Donating Granulocytes

Apheresis technology is used to collect single donor platelets, granulocytes, plasma for transfusion or fractionation, and red blood cells, or a combination of these components. A leukopheresis procedure is the separation and collection of either granulocytes or granulocytes and platelets, and the return of the remaining cellular components and plasma to the donor. A granulocyte is a white blood cell that helps fight infection.

Granulocyte Pheresis products are used typically in the treatment of neutropenic patients in whom eventual marrow recovery is expected, who have documented infections (especially gram-negative bacteria and fungi), and who have not responded to antibiotics. Various modalities may be used to improve granulocyte harvest, including donor administration of granulocyte colony-stimulating factor and/or corticosteroids.

In the Carolinas Region, granulocyte donors consent to corticosteroid stimulation prior to donation. Red Cross professionals administer dexamethasone to boost granulocyte counts prior to collection. The length of stimulation is twelve hours. This process is believed to enhance production and yield of the end product, and may provide increased efficacy of the product.

Apheresis collection begins after a prospective donor has:
• successfully completed the donor screening process
• been screened against additional apheresis criteria for granulocyte donors
• signed the appropriate informed consent