

Eating disorders have the highest mortality rate of any mental illness, and anorexia is the third most common chronic illness amongst adolescents<sup>1</sup>. An estimated 4% of anorexic individuals and 3.9% of bulimic individuals will die from the complications of the disorder<sup>2</sup>. Unfortunately, these numbers are underreported because eating disorders and their mortality rates are not tracked by government agencies.

Eating disorder complications can impact every organ and every system of the body. Individuals with anorexia also often have co-occurring mental health or substance abuse disorders. Purging behaviors, such as self-induced vomiting, abuse of laxatives, diuretics, diet pills, appetite suppressants or other stimulants, further elevate the risk of serious complications. Excessive exercise may accompany this behavior.

While some of the symptoms and complications of eating disorders are easily recognizable, others can be easily overlooked.

## Refeeding Syndrome

Patients who are malnourished may be at risk of refeeding syndrome – potentially fatal shifts in fluids and electrolytes that can occur when nutrition is reintroduced to patients who are starving.

During prolonged fasting or starvation, the body undergoes hormonal and metabolic changes in an attempt to protect itself from muscle and tissue breakdown. When nutrients are reintroduced, at-risk patients may experience swelling throughout the body. In extreme cases, swelling can spread to the lungs, putting patients at risk of death.

Identifying patients at high risk of refeeding syndrome and following established clinical guidelines for managing these patients is critically important.

## Eating Disorder Complications

### Cardiovascular/Circulatory

An estimated one-third of deaths due to anorexia nervosa are due to cardiac causes. Symptoms may include:

- Bradycardia
- Cardiac arrhythmias
- Chest pain
- Mitral valve prolapse
- Myocardial infarction
- Blood abnormalities including leukopenia (reduced white blood cells) and anemia (reduced red blood cells)
- Orthostatic hypotension
- Heart failure

### Gastrointestinal

- Cramps, bloating, constipation, diarrhea
- Gastroparesis
- Kidney infection/failure
- Liver failure
- Thrombocytopenia (low platelet count due to liver dysfunction)
- Cathartic colon – potentially irreversible

### Musculoskeletal & Skin

- Osteopenia
- Osteoporosis – potentially irreversible
- Weakness & fatigue
- Hair loss
- Lanugo
- Dental erosion & decay

### Endocrine

- Amenorrhea
- Iron deficiency/anemia
- Hypoglycemia, hyperglycemia, prediabetes
- Low testosterone
- Hyponatremia
- Hypokalemia
- Electrolyte imbalance
- Dehydration
- Vitamin and mineral deficiencies
- Refeeding edema

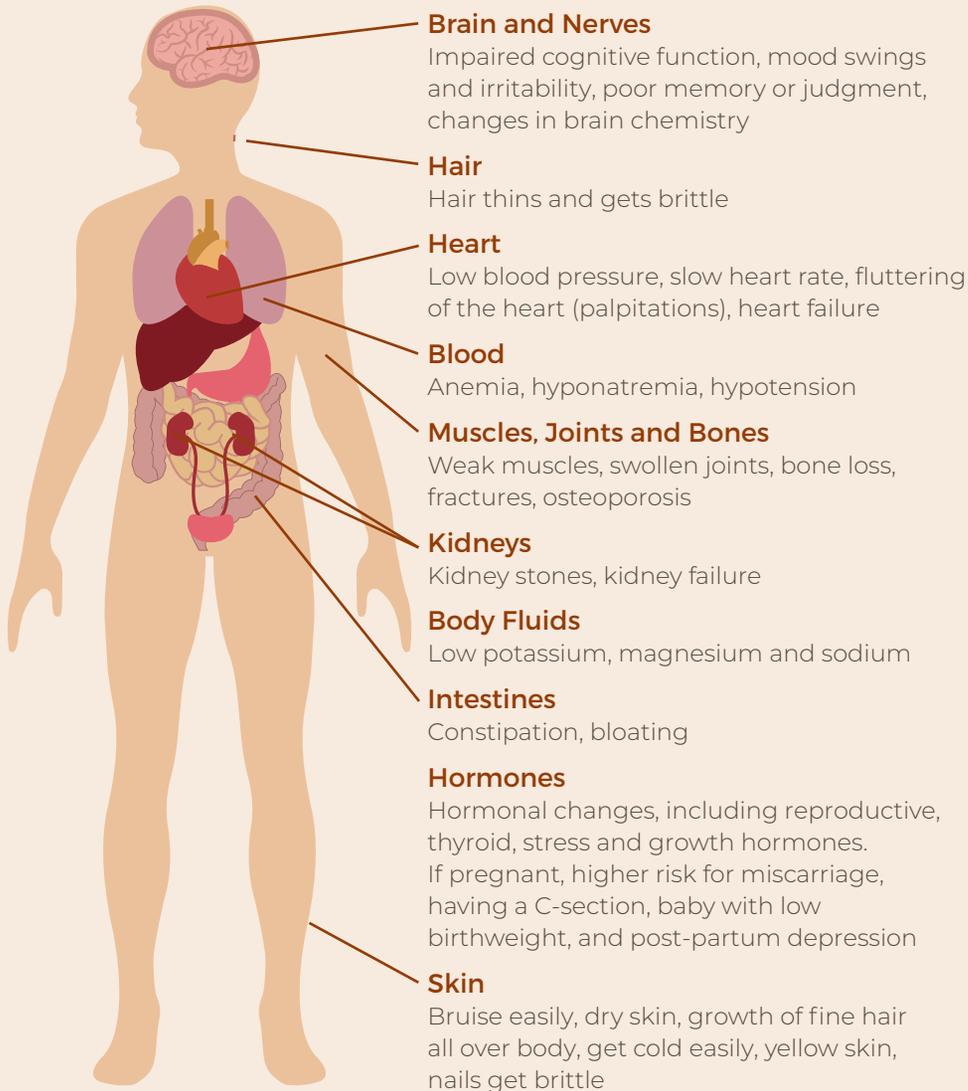
1. Public Health Service's Office in Women's Health, 2000

2. Crow, S.J., Peterson, C.B., Swanson, S.A., Raymond, N.C., Specker, S., Eckert, E.D., Mitchell, J.E. (2009)

Increased mortality in bulimia nervosa and other eating disorders. *American Journal of Psychiatry* 166, 1342-1346.

# The Anatomy of Eating Disorders

## How Anorexia Affects the Whole Body



## How Bulimia Affects the Whole Body

