



IWK Health

Maritime Medical Genetics Service

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The Maritime Medical Genetics Service is no longer accepting referrals for genetic counselling for individuals with sickle cell trait (also known as being a carrier for sickle cell anemia, or genotype "AS"). We will only accept a referral if BOTH reproductive partners are carriers (or their partner is a carrier of another beta-globin disorder, such as beta thalassemia) AND are planning a pregnancy/currently pregnant.

We would like to direct your attention to the following resources about sickle cell trait and hemoglobinopathy carrier screening in Canada:

<https://www.hematology.org/education/patients/anemia/sickle-cell-trait>

https://geneticseducation.ca/uploads/POC/POC_carrier_screening_Canada_hemoglobinopathies.pdf

Sickle cell trait typically does not cause symptoms. In very rare circumstances (for example, exercising at high altitude or extreme exertion/dehydration) individuals with sickle cell trait may exhibit symptoms. As sickle cell trait does not typically cause a hematologic disorder, people with sickle cell trait do not need to be seen by a hematologist. Screening can be ordered by any healthcare provider.

We suggest consideration of testing in all interested reproductive age first-degree relatives of your patient with a complete blood count (CBC), ferritin level, and hemoglobin electrophoresis. Hemoglobinopathy carrier screening is not indicated in healthy children.

A person with sickle cell trait is at risk of having children with sickle cell disease **if their reproductive partner also has sickle cell trait or is a carrier of another beta-globin disorder**. Sickle cell disease is inherited in an autosomal recessive manner. If both partners have sickle cell trait, there is a 25% chance of having a child with sickle cell disease with each pregnancy. Reproductive counselling should be provided to any individual with sickle cell trait by their primary care provider. Hemoglobinopathy screening should be offered to their reproductive partner and be completed prior to pregnancy, when possible.

If two adults have sickle cell trait or are carriers of another beta-globin disorder *and* are planning to have children or are currently pregnant, they can be referred to Maritime Medical Genetics Service for genetic counselling. **A referral with BOTH individuals' hemoglobinopathy screening reports should be included.**

Children with sickle cell trait or adult couples where both individuals have been tested and only one partner is a carrier do not need to be seen by Medical Genetics.

Provider questions can be directed to the Maritime Medical Genetics Service at 902-470-8754.