KNOW ABOUT G6PD DEFICIENCY & ITS IMPLICATIONS FOR THE INDIVIDUAL

What is G6PD deficiency?

G6PD deficiency is a genetic variation that causes your G6PD levels to be too low. It is NOT a disease but makes one susceptible to breakdown of red blood cells if the individual is exposed to specific drugs, infections or some agents like naphthalin, some beans [fava beans].

G6PD (glucose-6-phosphate dehydrogenase) is an enzyme that protects your red blood cells from damage. G6PD deficiency by itself usually does not cause any major problem if exposure to the above mentioned drugs / agents is avoided. A deficiency happens when you are born with a variation in DNA (in the gene for G6PD). Most people with G6PD deficiency do not have symptoms. But sometimes, triggers like certain medicines can cause serious problems, like breaking of red blood cells leading to anemia and jaundice. Sometimes, newborns with G6PD deficiency have severe jaundice.

G6PD deficiency is common, is found in 1 of 200 persons. If you or your son has G6PD deficiency, you need to know about the condition and the drugs, agents to be avoided. You need to inform your doctor about it every time you consult a doctor for any symptoms or illness.

Symptoms and Causes

G6PD deficiency does not typically cause symptoms unless a trigger stresses your red blood cells and causes them to break down. This causes symptoms like paleness, fatigue, yellowness of eyes, dark colored urine. When these symptoms develop fast and are severe, you need to consult a doctor and reach a hospital immediately. Such episode can be treated with blood transfusion and supportive therapy.

Many individuals with G6PD deficiency will not have any symptoms or problems through out the life.

Which agents need to be avoided by individuals with G6PD deficiency?

Eating Fava Beans is an important factor that may cause serious problems in an individual with G6PD deficiency. Fava beans look like these. In India, these are not commonly consumed. But one needs to remember and avoid such beans.

Other thing to avoid contact with is naphthalene balls or cloths stored with these naphthalene balls [mothballs]. Mehandi / Hena should not be used.

- **Can I give my child paracetamol or ibuprofen?**
- **Yes – paracetamol is safe for children with G6PD deficiency**.

Other than these infections like malaria, typhoid, etc. and certain drugs can trigger breaking of blood in these individuals.

Always check with your doctor or pharmacist before giving any medication to your child.

To prevent the symptoms of G6PD deficiency, a child with G6PD should avoid the triggers on the following lists:

Antibiotics
- Sulphonamides (check with your doctor)
- Co-trimoxazole (Bactrim, Septrin)
- Dapsone
- Chloramphenicol
- Nitrofurantoin
- Nalidixic acid

Antimalarials
- Chloroquine
- Hydroxychloroquine
- Primaquine
- Quinine
- Mepacrine

Chemicals
- Moth balls (naphthalene)
- Methylene blue

Foods
- Fava beans (also called broad beans)

Other drugs
- Sulphasalazine
- Methyldopa
- Large doses of vitamin C
- Hydralazine
- Procainamide
- Quinidine
- Diphenyldramine (Benadryl)
- Glyburide (glibenclamide, Diabeta, Glynase)
- Isoniazid

Key points to remember

- G6PD is an inherited condition and cannot be spread from one person to another.
- Most children with G6PD deficiency have a completely normal life as long as they avoid certain foods and drugs.
- Some children with the condition will get anaemia or jaundice, especially after taking medicine or eating food they should avoid, or after an infection.
- In case the child or individual with G6PD deficiency looks pale or yellow or has illness his hemoglobin and serum bilirubin should be checked.
- Do not give any medicine without discussing with the doctor

Dr Shubha Phadke

M D [Pediatrics], D M [Medical Genetics]

https://drshubhaphadke.in/

Formerly Professor & Head, Department of Medical Genetics
Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India