

## Volume-Reduced Platelet Education

Volume reduction is the manipulation of cellular blood products using centrifugation to remove plasma and storage media to concentrate the product.

During this process, platelets may become activated or damaged and **have a loss of function**.

At UC Davis Health, this process takes about **1-3 hours to prepare** a unit of volume-reduced platelets depending on product demand and blood bank staffing.



### Volume-reduction indications:

- ✓ Select patients at high risk for Transfusion Associated Circulatory Overload (TACO) not tolerating alternative volume management strategies.
- ✓ History of repeat severe allergic reaction to transfusions, with pathologist approval.
- ✓ Concentrated platelet solution post pediatric cardiac bypass (per cardiac protocol).
- ✓ Intrauterine transfusions.

**DO NOT ORDER** volume-reduced platelets for slow infusions, to significantly increase platelet count, or dosing with small aliquots.

### Alternatives:

- Restrictive transfusions. Transfuse blood components only when the benefits outweigh the risk of transfusion.
- Slow infusion rates for full or split units to infuse over 3-4 hours (review [Adult Transfusion Rate Table](#)).
- Peri-transfusion diuretics, if appropriate.

#### Resources:

[Circular of Information for the Use of Human Blood and Blood Components](#)

[UpToDate: Transfusion Associated Circulatory Overload \(TACO\)](#)

[AABB: Transfusion Associated Circulatory Overload \(TACO\) Bulletin](#)

Questions? Please contact the  
**Transfusion Safety Officer** for more  
information.

Transfusion Services: [916-734-2585](#)