheter which has already been accessed prior to arrival may be used.
- Upper extremity IV sites are preferable to lower extremity sites.
- Lower extremity IV sites are discouraged in patients with vascular disease or diabetes.
- In post-mastectomy patients, avoid IV, blood draw, injection, or blood pressure in arm on affected side.