Changes in Electrolytes after Surgery

Electrolytes are needed to maintain the body’s balance. The most common electrolytes replaced after surgery are magnesium, potassium, phosphate, and sodium. These are trace elements that are found in your blood and other body tissues. They help your body work. But, they must be in balance with each other.

How are they tested?

They are measured through lab blood tests.

Sodium
Sodium and water work hand in hand to maintain a proper fluid volume in the body. The kidneys respond to the amount of sodium. They will either conserve fluid or get rid of (excrete) it. Sodium helps control your blood pressure. During your stay in the hospital, IV fluids help control proper sodium levels. If your blood pressure or urine output is low, you may receive a large amount of fluid quickly.

Normal Level – 136-145 mmol/Liter

Potassium
Potassium is vital to healthy heart function, cell growth, and muscle contraction. In your diet, good sources of potassium are dark green leafy vegetables, raisins, bananas, salt substitutes, and potatoes. While in the hospital, it can be replaced by giving oral or intravenous (IV) supplements. IV Potassium may cause pain at the IV site. Please let your nurse know if you have pain or burning when you receive it through an IV. Potassium pills or liquid may cause nausea if not taken with meals or a snack.

Normal Level – 3.5-5.1 mmol/Liter

Magnesium
Magnesium is found in your body’s cells. Over half is within your bones. It is vital to your metabolism and the workings of organs and neuromuscular tissue. It can be replaced through your diet. Sources of magnesium are dark green vegetables, whole grains, nuts, seeds, tap water, fruits, and meats such as tuna, pork, and chicken. It can be replaced by giving oral or IV supplements. It must be run slowly by IV. It can take up to 24 hours to be absorbed.

Normal Level – 1.6-2.6 mg/dLite
Calcium
Calcium helps with nerve impulses, cardiac function, blood clotting, forming teeth and bone, and helping muscles contract. Calcium works closely with phosphorus. It is found mostly in the bones. Food sources are dairy products, salmon, fortified fruit juices, and dark green leafy vegetables. It is most often replaced with oral supplements like calcium carbonate (TUMS®). In severe cases, it may be given through an IV.

Normal Level – 8.4-10.2 mg/dLiter

Phosphate
Phosphate helps with the function of muscle, red blood cells and the nervous system. With calcium, it assists in forming bone and teeth. It is absorbed in the small bowel. It can be found in milk, cheese, eggs, meat, fish, and nuts. Oral supplements such as Neutra-Phos® may be used to treat mild phosphate loss. This can be mixed with juice or water. More severe lack of phosphate may be helped with IV supplements such as sodium phosphate or potassium phosphate.

Normal Level – 2.3-4.7 mg/dLiter

The proper balance of fluids and electrolytes will aid in your recovery.