



- **What is the definition of screening?**

- Investigating healthy individuals to detect unrecognized diseases thus different actions can be taken to prevent/delay the development of a disease or improve the prognosis (prognosis: outcome of the disease in future).

- **Why do we screen?**

- To reduce the occurrence of diseases and deaths.
- To take early actions against the disease before it develops further and harms the patient.
- To protect the society by preventing the spread of the disease.

- **What is the difference between screening and periodic health examination الفحص الدوري**

- Screening is inexpensive, requires little physician time, it is not diagnostic (just telling if the patient has a condition or not), those patients with positive screening tests will be referred to physicians for further workup and treatment.
- A screening test should be done for disease which has a “time lag” → time between exposure and appearance of symptoms.

- **What is “lead time”?**

- It is an advantage gained by screening and considered to be the period between early detection and diagnosis by other means.

- **What are the uses of screening?**

- Case detection (especially for those with no symptoms yet).
- Control of a disease (by reducing mortality and morbidity as mentioned earlier).
- Research: to know more about the disease.
- Health education: to create a public awareness and educate the society.

- **What are the types of screening programs?**

Selective disease screening	Detecting a specific disease in high risk individuals (e.g. retinopathy in patients with diabetes)
Mass	A single disease screening done for everyone regardless of risk (e.g. tuberculosis in pre-employment)
Multiphasic screening	Routine health checkups in well-women clinic, antenatal exam

- **What are the criteria needed for screening programs?**

The disease	<ul style="list-style-type: none"> • The disease is important and its natural history is understood. • There is a test to detect the disease. • There is an effective treatment for the disease. • There is an evidence that early detection of the disease will reduce morbidity and mortality.
The test	<ul style="list-style-type: none"> • Simple, safe, inexpensive, quick, easy to use and repeat. • Sensitivity: probability test will be positive if the disease is truly present. • Specificity: probability test will be negative if the disease it truly absent.

- **Ethics in screening:**

- You must explain to the candidates potential disadvantages, expected benefits and provide them with the choice to continue or withdraw.

- **Consanguinity:**

- It is a cultural tradition (especially in our region) where there are social and economic benefits تعزير العلاقات الأسرية and it is more prevalent among poorer and less educated people.



- **Types of consanguinity:**
 - ✓ Patrilateral (two brothers).
 - ✓ Matrilateral (two sisters).
 - ✓ Cross cousins (brother and sister).
- **Effects on congenital malformations:**
 - ✓ Rate: 3.5%
 - ✓ Congenital birth defects are higher than general population. Most common birth defect is congenital heart disease.
 - ✓ Expression of autosomal recessive disorders is common (e.g. sickle cell disease).
- **Effects on reproductivity:**
 - ✓ Few studies suggest increased abortions, stillbirths, perinatal deaths or neonatal deaths.
 - ✓ Some studies also suggest decreased birth weight.
 - ✓ In general, fertility is not affected.
- **Strategies to reduce the burden of consanguinity:**
 - ✓ Educate the society about risks of congenital diseases.
 - ✓ Early screening of genetic diseases at secondary school.
 - ✓ Screen carriers for common diseases.
 - ✓ Premarital counseling services.
 - ✓ Prenatal screening for genetic diseases.
 - ✓ Early ultrasound examination can detect 80% of congenital malformations.