

Carrying haemoglobin C

(also known as being AC, or having haemoglobin C trait)

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

What does it mean to carry haemoglobin C?

Haemoglobin C 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 C have both the usual haemoglobin (haemoglobin A) and an unusual haemoglobin called haemoglobin C. Haemoglobin C is different from haemoglobin S (sickle cell). A carrier of haemoglobin C does not carry sickle cell.

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

Haemoglobin C is common among people who originate from West or North Africa, and among African Americans and African Caribbeans. It occurs rarely in other groups.

Can carrying haemoglobin C cause any health problems?

Carrying haemoglobin C 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 provided that they are not anaemic (do not have a lower haemoglobin level than usual).

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

Only if their partner carries haemoglobin S (sickle cell).

With medical help, such a couple can have healthy children.

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

They should tell their partner that they carry haemoglobin C, 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 not a carrier, there is nothing to worry about.

What should they do if their partner is also a carrier?

They should ask their GP for an immediate appointment with a specialist counsellor. This is particularly important if they have already started a pregnancy. They can also contact the counselling service directly.

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 C. 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: