



Libyan International Medical University  
Faculty of Pharmacy  
Second year



# Male Hormones

Talal Abotraba - 2446  
Nebras Alzaidy - 2461

# TABLE OF CONTENTS

1. Introduction

2. Male hormones

3. Function of each hormone

4. Hormones' effect on fertility

5. Summary

6. References

# Introduction

Hormones are crucial for **male** sexual and reproductive function. They are also responsible for the development of secondary sexual characteristics in men, including facial and body hair growth and voice change. also affect bone and muscle development and metabolism.



2

# Male Hormones

# Hormones

## Androstenedione

Produced in the **adrenal glands and the gonads**

## Estradiol

produced in the **testicles**.

## Luteinizing hormone (LH)

Produced by **gonadotropic cells in the anterior pituitary gland**

## Follicle stimulating Hormone (FSH)

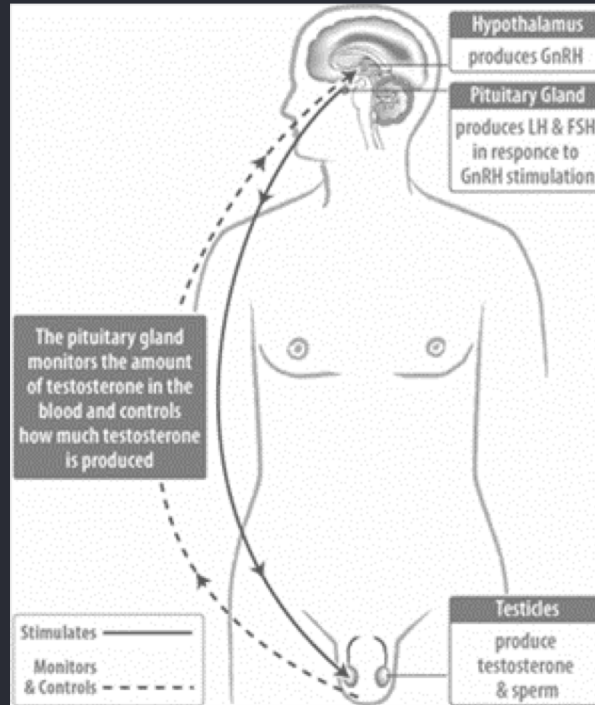
Secreted by the **gonadotropic cells of the anterior pituitary gland**,

## DHEA

Produced by the **adrenal glands**

## Testosterone

Produced by the **gonads (by the Leydig cells in testes in men)** also produced by the **adrenal glands**



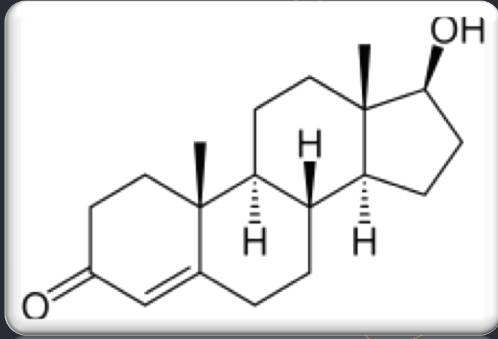


3

# Hormones Function

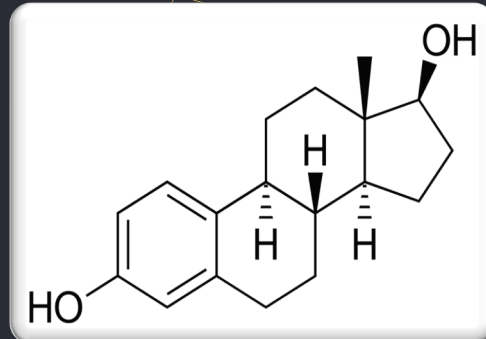


# Testosterone



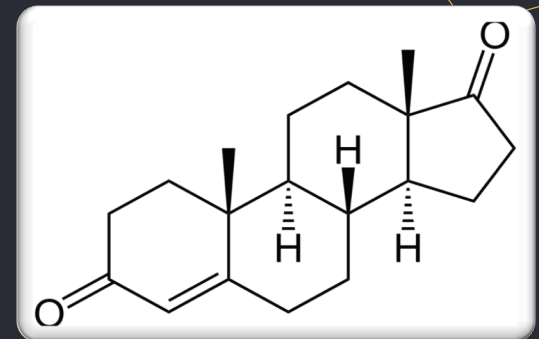
In men, it's thought to regulate sex drive (libido), bone mass, fat distribution, muscle mass and strength, and the production of red blood cells and sperm.

# Estradiol



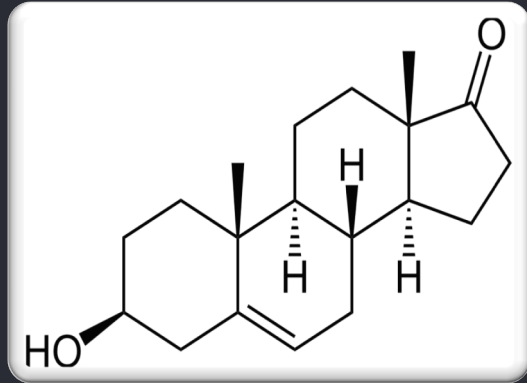
Essential for modulating libido, erectile function, and spermatogenesis

# Androstenedione



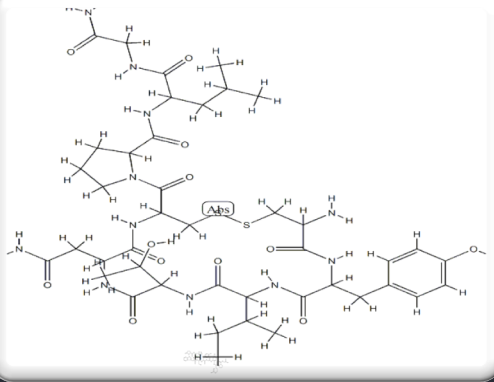
to increase the production of the hormone testosterone to enhance athletic performance, build muscle, reduce body fat, increase energy, keep RBCs healthy, increase sexual desire and performance.

# DHEA



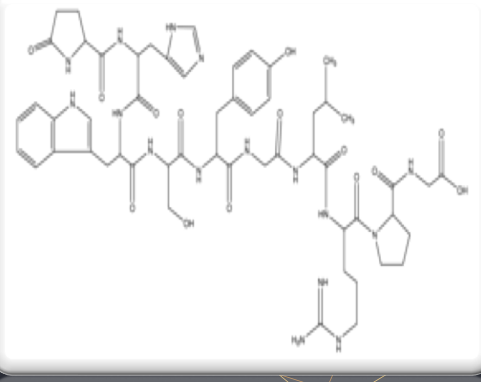
Both a natural hormone and popular supplement it can affect levels of other hormones in your body. It's studied for its potential to increase bone density, decrease body fat, improve sexual function and correct hormonal problems.

# LH



stimulates secretion of sex steroids from the gonads. In the testes, LH binds to receptors on Leydig cells, stimulating synthesis and secretion of testosterone.

# FSH



follicle stimulating hormone acts on the Sertoli cells of the testes to stimulate sperm production (spermatogenesis).





4

# Hormones' Effect on fertility

# Infertility

**Male infertility** refers to a **male's** inability to cause pregnancy in a **fertile**. **Male infertility** is commonly due to deficiencies in the semen, and semen quality is used as a surrogate measure of **male fecundity**.



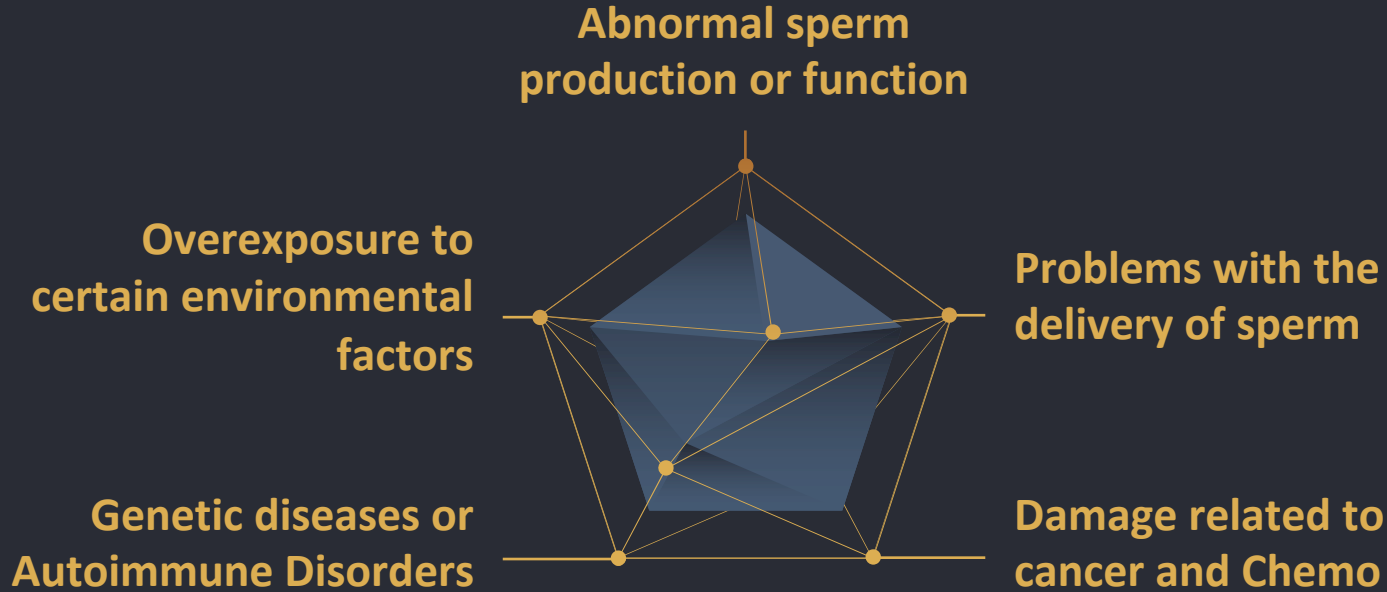
# Hormones Effecting Fertility

**FSH**

**LH**

Any condition that lowers LH and FSH levels, such as a pituitary tumor, can result in low or no sperm production and low blood testosterone levels.

# Other Factors Causing Infertility



# Summary

- The primary hormones involved in the **male reproductive system**
- **follicle-stimulating hormone**,
- **luteinizing hormone**,
- **testosterone**
- **Follicle-stimulating hormone** is necessary for sperm production (spermatogenesis),  
and **luteinizing hormone** stimulates the production of testosterone, which is also needed to make sperm.
- Many **men** with low sperm counts or abnormal semen are still **fertile**.  
And about 15% of **infertile men** have normal semen and plenty of normal sperm.

# Reference

- <https://www.webmd.com/infertility-and-reproduction/guide/male-fertility-tests#1>
- Guyton and Hall Textbook of Medical Physiology 12th Edition
- <https://www.hormone.org/diseases-and-conditions/infertility-male>



THANK  
YOU!