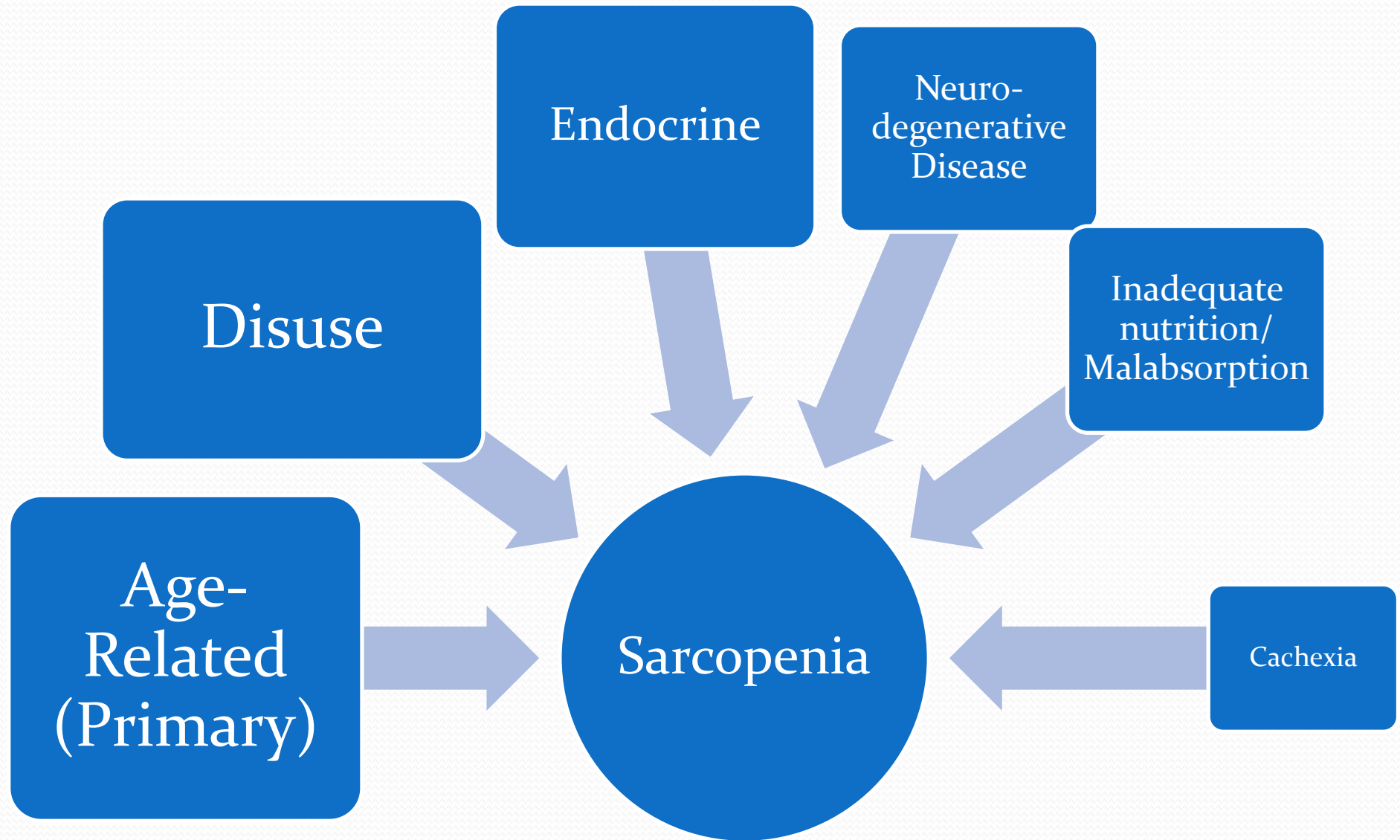


Mechanisms of Sarcopenia

Based on a slide by:
Cruz-Jentoft, A. J. et al. in Age and Ageing 2010:

For more information see “[Aging](#)” in the Oxford Journals

Mechanisms of Age Related Muscle Loss (Sarcopenia)



Age Related Factors

- Loss of Sex Hormones
- Apoptosis
- Mitochondrial dysfunction

Disuse

- Immobility
 - Disease
 - Confinement
- Physical inactivity
 - Loss of strength
 - Loss of exercise tolerance
 - Malaise / Depression
 - Social factors
- Zero gravity

Endocrine

- Corticosteroids
- Growth Hormone Decline
- Abnormal Thyroid Function
- Insulin Resistance
- Type II Diabetes

Neuro-degenerative Disease

- Motor Neuron Loss
- Alzheimer's
- Dementia

Cachexia

- Cancer
- AIDS
- Chronic obstructive lung disease
- Congestive heart failure
- Tuberculosis
- Familial amyloid polyneuropathy.
- Metabolic acidosis (from decreased protein synthesis and increased protein catabolism)
- Some autoimmune disorders
- Drugs addiction (especially amphetamines & cocaine)