

“Bloodless medicine” at NSMC

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Patients who are scheduled for surgery that could require blood transfusions may want to consider “bloodless medicine”, which refers to medical procedures in which the patient decides not to receive a blood transfusion. Transfusions are usually performed when blood is lost during surgery in order to maintain healthy levels of hemoglobin, which is what carries oxygen throughout the body.

A number of scientific and social factors contribute to bloodless medicine's gain in

popularity over the past several years. Medical professionals now think that lower levels of blood may be required during surgery. Some patients' religious beliefs keep them from receiving blood transfusions. Other reasons for the increase in bloodless medicine and surgery are the dwindling blood supply, concerns about infections, and fear of other complications, such as transfusing the wrong blood type.

Many procedures can be



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performed using bloodless techniques including:

- Vascular surgery
- Total hip and knee replacement
- Hysterectomy
- Neurosurgery
- Neonatal and pediatric services
- Gynecological and urological surgeries

A number of techniques can be used by physicians to help ensure procedures can be done without the need for blood products. For example, blood oxygen levels must be monitored when the patient opts out of receiving a blood transfusion. A pulse oximeter uses infrared light technology

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Other options instead of blood transfusion

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to estimate the amount of oxygen being carried by the blood.

During surgery, blood that is lost can be recovered and returned to the patient after being appropriately processed. Volume expanders in the form of intravenous fluids made of water, salts, sugars or starches may be used to help keep the correct amount of fluid in the blood vessels. Hemostatic drugs could be administered to assist with blood clotting.

Blood also can be conserved by simply choosing the least invasive surgery available.

Surgeons can reduce blood loss by adjusting the surgical

table so that the patient's head is sloped down while the legs are elevated. This position, known as Trendelenburg, helps keep blood in the upper half of the body where vital organs are located. Bloodless surgery techniques also can include bypass machines and technologically advanced scalpels.

Patients can help reduce the need for blood products during surgery. Certain foods, like lean red meats, increase iron levels, which is required by red blood cells for optimal oxygen-carrying capacity. Patients who are smokers should quit as soon as possible, as it interferes with the free flow of blood throughout the body. Aspirin, ibuprofen and

other non-steroidal anti-inflammatory drugs (such as vitamin E) interfere with blood clotting, and should either be stopped or only taken in small doses.

It is critical for patients to pay close attention to their health and nutrition after any procedure, especially bloodless. Patients should take care to drink extra fluids to maintain hydration and respond quickly to any unusual bleeding. Appropriate care during and after bloodless procedures may ensure a successful surgery and recovery for the patient.

For more information about bloodless medicine, please call the Blood Conservation Program at North Shore Medical Center at 305-694-3446.