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## Hormones

Hormones are your body's chemical messengers. They travel in your bloodstream to tissues or organs. They work slowly, over time, and affect many different processes, including:

- Growth and development
- Metabolism - how your body gets energy from the foods you eat
- Sexual function
- Reproduction
- Mood

Endocrine glands, which are special groups of cells, make hormones. The major endocrine glands are the pituitary, pineal, thymus, thyroid, adrenal glands, and pancreas. In addition, men produce hormones in their testes and women produce them in their ovaries.

Hormones are powerful. It takes only a tiny amount to cause big changes in cells or even your whole body. That is why too much or too little of a certain hormone can be serious. Laboratory tests can measure the hormone levels in your blood, urine, or saliva. Your health care provider may perform these tests if you have symptoms of a **hormone disorder** [<https://medlineplus.gov/endocrinodiseases.html>]. Home pregnancy tests are similar - they test for pregnancy hormones in your urine.

## Start Here

- Endocrine System [<https://kidshealth.org/en/parents/endocrine.html>] (Nemours Foundation)  
Also in Spanish [<https://kidshealth.org/es/parents/endocrine.html>]
- What Is a Hormone? [<https://biobeat.nigms.nih.gov/2024/07/what-is-a-hormone/>]  
 (National Institute of General Medical Sciences)

## Diagnosis and Tests

- Adrenocorticotrophic Hormone (ACTH) [<https://medlineplus.gov/lab-tests/adrenocorticotrophic-hormone-acth/>]  
 (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/hormona-adrenocorticotropica-acth/>]
- Aldosterone Test [<https://medlineplus.gov/lab-tests/aldosterone-test/>]  
 (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-aldosterona/>]
- Anti-Müllerian Hormone Test [<https://medlineplus.gov/lab-tests/anti-mullerian-hormone-test/>]  
 (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-la-hormona-antimulleriana/>]
- Catecholamine Tests [<https://medlineplus.gov/lab-tests/catecholamine-tests/>]  
 (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/pruebas-de-catecolaminas/>]
- Cortisol Test [<https://medlineplus.gov/lab-tests/cortisol-test/>]  
 (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-cortisol/>]
- DHEA Sulfate Test [<https://medlineplus.gov/lab-tests/dhea-sulfate-test/>]  
 (National Library of Medicine)

Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-sulfato-de-dhea/>]

- Estrogen Levels Test [<https://medlineplus.gov/lab-tests/estrogen-levels-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-estrogeno/>]
- Follicle-Stimulating Hormone (FSH) Levels Test [<https://medlineplus.gov/lab-tests/follicle-stimulating-hormone-fsh-levels-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-niveles-de-la-hormona-foliculoestimulante-fsh/>]
- Growth Hormone Tests [<https://medlineplus.gov/lab-tests/growth-hormone-tests/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/pruebas-de-la-hormona-del-crecimiento/>]
- IGF-1 (Insulin-like Growth Factor 1) Test [<https://medlineplus.gov/lab-tests/igf-1-insulin-like-growth-factor-1-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-igf-1-factor-de-crecimiento-similar-a-la-insulina-1/>]
- Luteinizing Hormone (LH) Levels Test [<https://medlineplus.gov/lab-tests/luteinizing-hormone-lh-levels-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-niveles-de-la-hormona-luteinizante-hl/>]
- Parathyroid Hormone (PTH) Test [<https://medlineplus.gov/lab-tests/parathyroid-hormone-pth-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-hormona-paratiroidea-pth/>]
- Progesterone Test [<https://medlineplus.gov/lab-tests/progesterone-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-progesterona/>]
- Prolactin Levels [<https://medlineplus.gov/lab-tests/prolactin-levels/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/niveles-de-prolactina/>]
- Renin Test [<https://medlineplus.gov/lab-tests/renin-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-renina/>]
- SHBG Blood Test [<https://medlineplus.gov/lab-tests/shbg-blood-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-sangre-de-shbg/>]
- Testosterone Levels Test [<https://medlineplus.gov/lab-tests/testosterone-levels-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-niveles-de-testosterona/>]
- Thyroid Tests: MedlinePlus Health Topic [<https://medlineplus.gov/thyroidtests.html>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/thyroidtests.html>]

## Related Issues

- Endocrine Related Hypertension [<https://www.endocrine.org/patient-engagement/endocrine-library/endocrine-related-hypertension>] (Endocrine Society)
- Endocrine-Disrupting Chemicals (EDCs) [<https://www.endocrine.org/patient-engagement/endocrine-library/edcs>] (Endocrine Society)
- Obesity [<https://www.endocrine.org/patient-engagement/endocrine-library/obesity>] (Endocrine Society)

## Specifics

- Anabolic Steroids: MedlinePlus Health Topic [<https://medlineplus.gov/anabolicsteroids.html>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/anabolicsteroids.html>]

## Test Your Knowledge

- Low Testosterone Quiz [[https://medlineplus.gov/ency/quiz/003707\\_27.htm](https://medlineplus.gov/ency/quiz/003707_27.htm)] (Medical Encyclopedia)  
Also in Spanish [[https://medlineplus.gov/spanish/ency/quiz/003707\\_88.htm](https://medlineplus.gov/spanish/ency/quiz/003707_88.htm)]

## Clinical Trials

- ClinicalTrials.gov: Hormones [<https://clinicaltrials.gov/search?cond=%22Hormones%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

# Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: The Prognostic Value of Hematological, Immune-Inflammatory, Metabolic, and Hormonal Biomarkers in... [<https://www.ncbi.nlm.nih.gov/pubmed/40732885>]
- Article: Driven to cannibalism: A hormonal trigger for phagocytosis. [<https://www.ncbi.nlm.nih.gov/pubmed/40673817>]
- Article: Metabolic and hormonal effects of an 8 days water only fasting combined... [<https://www.ncbi.nlm.nih.gov/pubmed/40596030>]
- Hormones -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Hormones%22%5Bmajr%3Aexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bdat%5D+NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comm+ent%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

## Find an Expert

- Find an Endocrinologist [<https://www.endocrine.org/patient-engagement/find-an-endocrinologist-directory>] (Endocrine Society)
- National Institute of Diabetes and Digestive and Kidney Diseases [<https://www.niddk.nih.gov>] 

## Children

- Your Endocrine System (For Kids) [<https://kidshealth.org/en/kids/endocrine.html>] (Nemours Foundation)  
Also in Spanish [<https://kidshealth.org/es/kids/endocrine.html>]

## Teenagers

- Endocrine System (For Teens) [<https://kidshealth.org/en/teens/endocrine.html>] (Nemours Foundation)  
Also in Spanish [<https://kidshealth.org/es/teens/endocrine.html>]

## Men

- Hypogonadism in Men [<https://www.endocrine.org/patient-engagement/endocrine-library/hypogonadism>] (Endocrine Society)
- Testosterone Therapy: Potential Benefits and Risks as You Age [<https://www.mayoclinic.org/healthy-lifestyle/sexual-health/in-depth/testosterone-therapy/art-20045728?p=1>] (Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.mayoclinic.org/es/healthy-lifestyle/sexual-health/in-depth/testosterone-therapy/art-20045728?p=1>]

## Women

- Headaches and Hormones: What's the Connection? [<https://www.mayoclinic.org/diseases-conditions/chronic-daily-headaches/in-depth/headaches/ART-20046729?p=1>] (Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/chronic-daily-headaches/in-depth/headaches/art-20046729?p=1>]
- Hormones and Breast Cancer [[https://www.endocrine.org/-/media/endocrine/files/patient-engagement/hormones-and-series/hormones\\_and\\_breast\\_cancer\\_what\\_you\\_need\\_to\\_know](https://www.endocrine.org/-/media/endocrine/files/patient-engagement/hormones-and-series/hormones_and_breast_cancer_what_you_need_to_know)] (Endocrine Society) - PDF
- Menopause: MedlinePlus Health Topic [<https://medlineplus.gov/menopause.html>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/menopause.html>]
- Pregnancy Test [<https://medlineplus.gov/lab-tests/pregnancy-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-embarazo/>]

## Older Adults

- Human Growth Hormone (HGH): Does It Slow Aging? [<https://www.mayoclinic.org/healthy-lifestyle/healthy-aging/in-depth/growth-hormone/art-20045735?p=1>] (Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.mayoclinic.org/es/healthy-lifestyle/healthy-aging/in-depth/growth-hormone/art-20045735?p=1>]

# Patient Handouts

- Could you have low testosterone? [<https://medlineplus.gov/ency/patientinstructions/000722.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000722.htm>]
- Growth hormone test [<https://medlineplus.gov/ency/article/003706.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003706.htm>]
- Luteinizing hormone (LH) blood test [<https://medlineplus.gov/ency/article/003708.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003708.htm>]
- Prolactin blood test [<https://medlineplus.gov/ency/article/003718.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003718.htm>]
- Serum progesterone [<https://medlineplus.gov/ency/article/003714.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003714.htm>]
- Testosterone [<https://medlineplus.gov/ency/article/003707.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003707.htm>]



## MEDICAL ENCYCLOPEDIA

- Aging changes in hormone production [<https://medlineplus.gov/ency/article/004000.htm>]
- Catecholamine blood test [<https://medlineplus.gov/ency/article/003561.htm>]
- Cortisol urine test [<https://medlineplus.gov/ency/article/003703.htm>]
- Could you have low testosterone? [<https://medlineplus.gov/ency/patientinstructions/000722.htm>]
- Erythropoietin test [<https://medlineplus.gov/ency/article/003683.htm>]
- Gastrin blood test [<https://medlineplus.gov/ency/article/003697.htm>]
- Growth hormone test [<https://medlineplus.gov/ency/article/003706.htm>]
- HCG blood test - qualitative [<https://medlineplus.gov/ency/article/003509.htm>]
- HCG blood test - quantitative [<https://medlineplus.gov/ency/article/003510.htm>]
- HCG in urine [<https://medlineplus.gov/ency/article/003619.htm>]
- Insulin C-peptide test [<https://medlineplus.gov/ency/article/003701.htm>]
- Luteinizing hormone (LH) blood test [<https://medlineplus.gov/ency/article/003708.htm>]
- Prolactin blood test [<https://medlineplus.gov/ency/article/003718.htm>]
- Serum progesterone [<https://medlineplus.gov/ency/article/003714.htm>]
- Testosterone [<https://medlineplus.gov/ency/article/003707.htm>]

## Related Health Topics

Anabolic Steroids [<https://medlineplus.gov/anabolicsteroids.html>]

Endocrine Diseases [<https://medlineplus.gov/endocrineldiseases.html>]

Growth Disorders [<https://medlineplus.gov/growthdisorders.html>]

Hormone Replacement Therapy [<https://medlineplus.gov/hormonereplacementtherapy.html>]

Menopause [<https://medlineplus.gov/menopause.html>]

## National Institutes of Health

The primary NIH organization for research on *Hormones* is the National Institute of Diabetes and Digestive and Kidney Diseases [<https://www.niddk.nih.gov>]

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