

## SEX CHROMOSOME ANEUPLOIDY IN MALES

- 47, XXY SYNDROME.  
KLINEFELTER
- 47, XYY SYNDROME
- 48, XXYY SYNDROME

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## 47, XXY SYNDROME. KLINEFELTER

- KLINEFELTER, 1942
- INFERTILITY
- SMALL TESTICLES
- GYNECOMASTIA

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## GROWN AND ENDOCRINE CHANGES

- SMALL HEAD CIRCUNFERENCE. < 1 SD
- INCREASE IN HEIGHT VELOCITY
- INFERTILITY
- GYNECOMASTIA
- BREAST CANCER. 4 %

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## COGNITIVE DEVELOPMENT

- QUIET
- SHY
- HYPOACTIVE
- LANGUAGE DELAYED
- AUDITORY PROCESSING DIFFICULTIES
- AUDITORY MEMORY DEFICITS
- VIQ < PIQ
- ATTENTION PROBLEMS

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## MOTOR PROBLEMS

- PROBLEMS IN FINE AND GROSS MOTILITY
- HYPOTONIA
- HYPEREXTENSIBILITY OF FINGER JOINTS
- POOR MUSCLE STRENGTH
- SYNKINETIC MOVEMENTS
- TREMOR, DYSMETRIA
- HANDWRITING DYSABILITY
- IMPAIRED SELF-IMAGE

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## EDUCATIONAL PROBLEMS

- POOR SCHOOL PERFORMANCE
- PROBLEMS WITH READING. DYSLEXIA
- IMPAIREMENT IN MATHS
- IMPAIREMENT IN SOLVING WORD PROBLEMS

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## PSYCHOPATHOLOGY

- RELATED TO LOW SELF-ESTEEM
- DYSTIMIA
- SUBSTANCE ABUSE
- CONDUCT DISORDERS
- ADHD

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## VARIANT PATTERNS

- 48, XXXY
- 49, XXXXY
- MORE DYSMORPHIC FEATURES
- MORE SEVERE LANGUAGE AND COGNITIVE IMPAIRMENT
- EACH EXTRA X REDUCES IQ IN 16 POINTS

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## TREATMENT

- LANGUAGE INTERVENTION
- READING PROGRAMS
- MATHS REMEDIATION
- IMPROVE MOTOR SKILLS
- INDIVIDUALS SPORTS
- TESTOSTERONE REPLACEMENT AT 12 YEARS

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## 47, XYY SYNDROME

- NO DYSMORPHIC FACIAL FEATURES
- NORMAL IQ
- NO ENDOCRINE PROBLEMS
- TALL STATURE
- LEARNING DISABILITIES
- EMOTIONAL PROBLEMS

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## GROWTH AND PUBERTY

- DELAYED PUBERTY
- HEIGHT ACCELERATION
- NORMAL TESTOSTERONE LEVELS

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## COGNITIVE AND BEHAVIORAL PROBLEMS

- PROBLEMS IN PROCESSING VERBAL INFORMATION
- HYPOTONIA
- MOTOR PLANING PROBLEMS
- POOR BILATERAL COORDINATION
- POOR VISUAL-PERCEPTUAL-MOTOR INTEGRATION
- $VIQ < PIQ$
- DYSLEXIA
- INATTENTION
- IMPULSIVITY
- REACTIVE DEPRESSION
- AGRESSIVE. LOW FUSTRATION TOLERANCE

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# TREATMENT

- LANGUAGE THERAPY
- BEHAVIORAL THERAPY
- PHARMACHOLOGICAL TREATMENT OF DEPRESSION
- TREATMENT OF ADHD
- IF MOOD LABILITY AND DEPRESSION DO NOT RESPOND, TRY: GABAPENTINE, CARBAMAZEPINE, VALPROATE AND LITHIU
- IF AGRESSION DON'T RESPOND: RISPERIDONE

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