G6PD Deficiency

What is G6PD Deficiency?

Glucose-6-phosphate dehydrogenase (G6PD) is an enzyme which is found throughout the body. Some people have less than the usual amount of G6PD in their red blood cells, therefore causing a deficiency. G6PD helps red blood cells function normally. G6PD is the most common human enzyme deficiency; it affects an estimated 400 million people worldwide.

How does someone get G6PD Deficiency?

G6PD deficiency is inherited; that means it is passed from one or both parents to the child. It is found in both males and females, but it usually affects males more severely. It is not contagious. Since it is inherited, there is no cure.

What does G6PD have to do with blood?

G6PD is found in red blood cells, which carry oxygen to all parts of the body. It helps the red blood cells to function normally. It also protects red blood cells against potentially harmful substances that can build up when you have a fever, take certain medicines, or eat certain foods. If there is not enough G6PD to protect red blood cells some of the red blood cells may be destroyed (hemolysis) during fever, or while taking certain medicines or eating certain foods. If this happens the person may not have enough red blood cells and may become anemic.

G6PD Deficiency Symptom Triggers

People with G6PD deficiency typically do not show any symptoms of the disorder until their red blood cells are exposed to certain triggers, which can be:

- Illness, such as bacterial and viral infections
- Certain painkillers and fever reducing drugs
- Certain antibiotics (especially those that have 'sulf' in their names)
- Certain antimalarial drugs (especially those that have 'quine' in their names)

It is important for people with G6PD deficiency to consult with their prescribing physician and pharmacist before using a new medication.
Other substances can be harmful to children with this condition when consumed or even touched such as *fava (broad) beans, henna compounds and naphthalene (a chemical found in mothballs and moth crystals). Any contact should be avoided.

Symptoms of G6PD Deficiency

A child with G6PD deficiency who is exposed to certain medication, food or infection that triggers the destruction of red blood cells may have no symptoms at all. In more serious cases, a child may exhibit symptoms of anemia and hemolysis:

- Paleness (in darker-skinned children paleness is sometimes best seen in the mouth, especially on the lips or tongue)
- Extreme tiredness
- Rapid heartbeat, rapid breathing, or shortness of breath
- Jaundice or yellowing of the skin and eyes, especially in newborns
- An enlarged spleen
- Dark, tea-colored urine

Once the trigger is removed or resolved, the symptoms of G6PD deficiency usually disappear quickly, typically within a few weeks.
If symptoms are mild, usually no medical treatment is needed as the body naturally makes new red blood cells.
If symptoms are more severe, a child may need to be hospitalized for supportive medical care such as providing oxygen, fluids, and, if needed, blood transfusion.

Caring for your Child

The best way to care for a child with G6PD deficiency is to limit exposure to the triggers. Always tell any health care provider that your child has G6PD deficiency. With the proper precautions, G6PD should not keep your child from living a healthy, active life.

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***Fava Beans and Broad Beans in other languages:**

- Arabic – fwl mudamis, alful alearid فول مدمس
- Catalan – mongetes
- Simplified Chinese – 蚕豆
- Traditional Chinese – 蠶豆
- Dutch – tuinbonen of fava-bonen
- English – fava or broad bean
- Farsi (Persian) – baghela, باقِلا
- French – fève
- German – Ackerbohne, Saubohne, Favabohne
- Greek – fava (φάβα) or koukia (κουκιά)
- Italian – fava
- Malay – kacang buncis besar
- Spanish – haba
- Turkish – bakla fasülyesi
- Urdu – فاوا لوبیا، بروڈ لوبیا