

Actions of Thyroid Hormones:

Increase:

- **General Metabolism:**
 - Oxygen consumption
 - Heat production
 - Basal metabolic rate (BMR)
- **Blood Glucose:**
 - Glycogenolysis
 - Gluconeogenesis
 - Glucose uptake by tissues
- **Protein Synthesis (at normal levels)**
- **Cardiac Output:**
 - Heart rate
 - Contractility
- **Pulmonary Ventilation**
- **Appetite**
- **Red Blood Cell Formation**
- **Milk Secretion (during lactation)**
- **Vitamin A Production (from beta-carotene)**
- **Growth and Tissue Differentiation**

Decrease:

- **Blood Cholesterol and Phospholipids**
- **Peripheral Resistance (vasodilation)**
- **Protein Synthesis (in excess)**
- **Diastolic Blood Pressure (or remains unaltered)**

Note:

- Both hypo- and hyperthyroidism can impair growth, development, and tissue maintenance.
- Thyroid hormones can also affect:
 - Bone health
 - Brain development
 - Mood and behavior
 - Reproductive health
 - Digestive system

