Endocrine Disease:

Acromegaly:

- Usually caused by a benign (noncancerous) tumor of the pituitary gland
- Symptoms:
  - Bones of the hands, feet, and face enlarge and create grotesque appearance
- Treatment:
  - Tumor frequently recurs
  - Eventually causes cardiovascular and respiratory disease that shortens life expectancy

Giantism:

- Symptoms:
  - Excessive growth of long bones and extreme tallness
  - Retarded mental development at times

Diabetes insipidus:

- Low level of ADH results in water not being absorbed in the kidneys
- Treatment:
  - ADH, replace missing hormone

Dwarfism:

- Causes: tumor, infection, genetic factors, and injury
- Symptoms:
  - Lack of sexual development
- Treatment:
  - If diagnosed early, it can be treated with injections of somatotropic hormone for five or more years until long bone growth is complete

Goiter:

- Causes:
  - Hyperactive thyroid, iodine deficiency, oversecretion of thyroid stimulating hormone by the pituitary gland, or a tumor
- Symptoms:
  - Dysphagia, or difficulty swallowing
  - Cough and a choking sensation
- Treatment:
  - Surgery to remove very large goiters

Hyperthyroidism:

- Causes:
  - Increased production of thyroid hormones
Symptoms:
- Extreme nervousness, tremors, irritability
- Daphoresis (excessive perspiration) Heat intolerance
- Excessive appetite with extreme weight loss
- Goiter formation

Treatment:
- Radiation to destroy part of the thyroid
- If thyroid is removed: thyroid hormones are replaced with medication

Grave's Disease:
- More common in women than men
- Symptoms:
  - Exophthalmia or protruding eye balls
  - Goiter
  - Tachycardia
- Treatment:
  - Radioactive iodine to destroy thyroid tissue
  - Thyroidectomy

Hypothyroidism:
- Two main forms: cretinism and myxedema
- Cretinism:
  - Results in lack of mental and physical growth leading to mental retardation and an abnormal dwarfed stature
  - If diagnosed early oral thyroid hormone can be given to minimal mental and physical damage

Myxedema:
- Symptoms:
  - Course, dry skin; slow mental function; fatigue; weakness; and intolerance for cold; weight gain; edema; puffy eyes; and a slow pulse
- Treatment:
  - May be caused by iodine deficiency; adding salt to diet corrects myxedema

Hyperparathyroidism:
- Results in hypercalcemia, which leads to formation of renal calculi, lethargy, gastrointestinal disturbances, and calcium deposits on wall of blood vessels and organs
- Because calcium is drawn from bones, bones become weak, deformed and likely to fracture
- Treatments:
  - Other treatments may include removal of parathyroid gland and administration of the hormone, diuretics to increase excretion of water and calcium
Hypoparathyroidism:
- Causes low levels of calcium in the blood
- Symptoms:
  - Tetany: sustained muscular contracture
  - Convulsive twitching

Addison’s disease:
- Interferes with the reabsorption of sodium and water
- Symptoms:
  - Dehydration, diarrhea, fatigue, hypotension, mental lethargy, weight loss, muscle weakness, excessive pigmentation leading to a bronzing color of the skin, hypoglycemia, and edema
- Treatment:
  - Controlled intake of sodium
  - Fluid regulation to combat dehydration

Cushing’s Disease:
- Causes:
  - Tumor of the adrenal cortex
- Symptoms:
  - Hyperglycemia, hypertension, muscle weakness, fatigue, hirsutism (excessive growth and/or an abnormal distribution of hair), poor healing of wounds, a tendency to bruise, a “moon” face, and obesity
- Treatment:
  - Can also occur in people with long term steroid therapy like prednisone
  - Those individuals need monitored closely for signs

Diabetes Mellitus:
- Two main types:
  - Insulin dependent or Type 1 Diabetes:
    - Usually occurs early in life and is more severe
  - Noninsulin-dependent or Type 2:
    - Usually controlled with diet and/or oral hypoglycemic medication
    - Symptoms:
      - Hyperglycemia:
      - Polyuria:
      - Polydipsia:
      - Polyphagia:
      - Glycosuria:
      - Fatigue
- Slow healing of skin infections
- If not treated diabetic coma and death may occur
- Treatment:
  - Regulated exercise
  - Oral hypoglycemic drugs or insulin injections
  - Newer treatments:
    - Insulin pump
    - Inhaled form of insulin

Statistics:
- Over 16 million americans have diabetes
- Research has proven that controlled diet and exercise can reduce the risk of diabetes by 55-70%
- Can cause atherosclerosis, heart attacks, strokes, peripheral vascular disease that limits wound healing, diabetic retinopathy (blindness)
- Kidney disease: renal failure