

SHARE YOUR HEALTH
AND VITALITY WITH
SOMEONE IN NEED



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Autologous Donation

The Third “R”

- CBS provides a service whereby a patient may be eligible to donate their own blood for elective surgery.
- This is known as Autologous Donation.

Eligibility Requirements

- Each request considered on an individual basis
- Requires the Medical Director's approval
- Does the patient want to do this?
- Have the pros and cons been explained?

Eligibility Requirements cont'd

- Request for Consideration for Autologous Transfusion from patient's physician:
 - **Type of surgery**
 - **Current medications**
 - **Age/weight**
 - **Brief medical history**
 - **Number of units**
 - **Currently we collect autologous as WB**
 - **As of 22 Nov 08 we will be using Buffy Coat system, units to be ordered as RBC & FFP**

Eligibility Requirements cont'd

- Hemoglobin
 - An iron supplement may be suggested to off-set the mild anemia which occurs
 - Accepted with hgb of 110 g/l hct 0.33 on first visit and hgb 105 g/l hct 0.32 on subsequent visits
 - May also be referred to Blood Conservation office for injections of ESA

Collection frequency

- Determined by CBS Medical Director and patient's physician
- One unit per week to a max of four units, the last no less than 72 hours prior to surgery
- In collaboration with Dr. Muirhead and the Blood Conservation office, it is rare to collect > two units/patient
- Most women rarely donate > two units as their hgb cannot sustain more

Advantages

- Prevents transfusion-transmitted disease
- Prevents red cell alloimmunization
- Supplements the blood supply
- Provides compatible blood for patients with alloantibodies
- Prevents some adverse transfusion reactions (febrile reactions, TRALI reactions, allergic reactions, delayed hemolytic Tx reactions)
- Provides peace of mind for patient and family

Disadvantages

- Autologous donors have increased risk of reactions at donation (1 in 16,000 or about 12x higher than allogeneic donors)
 - usually in young patients, underweight, previous reaction, or first time donation
 - not as likely in the elderly over 75, or on medications
- Risk of driving to and from the donation
- Does not affect the risk of bacterial contamination

Disadvantages cont'd

- Does not affect the risk of receiving the "wrong unit" (1 in 50,000)
- Risk of receiving allogeneic blood before, or instead of autologous blood
- More costly than allogeneic
- Risk of surgery date postponement
- Blood is wasted if not transfused

Disadvantages cont'd

- Subjects patients to perioperative anemia
 - in general physiological erythropoiesis is not effective in the time frame that we provide
 - (for optimal benefit should collect between 21 and 34 days prior to surgery; not within 2 weeks prior to surgery)
- Increases the likelihood of perioperative transfusion
 - induced anemia
 - know the "blood is there"
- Doesn't decrease the risk of TACO

Role of CBS

- Each unit undergoes the same testing as homologous blood
- Abnormal results forwarded to the patient, their attending physician and Public Health as required
- Abnormal results may mean the patient is no longer eligible and unit destroyed
- CBS tests for blood type, HIV 1/2, HTLV I/II, Hepatitis B & C and syphilis

Abnormal results

- Except for WNV, the patient's name is added to a deferral data base of those who cannot give blood
- Medical Director notifies the surgeon/ anaesthesiologist of any positive result

Abnormal results cont'd

- CBS has accepted patients with a hepatitis history and/or jaundice after the age of 11. They may be referred to their doctor for Hepatitis B surface antigen and anti-HCV testing prior to entry into program
- Units with positive syphilis or indeterminate results can be transfused but with a Biohazard label applied.

How is CBS contacted?

- The patient's surgeon has the patient take the requisition to their family doctor
- The surgeon's office can also notify the family doctor of his needs for blood for the surgery and the requisition is filled out by the family doctor
- Some are referred through the Blood Conservation office

Where?

- Two permanent sites:
 - 777 William Ave, Wpg
 - P1-D-800 Rosser Ave, Brandon, on Wed or Thurs.

Conclusion

- Stats:
 - In 2007, Winnipeg collections:
 - 153 requested units
 - 146 collected units
 - 48 transfused units
 - 97 returned/ destroyed units
 - This supports Canadian stats where <50% of all collected autologous units are utilized.