

DNA diagnosis:

Carrying haemoglobin D (not haemoglobin D Punjab)

(also known as being AD, or having haemoglobin D trait)

- A carrier of haemoglobin D is a healthy person.
- Carrying haemoglobin D does not weaken them physically or mentally.
- They do not need any medical treatment because they carry haemoglobin D.

What does it mean to carry haemoglobin D?

Haemoglobin D is one of many possible variations in the blood called *haemoglobin gene variants*, or *haemoglobin variants*.

Haemoglobin is what makes blood red. Carriers of haemoglobin D have both the usual haemoglobin (haemoglobin A) and an unusual haemoglobin called haemoglobin D.

A carrier will always be a carrier, and no-one can catch it from them. They inherited haemoglobin D from one of their parents, and could pass it on to their children.

Anyone can carry haemoglobin D. There are seven different types. Haemoglobin D Punjab is the only one that can affect the health of a carrier's children. "Harmless" types of haemoglobin D include haemoglobin D Iran, found among people who originate from the Middle East, and haemoglobin D Ibadan, found among people who originate from West Africa.

Can carrying haemoglobin D cause any health problems?

Carrying haemoglobin D is not an illness, and will never turn into an illness. Carriers can eat what they want, and do any kind of work they choose.

Carriers can give blood providing they are not anaemic (do not have a lower haemoglobin than usual).

Could a carrier of haemoglobin D have children with a serious haemoglobin disorder?

Carrying haemoglobin D will not affect the health of their children, even if their partner is also a carrier.

What should a carrier do if they are thinking of having children?

They should tell their partner that they carry haemoglobin D and ask him or her to have a blood test "for haemoglobin disorders". This test should be done before they start a pregnancy, or as soon as possible once a pregnancy has started. Their GP can arrange it.

If their partner is also a carrier, they should ask their GP for an appointment with a specialist counsellor, to confirm that there is nothing to worry about.

Is there anything else that a carrier should do?

If a carrier has brothers or sisters, or already has children, they need to know that they may also carry haemoglobin D. They should ask their GP or practice nurse for a blood test "for haemoglobin disorders".

Counselling services for haemoglobin gene variants are provided in this area by: