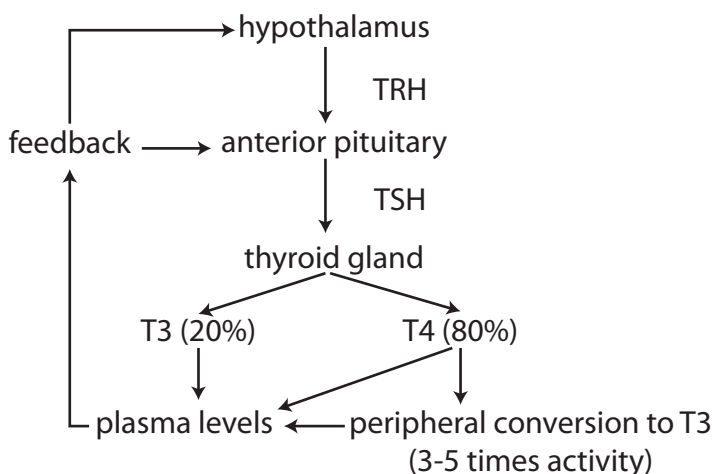


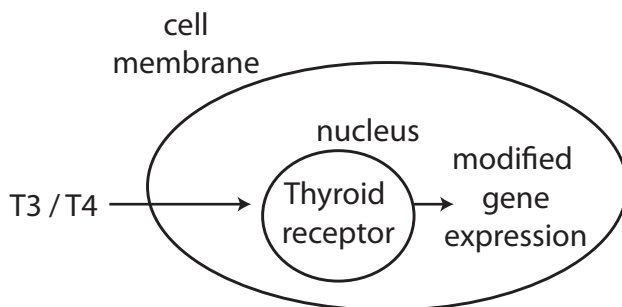
JULY 2008
QUESTION 15

Outline the physiological consequences of hyperthyroidism in an adult.

Thyroid hormone regulation



mechanism



functions

increased cell activity of most tissues (except, testes, uterus, spleen, lymph nodes)

increased energy demands (and BMR)

carbohydrate metabolism

increased
glycogenolysis
carbohydrate absorp
decreased
glycogen storage

protien metabolism

increased
gluconeogenesis
protien breakdown
muscle wasting

fatty acid metabolism

decreased
cholesterol (direct)
increased
gluconeogenesis
lipolysis

Oxygen demand

increased
ventilation
heart rate
fluid rention

physiological effects

Cardiovascular

peripheral vasodilation, increased iontropy (direct and indirect), chronotropy, widened pulse pressure

Respiratory

increased respiratory rate, tidal volume

Neurological

hyper-reflexia, rapid mentation, increased agitation, restlessness, seizures, tremor

Renal

increased water and Na reabsorption (secondary to vasodilation effects)

Other

increased osteoblast activity, gastrointesitnal motility, insulin production