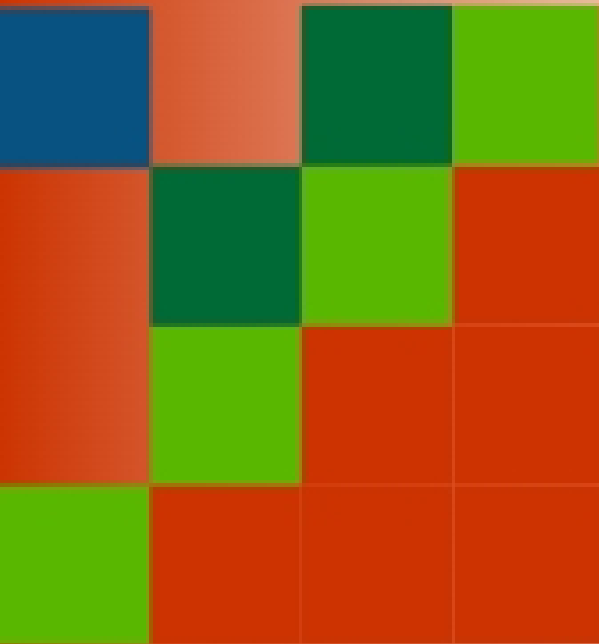


# PGY452/552: *Endocrine physiology*

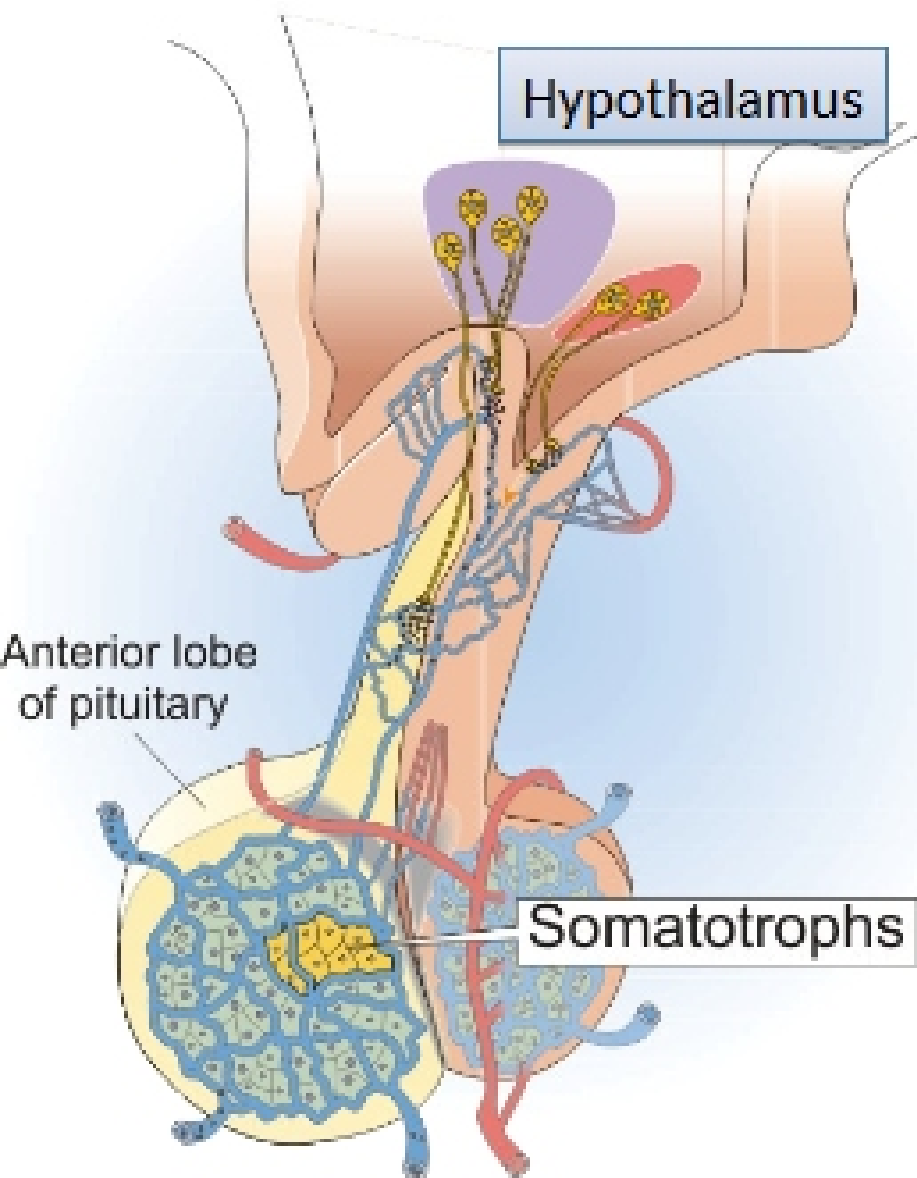


- A. Growth hormone & IGF1 work together
- B. Metabolic effects
- C. Control
- D. Integration with anabolism
- E. Growth syndromes

# Growth is key to survival

- Large?
- Small?
- **2 hormones**
  - Growth hormone
  - Insulin-like growth factor 1
- Major Functions
  - □ Protein anabolism
  - □ Lipid & glucose catabolism
  - □ DNA/RNA synthesis
  - □ Mitogenesis
- Linear growth bone growth

# GH secreted from the anterior pituitary



- GH = somatotrophin
- 190 amino acid peptide
- Secreted by
  - Somatotrophs in anterior pituitary
  - Most abundant cell type
- Extensive hypothalamic control
- Receptors most abundant in liver
  - Also muscle > adipose > kidney & heart
  - Wide-spread