### SPECIMEN COLLECTION ISSUES

#### Process/Handling/Transport Issues

- **Red blood cell trauma and damage**
  - Adequate packaging of specimens to avoid excessive mixing
- **Release of potassium from cells**
  - Chilling whole blood beyond 2 hours affects water balance of cells
- **Leakage of RBCs across barrier, RBC contamination, high potassiums,** and other erroneous test results
- **Carryover from previous tube**
- **Plasma Potassium increases over time due to presence of cells**
- **Serum vs Plasma**
- **Increased heat exposure in centrifuge**
- **Serum above barrier, RBC contamination**
- **Plasma**
- **Use alternate site**
- **Do not probe**
- **Recommended Order of Draw**
- **Different order of draw**
- **Non additive tubes**
- **Release potassium from cells**
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#### PHYSIOLOGICAL ISSUES

- **Thyrotoxicosis**
- **Myocardial or peritoneal disorders with severe leakiness**
- **Dehydration**
- **Anorthagene Therapy (Cortisone, Estrogens)**
- **Liver Disease**
- **Familial pseudohyperkalemia**
- **Oral Thiazide of Antihypertensives**
- **Seizures or Valproate**

#### BLEEDING

- **Possible Consequences**
  - Repeated fist clenching with or without tourniquet causes excessive release of potassium from skeletal muscles (pseudohyperkalemia)
- **Corrective Actions**
  - Release the tourniquet as soon as blood flow is established.
  - Tourniquet should be released within 1 minute

#### PROCESSING/TABLING/TRANSPORT ISSUES

- **Possible Consequences**
  - Repeated fist clenching with or without tourniquet causes excessive release of potassium from skeletal muscles (pseudohyperkalemia)

#### Troubleshooting Erroneous Potassiums in a Clinical Laboratory Setting

**Note:** This troubleshooting guide is intended for use with the complete BD Vacutainer® Blood Collection System, and may not apply when interchanging blood collection components from other manufacturers.