

## Genetic Disorders Quiz Answer Key PDF

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**What is the main focus of genetic counseling?**

- A. Diagnosing genetic disorders
- B. Offering information and support ✓**
- C. Conduct surgeries
- D. Prescribing medication

**Which genetic disorder is characterized by an extra chromosome 21?**

- A. Turner syndrome
- B. Klinefelter syndrome
- C. Down syndrome ✓**
- D. Cystic fibrosis

**What type of genetic disorder is Down syndrome?**

- A. Single-gene disorder
- B. Chromosomal disorder ✓**
- C. Multifactorial disorder
- D. Mitochondrial disorder

**Which disorder is caused by a mutation in mitochondrial DNA?**

- A. Hemophilia
- B. Leber's hereditary optic neuropathy ✓**
- C. Huntington's disease
- D. Turner syndrome

**What ethical considerations should be taken into account when conducting genetic testing on minors?**

**Key ethical considerations include obtaining informed consent from guardians, assessing the child's ability to understand the implications, considering the potential psychological impact of results, and ensuring confidentiality and privacy.**

**Which of the following is an example of a multifactorial disorder?**

- A. Hemophilia
- B. Diabetes ✓**
- C. Cystic fibrosis
- D. Huntington's disease

**What is the inheritance pattern of cystic fibrosis?**

- A. Autosomal dominant
- B. Autosomal recessives ✓**
- C. X-linked
- D. Y-linked

**Which disorders are associated with X-linked inheritance? (Select all that apply)**

- A. Hemophilia ✓**
- B. Cystic fibrosis
- C. Duchenne muscular dystrophy ✓**
- D. Turner syndrome

**Which of the following are types of genetic disorders? (Select all that apply)**

- A. Chromosomal disorders ✓**
- B. Infectious disorders
- C. Single-gene disorders ✓**
- D. Multifactorial disorders ✓**

**What are the main challenges in diagnosing multifactorial disorders?**

The main challenges in diagnosing multifactorial disorders include the variability in genetic and environmental influences, the lack of clear diagnostic markers, and the overlap of symptoms with other conditions.

How can lifestyle changes contribute to the management of multifactorial disorders?

Lifestyle changes can contribute to the management of multifactorial disorders by addressing key risk factors through improved nutrition, physical activity, and stress reduction.

Which tests are used for diagnosing genetic disorders? (Select all that apply)

- A. Karyotyping ✓
- B. Blood glucose test
- C. DNA sequencing ✓
- D. Biochemical tests ✓

Describe the role of genetic counseling in managing genetic disorders.

Genetic counseling involves providing information, support, and guidance to individuals and families affected by genetic disorders, helping them understand the implications of genetic conditions, the risks of inheritance, and available testing and treatment options.

What is the primary method for detecting chromosomal abnormalities?

- A. Blood test
- B. Karyotyping ✓
- C. MRI
- D. Ultrasound

Which of the following are single-gene disorders? (Select all that apply)

- A. Cystic fibrosis ✓
- B. Sickle cell anemia ✓
- C. Down syndrome
- D. Huntington's disease ✓

What are common symptoms of genetic disorders? (Select all that apply)

- A. Developmental delays ✓**
- B. High blood pressure
- C. Physical abnormalities ✓**
- D. Metabolic issues ✓**

**Explain the difference between autosomal dominant and autosomal recessives inheritance patterns.**

**In autosomal dominant inheritance, a single copy of the mutated gene can cause the trait or disorder to manifest, meaning that an affected individual has a 50% chance of passing it on to their offspring. In contrast, autosomal recessives inheritance necessitates that an individual inherits two copies of the mutated gene (one from each parent) for the trait or disorder to be expressed, making it possible for carriers to pass on the gene without showing symptoms themselves.**

**What are potential ethical issues related to genetic testing? (Select all that apply)**

- A. Genetic privacy ✓**
- B. Increased lifespan
- C. Genetic discrimination ✓**
- D. Implications of genetic modifications ✓**

**Discuss the potential impact of genetic discrimination on individuals with genetic disorders.**

**The potential impact of genetic discrimination on individuals with genetic disorders includes barriers to employment opportunities, challenges in obtaining health insurance, and increased social stigma, which can exacerbate mental health issues and reduce quality of life.**

**Which genetic disorder is associated with the X chromosome?**

- A. Cystic fibrosis
- B. Hemophilia ✓**
- C. Down syndrome
- D. Huntington's disease