

MODULE 1 L07

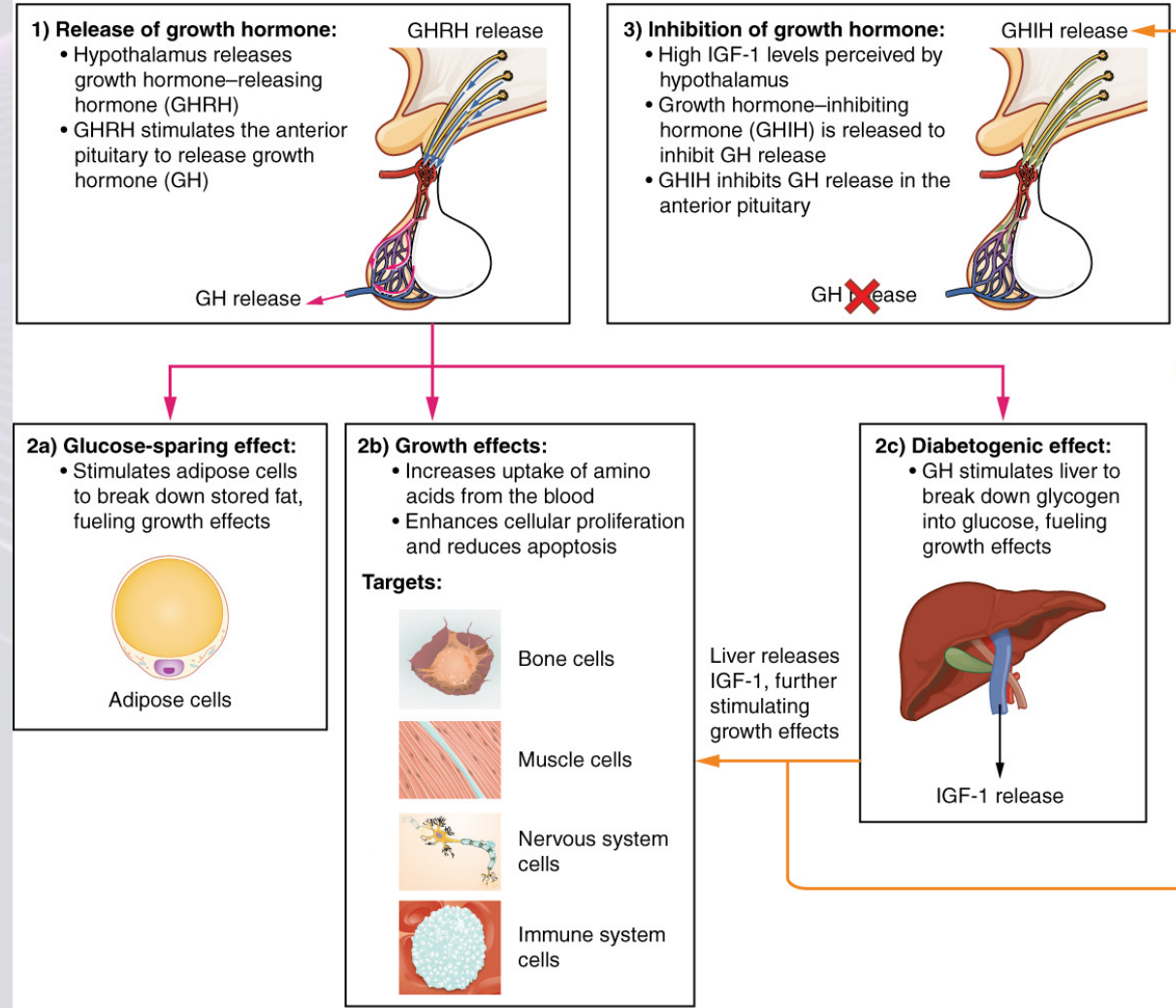
Growth Hormone and Melanocyte-Stimulating Hormone

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7. Growth Hormone (GH)

- Hypothalamus – GHRH and GHIH (somatostatin)
 - ❖ Anterior pituitary – GH
 - Targets all cells in body
- Growth Hormone also referred to as:
 - ❖ Human growth hormone
 - ❖ Somatotropin
- GH functions:
 - ❖ Stimulates bone growth
 - ❖ Promotes:
 - Protein synthesis
 - Anti-aging
 - Cell regeneration
 - Tissue repair
 - Healing
 - Stimulates mitosis
 - ❖ Stimulates breakdown of fat (lipolysis) ⇒
 - ↑ blood sugar
 - ❖ Diabetogenic effect:
 - Stimulates liver to produce IGF-1



Melanocyte-Stimulating Hormone

- Pars intermedia (intermediate pituitary)
 - ❖ Between the anterior and posterior pituitary
 - Secretes Melanocyte-stimulating hormone (MSH)
- Acts locally in skin
 - ❖ Production of melanin
 - In response to UV light exposure
- Production in the pituitary:
 - ❖ Amount of MSH in lighter skin individuals = darker skin individuals
 - ❖ During pregnancy:
 - Increase in MSH production
 - + estrogen = darker skin pigmentation
 - Areolas and labia minora

Pars tuberalis

Pars distalis

Pars intermedia

Infundibulum

Melanin

Melanocyte

