

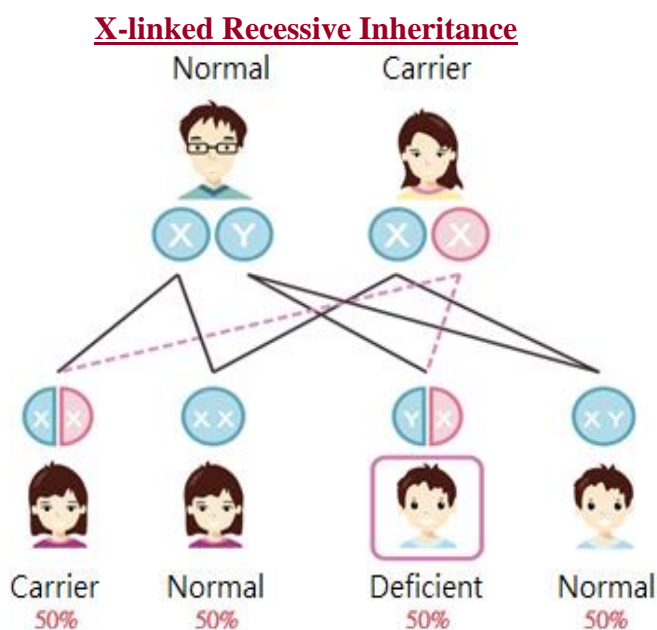
Glucose-6-Phosphate Dehydrogenase (G6PD) Deficiency

What is Glucose-6-Phosphate Dehydrogenase (G6PD) Deficiency?

Glucose-6-Phosphate Dehydrogenase (G6PD) is an enzyme which protects the red blood cells and prevents them from being damaged. People with G6PD deficiency usually have a normal health. But once they suffer from severe infection or are exposed to oxidative stimuli such as certain drugs, chemical agents, large amount of red blood cells will be damaged and broken down, leading to acute haemolysis. Bilirubin will be produced as the red blood cells are broken down during acute haemolysis, resulted in jaundice. Without timely treatment to the newborn babies with severe jaundice, excessive bilirubin levels in the blood may accumulate in the brain, leading to irreversible brain damage. Consequently, mental retardation, cerebral palsy and hearing deficit, or even death will occur.

What are the causes of G6PD Deficiency?

G6PD Deficiency is a genetic condition with an X-linked recessive inheritance, therefore males are more likely to be affected by this condition. In Hong Kong, the incidence of G6PD Deficiency is around 4.5% in males and 0.5% in females. Their brothers have 50% chance to be affected, while their sisters have 50% chance to be gene carriers.



What are the precautions should the affected people take ?

G6PD deficiency is an inheritable and **life-long** condition. There is no cure of the disease. In order to prevent acute hemolysis after exposure to oxidative stimuli, **affected people should take the following lifelong precautions:**

1.* Avoid Chinese herbal medicines such as:

Rhizoma Coptidis
(Huang Lien)



Flos Lonicerae
(Kam Ngan Fa)



Flos Chimonanthi Praecocis
(Leh Mei Hua)



Calculus Bovis
(Niu Huang)



Margaritas
(Pearl powder)



(e.g. Counter drugs such as Bo Ying Compound which contains Margaritas, etc.)

2. * Avoid Western medicines such as:

- Certain **Antipyretics**
- **Antibiotics** such as:
 - Nitrofurantoin
 - Nalidixic acid
 - Sulfamethoxazole
- **Antimalarials** such as:
 - Primaquine
- **Antispasmodics** such as:
 - Phenazopyridine

*** This list is not exhaustive. Please consult your doctor.**

3. Avoid eating **fava or broad beans** and **their products**.



Fava / Broad beans



4. Avoid close contact with **mothballs** (Naphthalene) and Naphthalene-containing products.



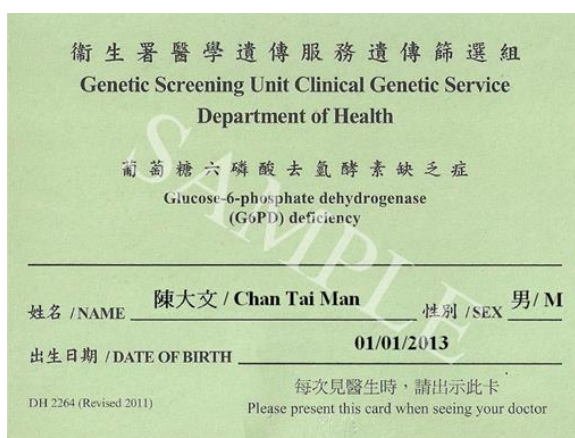
Mothballs



5. Mothers who are breastfeeding their babies with G6PD Deficiency should consult doctor before taking any Chinese or Western medicine.
6. Pregnant ladies should inform their medical and nursing staff about any family history of G6PD Deficiency.

What are the precautions should the affected people take ?

7. Inform your doctor or medical staff about your health condition during consultation, or show your G6PD deficiency alert card to your doctor.



8. During hemolytic crisis, affected subjects will develop yellowish skin and mucosal membranes including the whites of the eyes. They may pass dark coloured urine.

- ****** Neonates may look pale, seem lacking energy and become excessively sleepy.
- ****** Older children or adults may complain of tiredness, breathlessness and rapid heartbeats.

****Please consult your doctor without delay if the above signs and symptoms are observed.**

If the above precautions are taken, the affected people will enjoy normal growth and health.



Hotline: 2361 9979

Website: <http://www.cgs.dh.gov.hk>



Genetic Screening Unit
Clinical Genetic Service
Department of Health

