

**Mission of the Klinefelter Center:**

*To provide compassionate and comprehensive medical and surgical care **for XXY males** by medical professionals with expertise in the various aspects of Klinefelter Syndrome. Services are available **for all ages from young boys to adult men.***



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<http://klinefelter.jhu.edu/>

# Johns Hopkins Klinefelter Syndrome Center



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MEDICINE

## What is Klinefelter (XXY) syndrome?

Klinefelter syndrome is a chromosomal disorder that occurs in men and is typically caused by the addition of an extra X chromosome to the X and Y sex chromosomes. The prevailing characteristic is testicular failure with effects on hormone production and fertility. The extra X chromosome(s) can also affect physical, cognitive and/or social development, though symptoms and severity vary greatly from person to person.



### Symptoms of Klinefelter Syndrome

- ◆ Delayed or incomplete puberty
- ◆ Small, firm testicles
- ◆ Small genitalia
- ◆ Decreased body hair
- ◆ Infertility or sexual dysfunction
- ◆ Enlarged breasts (gynecomastia)
- ◆ Abnormal body proportions (tall stature, long legs, short trunk, wide hips)
- ◆ Learning, language, speech, or social difficulties.
- ◆ Some men report having no symptoms at all.

For more information visit our website:  
<http://klinefelter.jhu.edu/>

### Services Offered:

- ◆ Detailed Evaluation / Examination
- ◆ Adult Endocrinology
- ◆ Pediatric Specialists
- ◆ Infertility Management
- ◆ Cognitive Assessment
- ◆ Psychological Assessment
- ◆ Speech/Language Evaluation
- ◆ Genetic Counseling

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### What treatments are available?

The XXY chromosomal pattern cannot be changed, but there are many ways to manage symptoms.

As children, many XXY males qualify for special services to help them in school. A variety of specialists, such as physical, speech, occupational, behavioral, mental health, and family therapists can often help reduce or eliminate some of the symptoms of the XXY condition, such as poor muscle tone, speech, language, or learning problems, or low self-confidence.

Hormonal options such as testosterone therapy can help XXY males reach normal testosterone levels. For infertile men interested in fathering children, other hormonal treatments and procedures should be considered. Having normal testosterone levels can help develop bigger muscles, deepen the voice, and grow facial and body hair. Testosterone replacement therapy (TRT) often starts when a boy reaches puberty, although it can be started later in patients who are diagnosed as adults.

## History of Johns Hopkins

Patients are the focus of everything we do at The Johns Hopkins Hospital. From our beginnings in 1889 to the opening of our most advanced patient facilities in 2012, our mission to advance patient care, education, and research, continues to change the course of modern medicine. The Johns Hopkins Hospital and the Johns Hopkins School of Medicine are the founding institutions of modern American medicine. The hospital occupies approximately 20 of the 60 buildings on the Johns Hopkins Medical Campus. The complex receives 80,000 visitors weekly. It houses over 1,000 beds and has a staff of over 1,700 doctors with over 30,000 total employees. In addition to the main hospital, the system operates four other hospitals and several outpatient care facilities in the Baltimore and Washington metro areas and a children's hospital in St.

