Single Gene Disorders - Autosomal Dominant Inheritance

https://medlineplus.gov/ency/article/002049.htm

You Are Here:

Home

→

Medical Encyclopedia

→

Autosomal dominant

URL of this page: //medlineplus.gov/ency/article/002049.htm

Autosomal dominant

To use the sharing features on this page, please enable JavaScript.

Autosomal dominant is one ofÂ many ways that a trait or disorder can be passed down

through families.In an autosomal dominant disease, if youÂ get the abnormal gene from only one parent, you can get the disease. Often, one of the parents may also have the disease.Information

Inheriting a disease, condition, or trait depends on the type of chromosome affected (nonsex or sex chromosome). It also depends on whether the trait is dominant or recessive.A single abnormal gene on one of the first 22 nonsex (autosomal) chromosomes from either parent can cause an autosomal disorder.Dominant inheritance means an abnormal gene from one parent can cause disease. This happens even when the matching gene from the other parent is normal. The abnormal gene dominates.This disease can also occur as a new condition in a child when neither parent has the abnormal gene.A parent with an autosomal dominant condition has a 50% chance of having a child with the condition. This is true for each pregnancy.It means that each child's risk for the disease does not depend on whether their sibling has the disease.Children who do not inherit the abnormal gene will not develop or pass on the disease.If someone is diagnosed with an autosomal dominant disease, their parents should also be tested for the abnormal gene.Examples of autosomal dominant disorders include Marfan syndrome and neurofibromatosis type 1. Alternative Names

Inheritance - autosomal dominant; Genetics - autosomal dominantImages

Autosomal dominant genes

References

Jones KL, Jones MC, Campo M. Genetics, genetic counseling, and prevention. In: Jones KL, Jones MC, Campo MD, eds. Smith's Recognizable Patterns of Human Deformation. 8th ed. Philadelphia, PA: Elsevier; 2022:chap 2.Nussbaum RL, McInnes RR, Willard HF. Patterns of single-gene inheritance. In: Nussbaum RL, McInnes RR, Willard HF, eds. Thompson & Thompson Genetics in

Medicine. 8th ed. Philadelphia, PA: Elsevier; 2016:chap 7.Scott DA, Lee B. Patterns of genetic transmission. In: Kliegman RM, St. Geme JW, Blum NJ, Shah SS, Tasker RC, Wilson KM, eds. Nelson Textbook of Pediatrics. 21st ed. Philadelphia, PA: Elsevier; 2020:chap 97.

Review Date 1/6/2022

Updated by: Anna C. Edens Hurst, MD, MS, Associate Professor in Medical Genetics, The University of Alabama at Birmingham, Birmingham, AL. Review provided by VeriMed Healthcare Network. Also reviewed by David Zieve, MD, MHA, Medical Director, Brenda Conaway, Editorial Director, and the A.D.A.M. Editorial team.