

MEN'S HEALTH AND HORMONE BALANCE



PHYATHAI-SRIRACHA HOSPITAL

DOCTOR PROFILE

KANOKWAN WATTANA, MD

ANTI-AGING AND REGENERATIVE MEDICINE

- Master of Science In Anti-aging and Regenerative Medicine, DPU
- American Board of Anti-Aging and Regenerative Medicine (ABAARM)
- American Board Certified in Nutritional Wellness , American Naturopathic Certification Board (ANCB)
- Certificate in Fundamental Occupational Medicine, Burapha University

OPTIMAL HEALTH



Optimal Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

**A HEALTHY
OUTSIDE STARTS
FROM THE INSIDE**

Robert Urich



HORMONE

PHYATHAI-SRIRACHA HOSPITAL



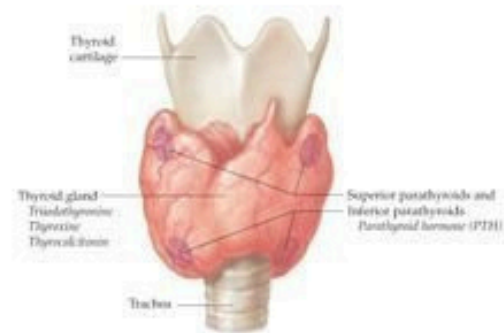
HORMONE SYMPHONY



The endocrine system is a complex network of glands and organs. It uses hormones to control and coordinate your body's metabolism, energy level, reproduction, growth and development, and response to injury, stress, and mood.

THE ENDOCRINE SYSTEM

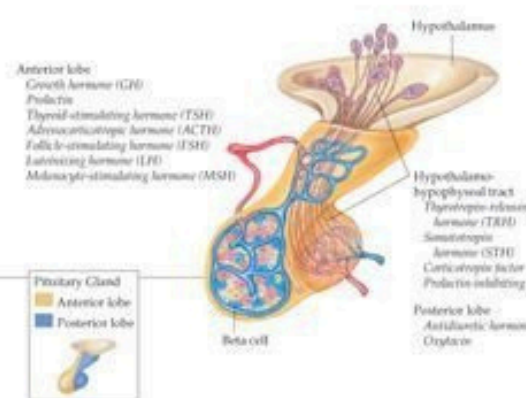
Thyroid and Parathyroid Glands



Pineal Gland



Pituitary Gland and Hypothalamus



Hypothalamus

TRH, CRH, GHRH
Dopamine
Somatostatin
Vasopressin

Pineal gland

Melatonin

Pituitary gland

GH, TSH, ACTH
FSH, MSH, LH
Prolactin, Oxytocin
Vasopressin

Thyroid and Parathyroid

T3, T4, Calcitonin
PTH

Liver

IGF, THPO

Adrenal

Androgens
Glucocorticoids
Adrenaline
Noradrenaline

Kidney

Calcitriol, Renin
Erythropoietin

Testes

Androgens
Estradiol, Inhibin

Thymus

Thymopoietin

Stomach

Gastrin, Ghrelin
Histamine
Somatostatin
Neuropeptide Y

Pancreas

Insulin, Glucagon
Somatostatin

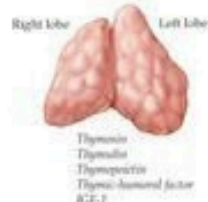
Ovary, Placenta

Estrogens
Progesterone

Uterus

Prolactin, Relaxin

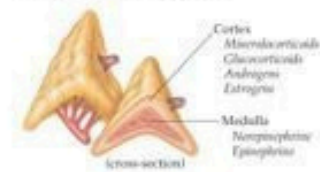
Thymus Gland



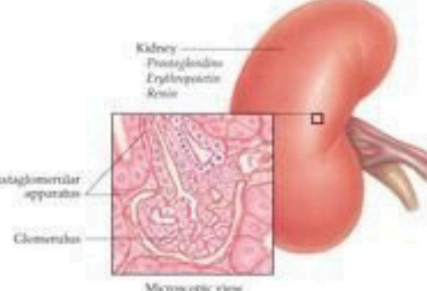
Heart



Adrenal Glands



Kidney



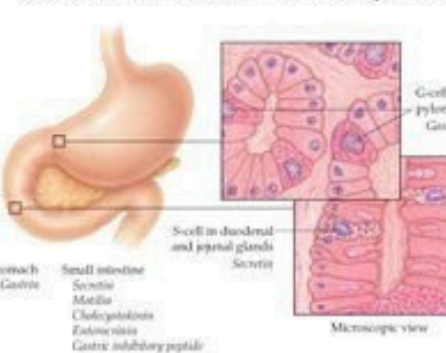
Ovary



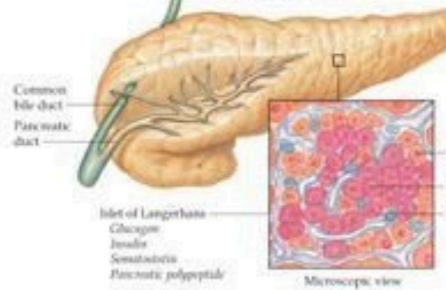
Placental Hormones

(from uterus during pregnancy)
Chorionic gonadotropin
Progesterone
Estrogen
Relaxin

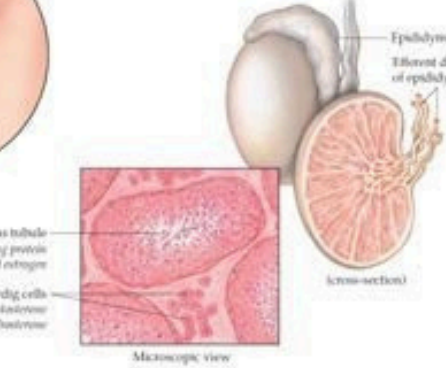
Stomach, Duodenum, and Jejunum



Pancreas

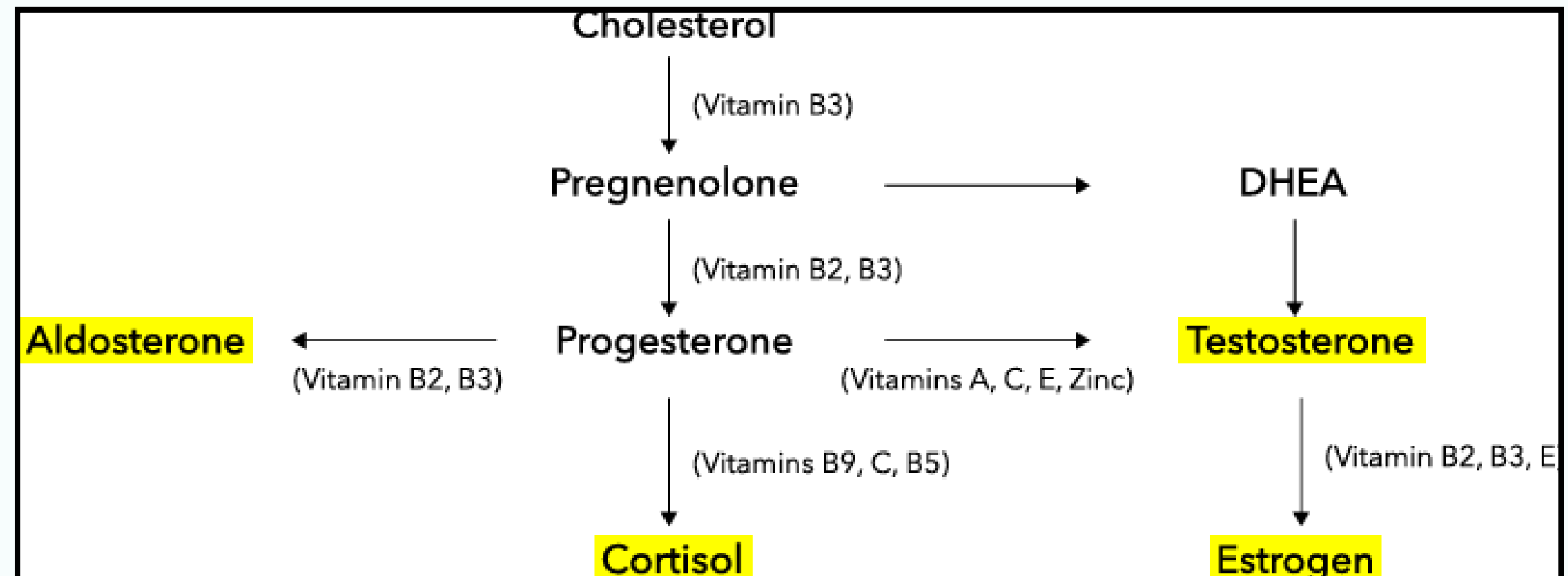
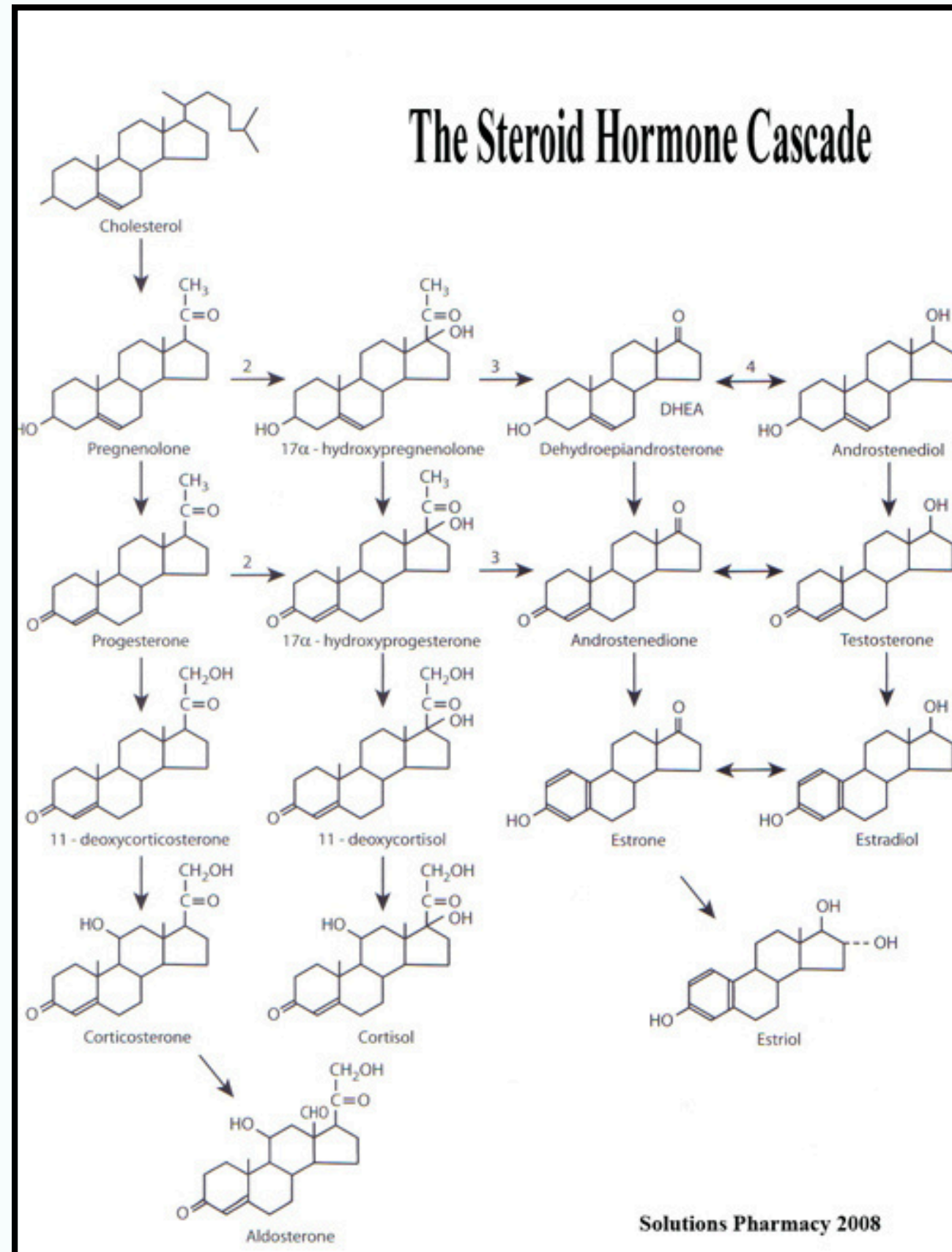


Testes

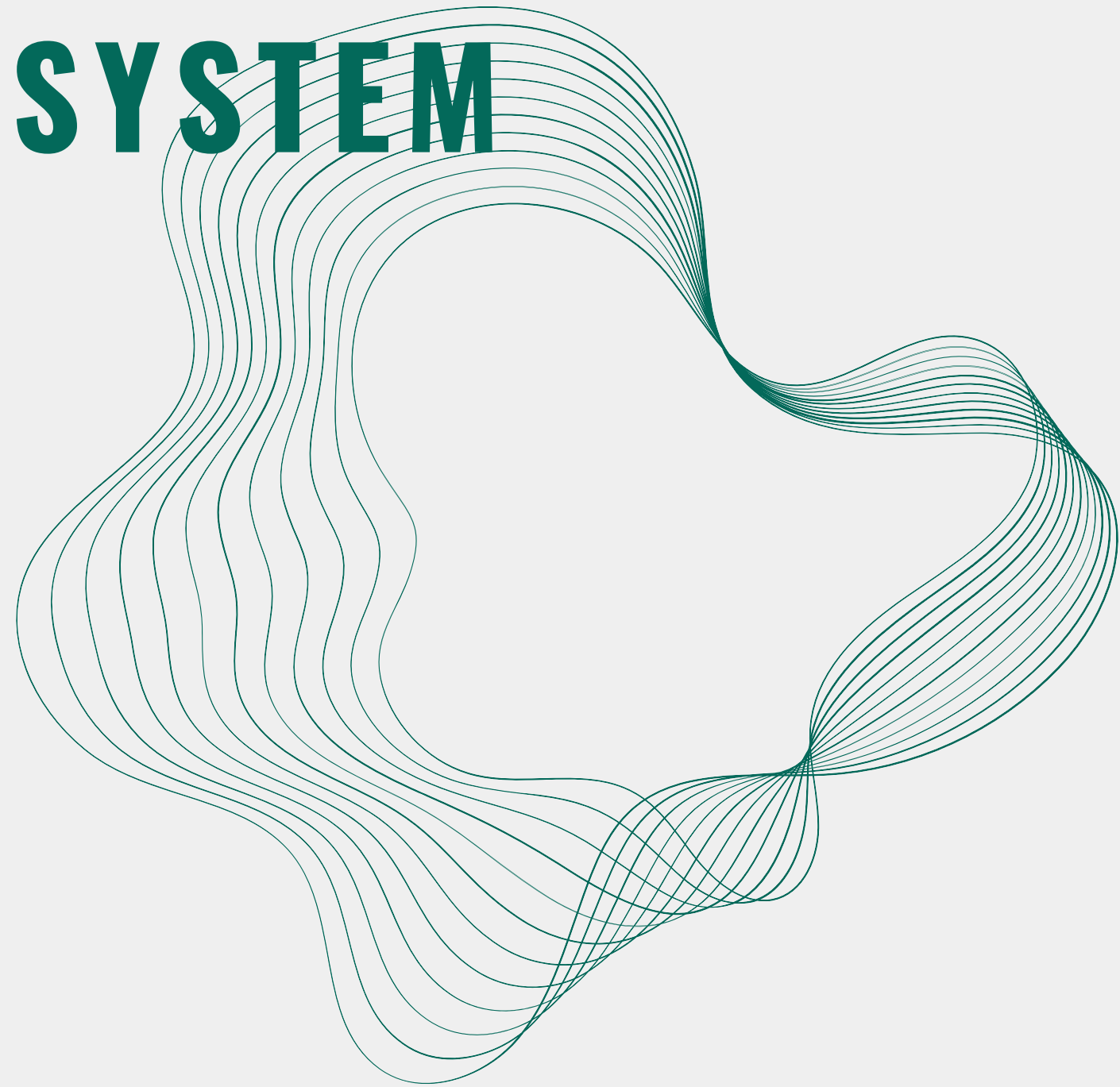


Note: Follicular endogenous hormones.

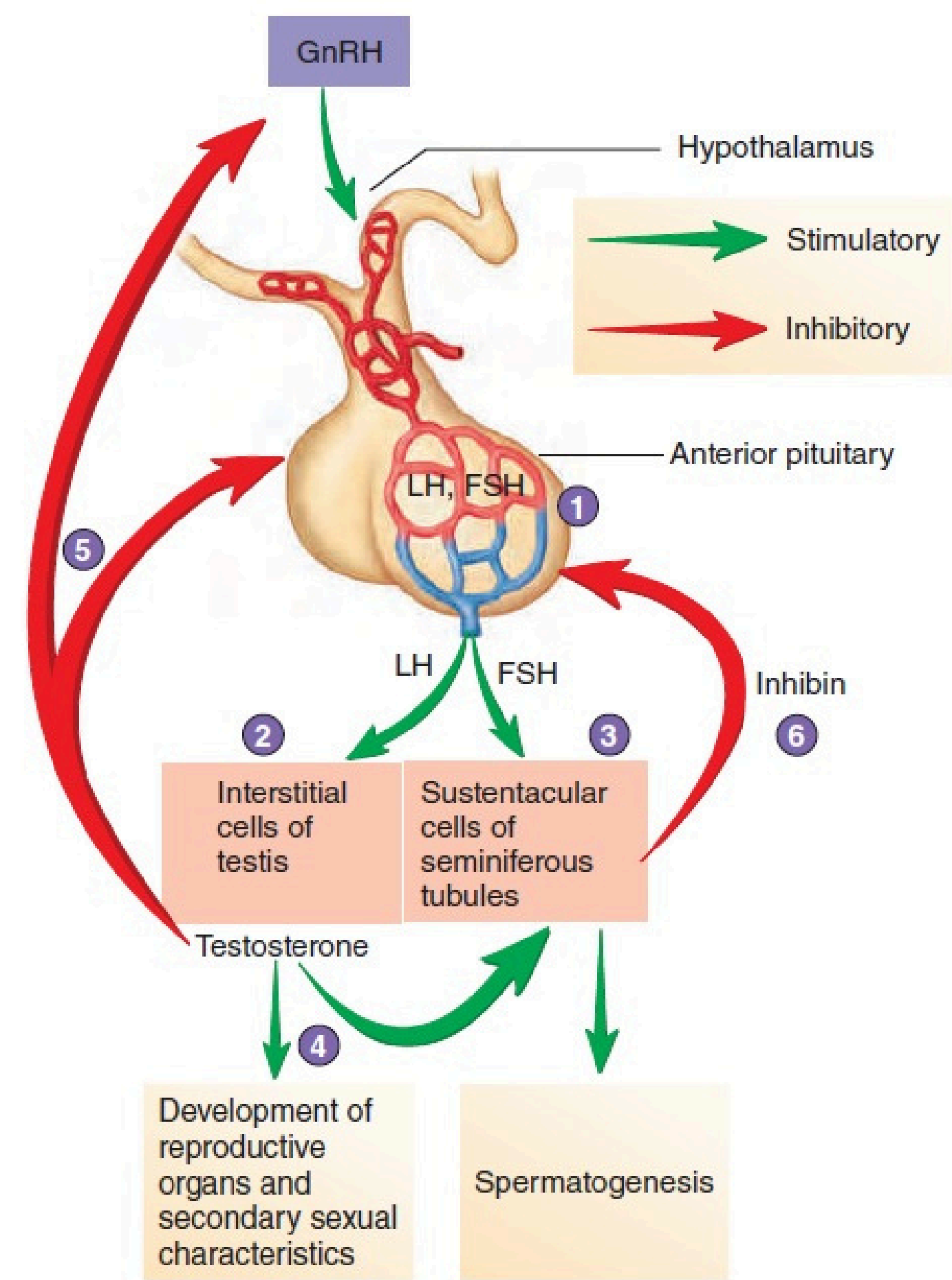
CHOLESTEROL CASCADE



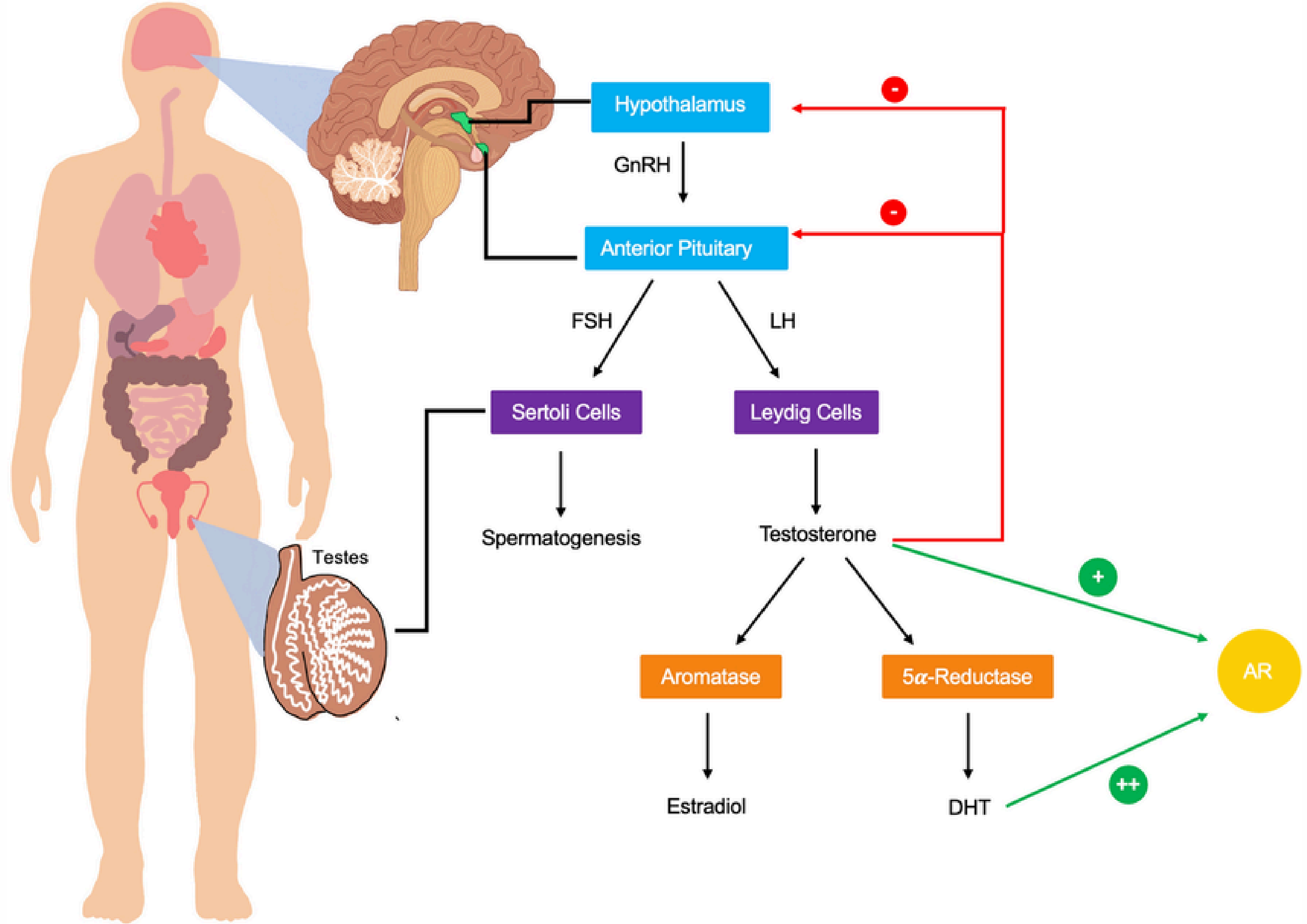
MALE REPRODUCTIVE SYSTEM



- 1 Gonadotropin-releasing hormone (GnRH) from the hypothalamus stimulates the secretion of luteinizing hormone (LH) and follicle-stimulating hormone (FSH) from the anterior pituitary.
- 2 LH stimulates testosterone secretion from the interstitial cells.
- 3 FSH stimulates sustentacular cells of the seminiferous tubules to increase spermatogenesis and to secrete inhibin.
- 4 Testosterone has a stimulatory effect on the sustentacular cells of the seminiferous tubules, as well as on the development of reproductive organs and secondary sexual characteristics.
- 5 Testosterone has a negative-feedback effect on the hypothalamus and pituitary to reduce GnRH, LH, and FSH secretion.
- 6 Inhibin has a negative-feedback effect on the anterior pituitary to reduce FSH secretion.



PROCESS Figure 19.7 Regulation of Reproductive Hormone Secretion in Males



THE EFFECTS OF TESTOSTERONE



SKIN
Hair growth
Collagen growth



MUSCLES
Muscle growth
Increased strength
Increased endurance



BONES
Bone mass density
maintenance



BRAIN
Increased sex drive
Improved mood
Confidence
Memory function



BONE MARROW
Red blood cell
production

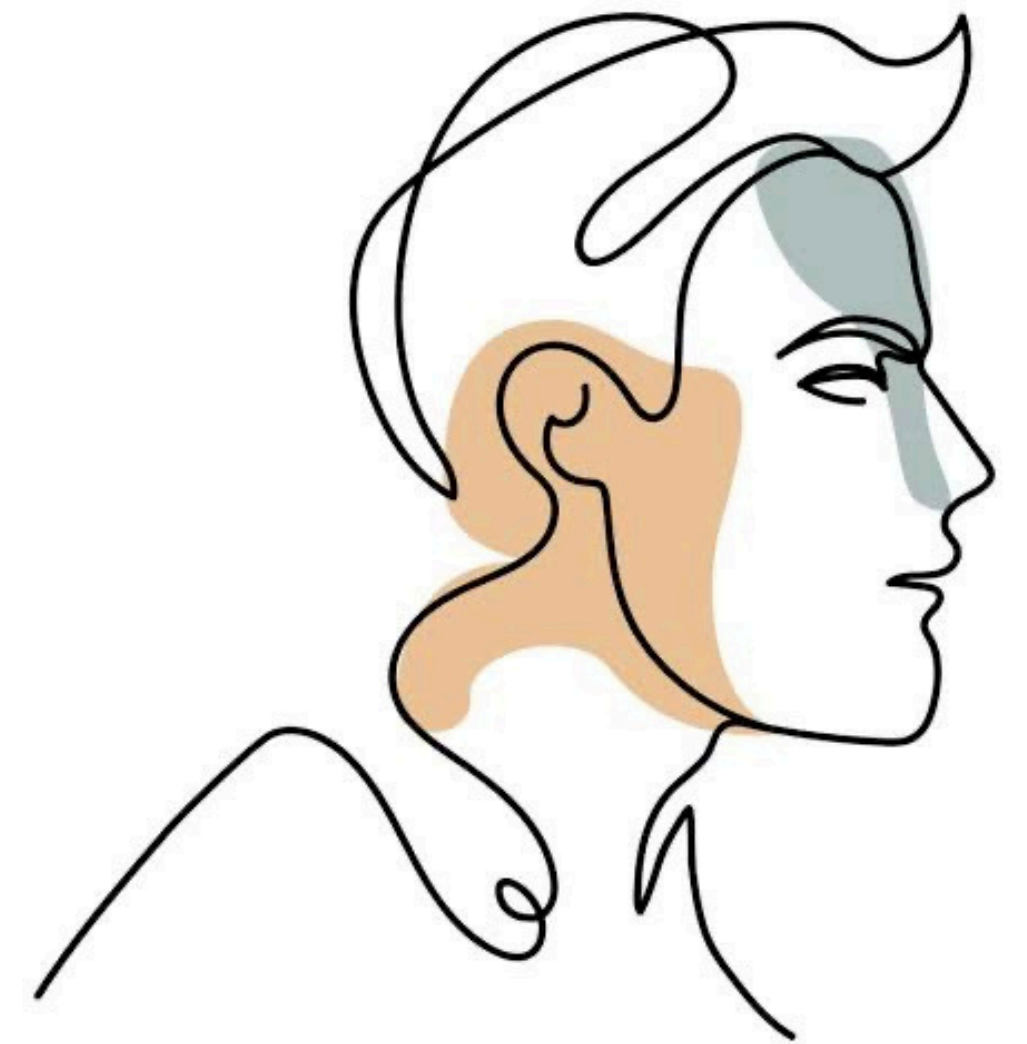


SEX ORGANS
Sperm production
Erectile function
Prostate growth



ANDROPAUSE

- Androgen deficiency in aging male (ADAM)
- Testosterone Deficiency Syndrome
- Androgen Deficiency of the Aging Male



ADAM Questionnaire about symptoms of low testosterone

(Androgen deficiency in the aging male)

This basic questionnaire can be very useful for men to describe the kind and severity of their low testosterone symptoms.

Check the box next to the question with the appropriate answer.

Question	Yes	No
1. Do you have a decrease in libido (sex drive)?		
2. Do you have a lack of energy?		
3. Do you have a decrease in strength and/or endurance?		
4. Have you lost height?		
5. Have you noticed a decreased "enjoyment of life?"		
6. Are you sad and/or grumpy?		
7. Are your erections less strong?		
8. Have you noticed a recent deterioration in your ability to play sports?		
9. Are you falling asleep after dinner?		
10. Has there been a recent deterioration in your work performance?		

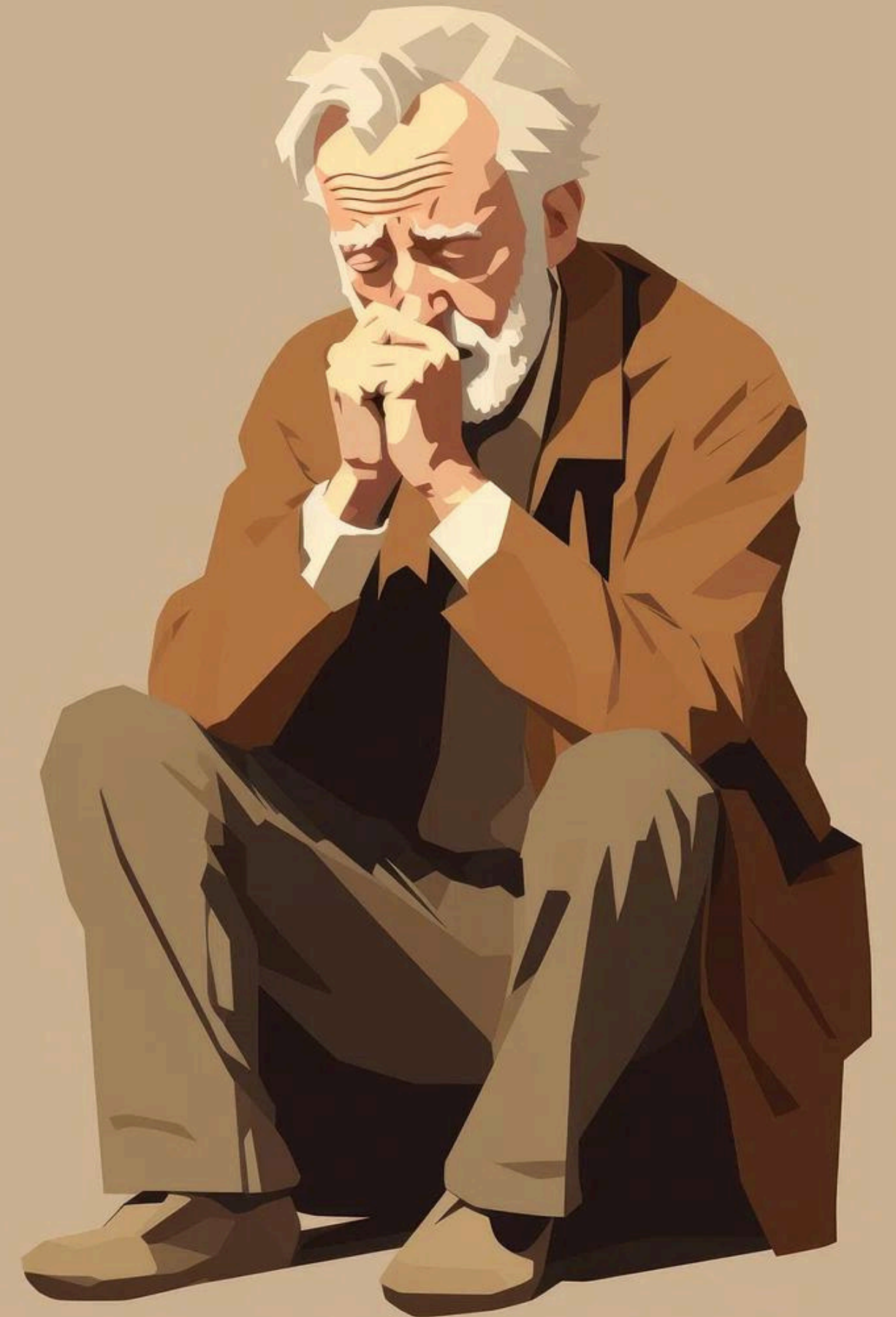
You may have low testosterone if:

- You answer YES to number 1 or 7 or
- You answer YES to more than 3 questions.

Consult with your physician to find out if testosterone replacement therapy is right for you.

ANDROPAUSE

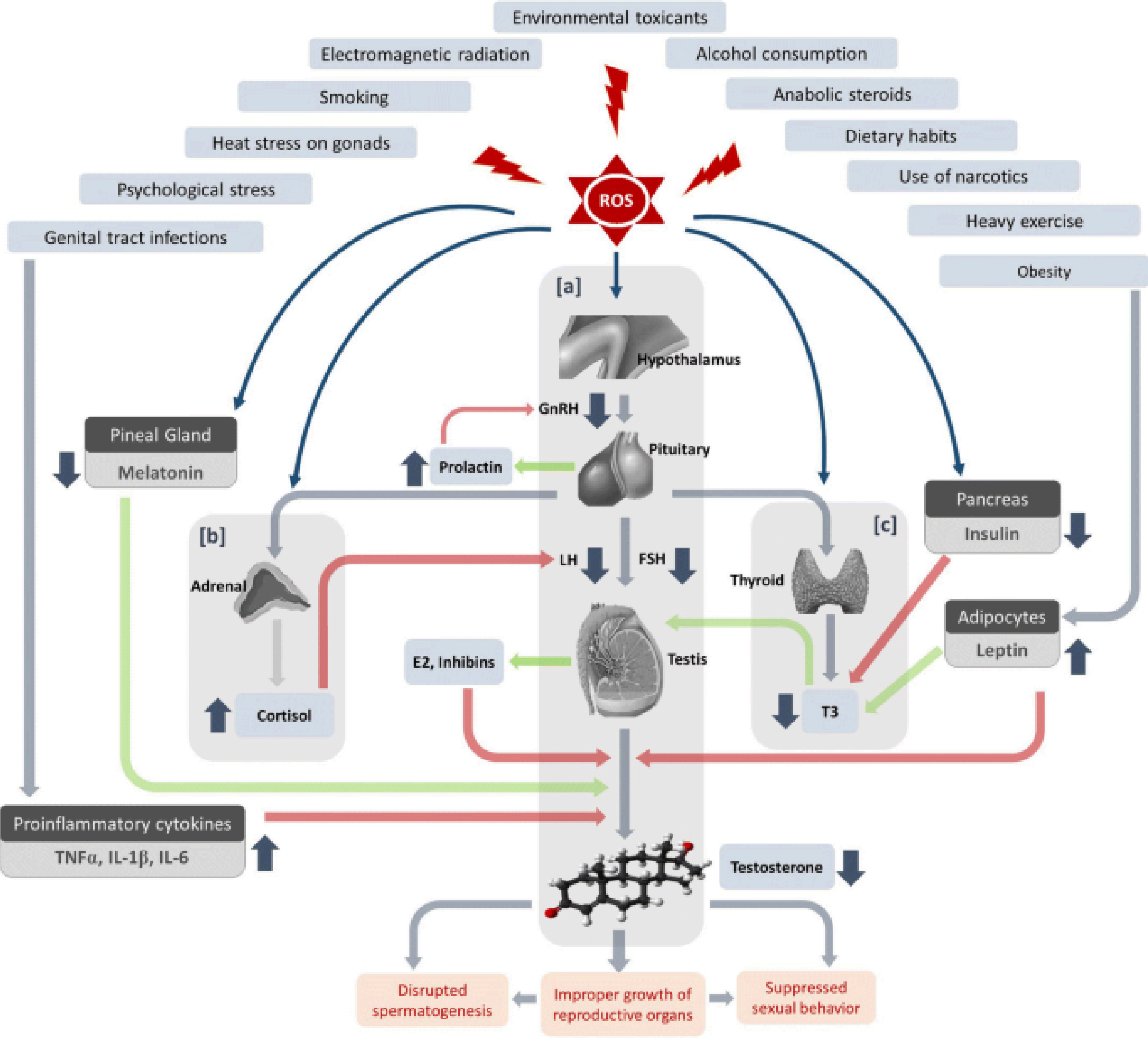
Hormone deficiencies in men can cause a number of symptoms, including erectile dysfunction, low sex drive, hair loss, fatigue, and brain fog.



TESTOSTERONE

As men age, the level of testosterone produced by the body naturally decreases. For some men, this is not an issue, as they never decrease to levels that affect their physical or sexual health. Yet for many men, testosterone levels can decrease dramatically causing erectile dysfunction, increased risk of heart disease, and loss of density in bones.

Reactive oxygen species (ROS) are molecules capable of independent existence, containing at least one oxygen atom and one or more unpaired electrons. Increased production of free radicals is caused by excessive exposure to UV radiation, long-term stress conditions, intense physical exercise, improper diet and use of stimulants. Under physiological conditions, there is a balance between the generation and removal of free radicals from the body.





Male infertility



Ageing



Environment



Lifestyle



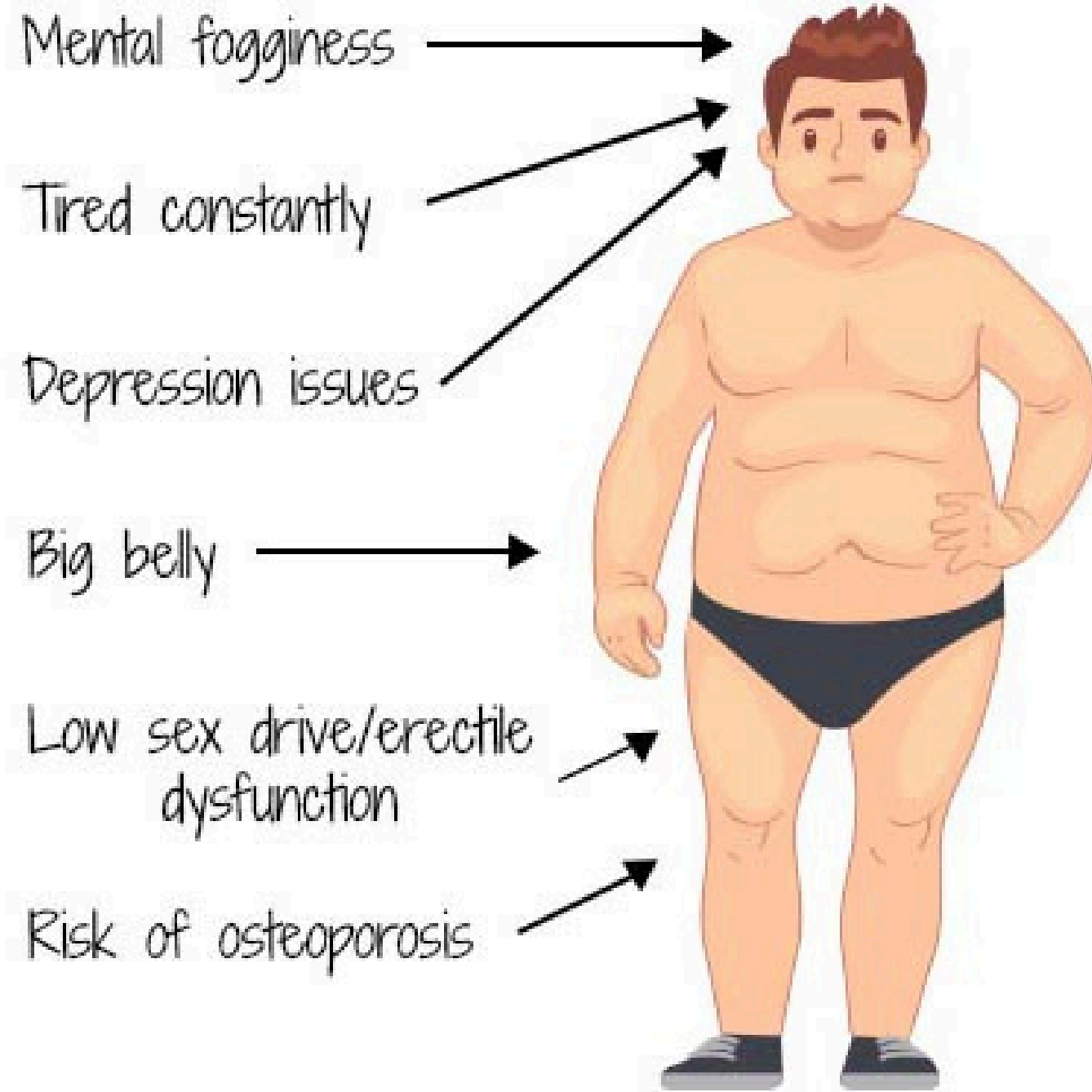
Physio Pathology

- Impaired cellular functions
- Vulnerability to diseases
- Modifications of reproductive hormones
- Andropause or late-onset hypogonadism
- Genomic instability

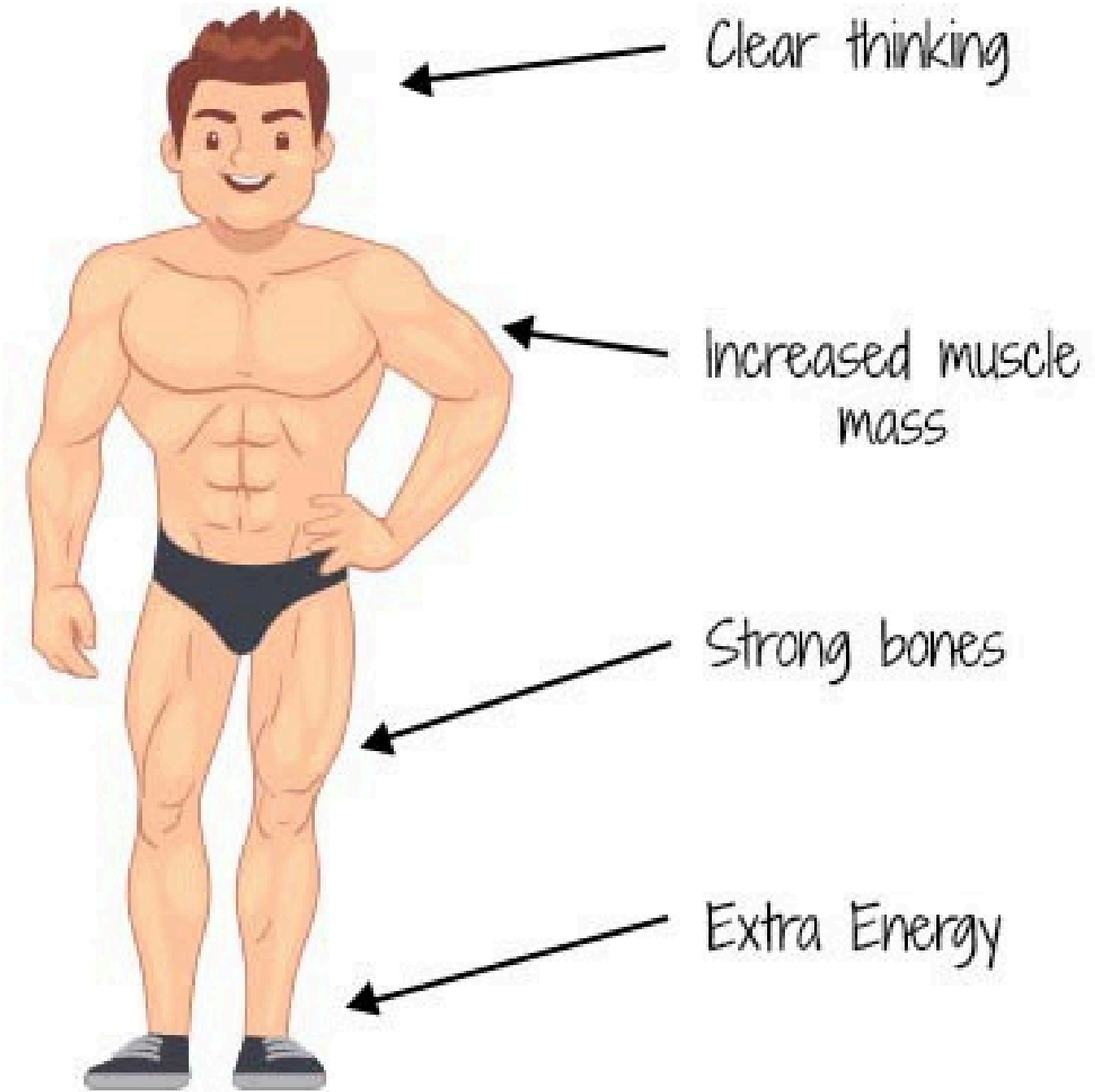
- Obesity
- Alcohol and tobacco consumption
- High energy intake
- Nutritionally poor foods
- Recreational drugs
- Stress & anxiety

- Radiation exposure
- Tight-fitting underwear
- Recurrent hot baths or saunas
- Exposure to endocrine-disrupting chemicals
- Occupational exposure
- Genetic susceptibility
- Problems with ejaculation or sexual activity
- Testicular injury and diseases
- Endocrinal / auto-immune disorders
- Disorders which reduce fertility
- Poor sperm quantity and/or quality
- STDs/ pathogens

Low TESTOSTERONE



Optimal TESTOSTERONE



01

PHYSICAL EXAM

- Screening
- Past history
- U/D
- Medication
- Risk factors
- Protocol for TRT

02

LAB

- Plan lab investigation
- Basic and Special

03

TREATMENT

- Plan of Treatment
- Personalized

04

FOLLOW UP

- Sign and symptoms
- Lab investigation

The background is a solid teal color. On the left side, there are several white, wavy, overlapping lines that create a sense of motion and depth. On the right side, there is a large, white, semi-circular shape that partially overlaps the teal background.

LAB INVESTIGATION

- All Hormones
- Basic check up
- PSA level
- Ultrasound

LAB INVESTIGATION

Estradiol E2

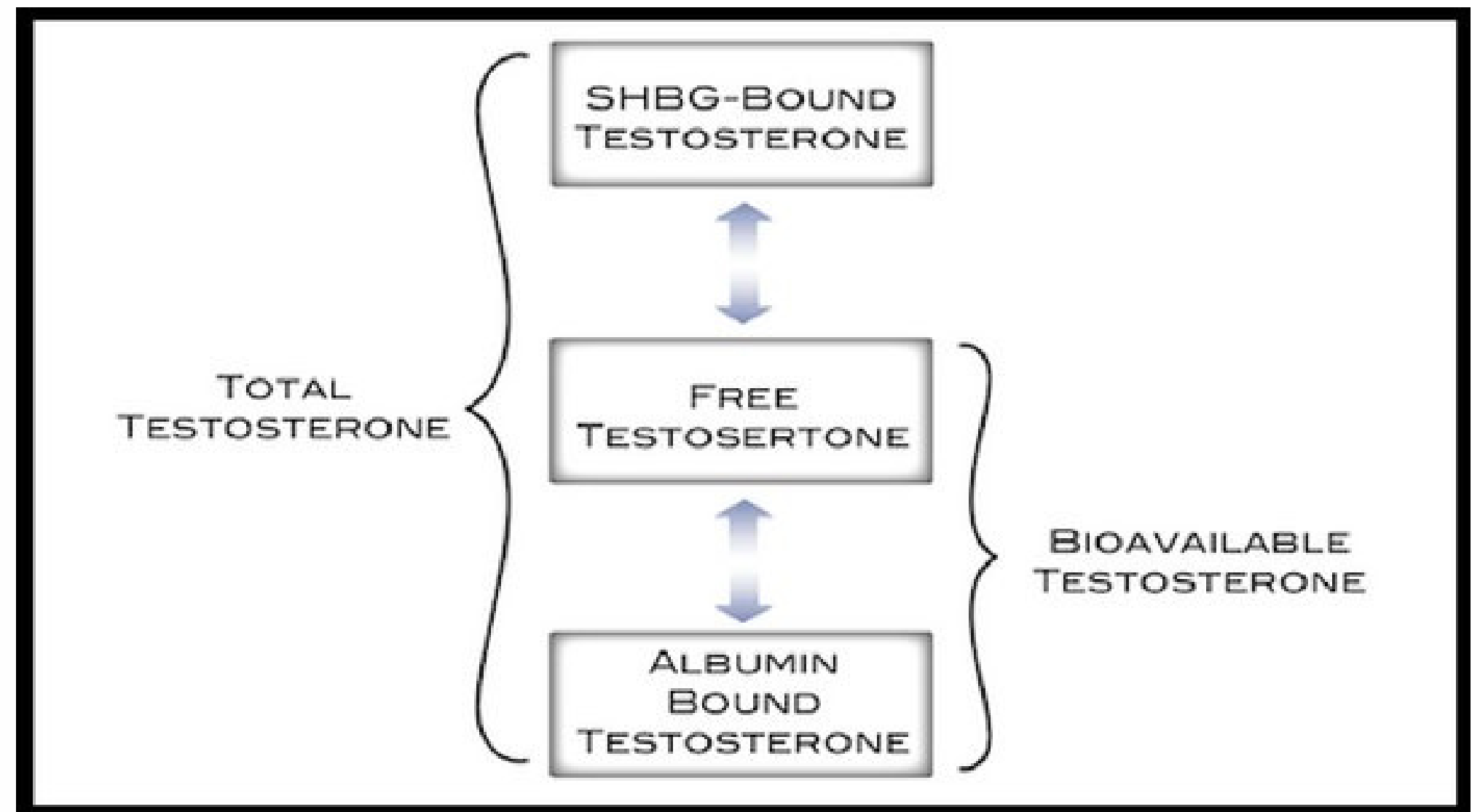
Progesterone

FSH

Luteinizing Hormone LH

Testosterone

Sex Hormone Binding Globulin (SHBG)



TREATMENT

- Lifestyles modification
- Nutrition
- Exercise
- Supplements
- HRT : Transdermal, Oral, Intramuscular injection



LIFESTYLE MEDICINE FOCUSES ON 6 AREAS TO IMPROVE HEALTH



10
Foods to increase testosterone levels



1. Avocados
2. Berries and cherries
3. Green and leafy vegetables
4. Ginger
5. Onion
6. Milk products
7. Sea fish
8. Pomegranates
9. Eggs
10. Olive oil



NUTRITIONAL SUPPLEMENT

- L-Arginine
- L-Citrulline
- Zinc
- Vitamin B
- Vitamin C
- Vitamin K
- Magnesium
- Manganese
- Selenium



EXERCISES



High Intensity
Interval Training
(HIIT)



Resistance
training
Strengthening
exercise
Weightlifting

MEN'S HEALTH AND HORMONE BALANCE



Phyathai-Sriracha Hospital

Phyathai Sriracha Hospital cares for health at every stage of life, with experienced doctors specializing in all areas for longevity

