A community of patients, carers and healthcare professionals advocating for the rights of people living with Sickle Cell Disease within Australia

CONTACT US

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All brochures created by ASCA are reviewed by adult and paediatric haematologist.

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Last Reviewed Date: 3/09/2021

Australian Sickle Cell Advocacy

Sickle Cell Trait

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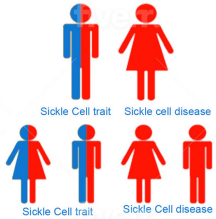
WHAT IS SICKLE CELL TRAIT?

- Sickle Cell Trait (SCT)/carriers occurs when a child inherits ONE sickle cell gene from one parent and one normal haemoglobin gene from another parent.
- This does not result in the sickle cell disorder and symptoms rarely manifest. However, medical providers should be informed of this status especially when undertaking certain medical procedures that require anaesthetics, for example, general surgery.
- If you are from a high risk area and/or have a family history of sickle cell disease, it is advisable to have a blood test to know your sickle cell trait status.
- Knowing your sickle trait status, along with genetic counseling will help you make informed decisions when planning a family.

When both parents have Sickle Cell Disease

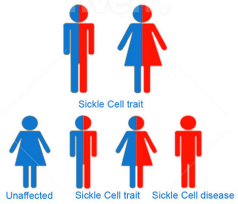
Risk for child:
To have Sickle Cell Anaemia: 100%
To have Sickle Cell Trait: 0%
Unaffected: 0%

When one parent has Sickle Cell Disease & another has the Sickle Cell Trait



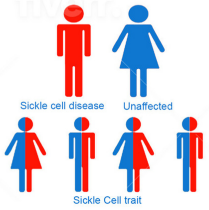
Risk for child:
To have Sickle Cell Anaemia: 50%
To have Sickle Cell Trait: 50%
Unaffected: 0%

When both parents have the Sickle Cell Trait



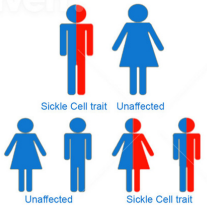
Risk for child:
To have Sickle Cell Anaemia: 25%
To have Sickle Cell Trait: 50%
Unaffected: 25%

When one parent has the Sickle Cell Disease



Risk for child:
To have Sickle Cell Anaemia: 0%
To have Sickle Cell Trait: 100%
Unaffected: 0%

When one parent has the Sickle Cell Trait



Risk for child:
To have Sickle Cell Anaemia: 0%
To have Sickle Cell Trait: 50%
Unaffected: 50%

DIAGNOSIS

A SCT is diagnosed with a simple blood test. People at risk of having SCT can talk with a doctor or health clinic about getting this test.

COMPLICATIONS

Most people with SCT do not have any vaso-occlusive symptoms of SCD and have normal life expectancy. However, in extreme cases such as increased pressure in the atmosphere, low oxygen levels (high altitudes), severe dehydration, hypoxia, extreme sporting activities, severe heat exposures, people with SCT might experience pain crises similar to that of SCD.

Aside from pain crises, other conditions that have be found to be associated with SCT includes:

- Red blood cells in urine (microscopic haematuria) due to damage in the kidneys (renal papillae necrosis), urinary tract infection, urinary calculi or malignancies.
- Very diluted urine (hyposthenuria) caused by thrombosis in the renal artery.
- Inhibition in arterial supply to the spleen which patients experience as pain in the left upper quadrant of the torso.
- Blood clots forming in the deep veins of the leg (venous thromboembolism).

It is recommended that people with SCT avoid any extreme situations and have their renal functions monitored and lifestyle modifications to prevent venous thromboembolism.

MORE RESEARCH

More research is needed to find out why some people with SCT have complications and others do not.

For more information see: https://www.cdc.gov/ncbddd/sicklecell/traits.html