

## Understanding metabolism/metabolic

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### How does your metabolism work?

Metabolism is that the chemical change your body uses to rework the food you fret the fuel that keeps you alive. Nutrition (food) consists of proteins, carbohydrates, and fats. These substances are weakened by enzymes in your gastrointestinal system, then carried to the cells where they will be used as fuel. Your body either uses these substances immediately, or stores them within the liver, body fat, and muscle tissues for later use.

### What is a metabolic disorder?

A disorder occurs when the metabolism process fails and causes the body to possess either an excessive amount of or insufficient of the essential substances needed to remain healthy. Our bodies are very sensitive to errors in metabolism. The body must have amino acids and lots of sorts of proteins to perform all of its functions. For example, the brain needs calcium, potassium, and sodium to get electrical impulses, and lipids (fats and oils) to take care of a healthy systema nervosum. Metabolic disorders can take many forms. This includes:

- a missing enzyme or vitamin that's necessary for a crucial reaction
- abnormal chemical reactions that hinder metabolic processes
- a disease within the liver, pancreas, endocrine glands, or other organs involved in metabolism
- nutritional deficiencies

### What causes metabolic disorders?

You can develop a disorder if certain organs — as an example, the pancreas or the liver — stop functioning properly. These sorts of disorders are often a result of genetics, a deficiency during a certain hormone or enzyme, consuming an excessive amount of certain foods, or variety of other factors. There are many genetic metabolic disorders caused by mutations of single genes. These mutations can be passed down through generations of families. According to the National Institutes of Health (NIH) Trusted Source, certain racial or ethnic groups are more likely to expire mutated genes for particular inborn disorders. The most common of these are:

- sickle cell anemia in African Americans
- cystic fibrosis in people of European heritage
- maple syrup urine disease in Mennonite communities
- Gaucher's disease in Jewish people from Eastern Europe
- hemochromatosis in Caucasians in the United States

### Understanding electrolyte disorders

Electrolytes are elements and compounds that occur naturally within the body. They control important physiologic functions. Examples of electrolytes include: calcium, chloride, magnesium, phosphate, potassium and sodium. These substances are present in your blood, bodily fluids, and urine. They're also ingested with food, drinks, and supplements. An electrolyte disorder occurs when the amount of electrolytes in your body are either too high or too low. Electrolytes got to be maintained in a good balance for your body to function properly. Otherwise, vital body systems can be affected. Severe electrolyte imbalances can cause serious problems like coma, seizures, and asystole.

#### Symptoms of electrolyte disorders

Mild sorts of electrolyte disorders might not cause any symptoms. Such disorders can go undetected until they're discovered during a routine biopsy. Symptoms usually start to seem once a specific disorder becomes more severe. Not all electrolyte imbalances cause an equivalent symptoms, but many share similar symptoms. Common symptoms of an electrolyte disorder include: irregular heartbeat, fast heart rate, fatigue, lethargy, convulsions or seizures, nausea, vomiting, diarrhea or constipation, abdominal cramping, muscle cramping, muscle weakness, irritability, confusion, headaches, numbness and tingling.

### Causes of electrolyte disorders

Electrolyte disorders are most frequently caused by a loss of bodily fluids through prolonged vomiting, diarrhea, or sweating. They may also develop thanks to fluid loss associated with burns. Certain medications can cause electrolyte disorders as well. In some cases, underlying diseases, like acute or chronic renal disorder, are responsible. The exact cause may vary counting on the precise sort of electrolyte disorder.