

# FACT SHEET THIRTY THREE

## SICKLE CELL DISORDERS AND ALCOHOL

Sickle cell disorders occur in some people of African, Asian, Middle Eastern or Mediterranean origin. Sickle cell disorders are caused by the presence of a certain allele, or 'type', of a gene which codes for a subunit of haemoglobin, a protein in red blood cells which is responsible for carrying oxygen around the body. Each person has two copies of the gene and the severity of the disorder will depend on how many of the 'sickle cell' alleles they have, if someone has one copy of the sickle cell allele and one copy of the 'normal' allele they are said to be a carrier of this condition.

*Sickle Cell Trait* - occurs when a child inherits a sickle cell allele from one parent and a 'normal' copy of the gene from the other parent. Usually it causes no problems and people with this condition may not even be aware that they have it. It can however cause problems with anaesthetics so it may therefore be advisable to have a blood test to see if you are a carrier of this condition if you are in one of the groups mentioned above.

*Sickle Cell Anaemia* - occurs when a child inherits two copies of the sickle cell allele, one from each parent. In this case it produces alterations in the haemoglobin that lead to distortions in the shape of the red blood cells when they release their oxygen, these changes in shape lead to blockages in smaller blood vessels. Symptoms can include severe pain due to lack of oxygen in tissues with blocked vessels and anaemia due to the premature death of these misshapen red blood cells.

*Sickle Cell Crisis* - describes the painful episodes which can last a few hours or several days. Sufferers are often admitted to hospital and need strong painkillers such as morphine and pethidine to obtain relief. In the long-term, sufferers may sustain damage to internal organs such as the liver, kidneys, lungs, heart and spleen. In some cases complications of sickle cell anaemia can prove to be fatal.

Often people with sickle cell trait who have partners that are also carriers of this disorder seek expert advice when they are planning to have a family as when both parents are carriers there is a one in four chance that a child may be born with sickle cell anaemia.

**Drinking alcohol is potentially very damaging for people with sickle cell anaemia, alcohol dehydrates the body and this can make the symptoms of this disorder much worse. Prolonged drinking greatly increases the rate of liver damage in sickle cell patients and also depletes the body's levels of vitamins which are needed for red blood cell production. It also increases the risk of bleeding from**

**the stomach. Sufferers are strongly advised not to be tempted to use alcohol for pain relief.**

**apas** offers help with and advice about reducing drinking and abstinence.