

## To find out whether you or your loved one

has sickle cell disease (SCD) or sickle cell trait (SCT), blood tests must be done to screen for these conditions. Arming yourself with this information is referred to as knowing your sickle cell status.

**Both SCT and SCD are conditions that are genetically inherited or passed down from your parents.**

The two conditions are different; one cannot morph into the other. SCD causes many debilitating symptoms like anaemia (makes one feel tired, weak or short of breath), severe pain or even stroke. However, SCT does not make one sick. Indeed, screening test might show that you have SCT and yet you never have physical symptoms.



Stay healthy and happy



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Empowering Dreams,  
Changing Lives

## Genetic Screening for Sickle Cell Disease



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## What is sickle cell screening?

Screening for sickle cell means testing a person's



blood for abnormal types of haemoglobin:

Haemoglobin (Hb) is the protein inside the red blood cell that delivers oxygen to all organs in the body.

There are many forms of altered haemoglobin, but people with SCD (HbSS, HbSC, HbSD etc.) or SCT (HbAS) make a form of haemoglobin which is abnormal and it is called haemoglobin S or sickle haemoglobin.

A blood test for haemoglobin S or sickle haemoglobin can tell you if your haemoglobin is normal, you have SCD or SCT (carrier status) or if you have another type of abnormal haemoglobin.

When an individual has two haemoglobin S genes, HbSS, the disease is called sickle cell anaemia. This is the commonest form of SCD and mostly the severe kind.

Commonly available methods of screening are haemoglobin solubility test, electronic cell count and HB electrophoresis.

## Why genetic screening?

Sickle cell disease is an inheritable disorder due to a mutation (change) in the gene that gives instruction for haemoglobin production in our body. Hence, genetic-based diagnosis is the most appropriate method of diagnosing SCD.

Furthermore, because SCD is a genetic disease, commonly available methods of screening (Hb solubility test and electronic cell count) are incapable of definitive diagnosis in terms of inherited genotype variants (HbSS, HbSC or HbAS).

Because of these variants, the severity of SCD ranges from insignificant to life threatening. Therefore, early genetic-based screening is critically important in the management and the survival of the child.



Source: Fogarty International Centre—NIH  
For Africa: child survival rate is 10% for children with no access to health care; but about 50% for the ones with access.

## When can genetic screening be done?

**Birth:** Newborns can be genetically screened for sickle cell anaemia or SCT. A positive newborn screening test means your baby likely has a condition reported and the result will be transmitted to a pediatrician for counselling.

**Adulthood:** This may be done as part of the care you and your partner receive before or during pregnancy, or after your baby is born.

## Where can I get tested?

You, your partner and even your child can be tested at **Biologix Support Services (Biologix)**. Biologix is a registered molecular biology lab-cum-biotech company that provides, among other things, genomic, proteomic and bioinformatics research support services to life science institutions, hospitals and diagnostic centres across the country.

At Biologix, we employ molecular method (genetic analysis) in our sickle cell screening which is carried out by well-trained molecular biologist with expertise in sickle cell disease.

We guarantee quick and professional service with lucid result to complement other routine or primary tests (complete blood count, Hb solubility and Hb electrophoresis) that are usually done in our hospitals.

**To get in touch with us, please call or send WhatsApp chat to 08093028488, 08053072221 or 07066381973. Alternatively, send email request to [info@biologix.com.ng](mailto:info@biologix.com.ng)**