

Supporting young people and adults
born with a heart condition

The
Somerville
Foundation



Transposition of the Great Arteries

(Mustard or Senning Operation)

> Your heart, your life, your choices

The leaflet provides information to help you understand the heart condition with which you were born and to make choices about your treatment. Your medical team will work in partnership with you and help you make informed decisions. Remember though it is your heart, your life and ultimately your choices.

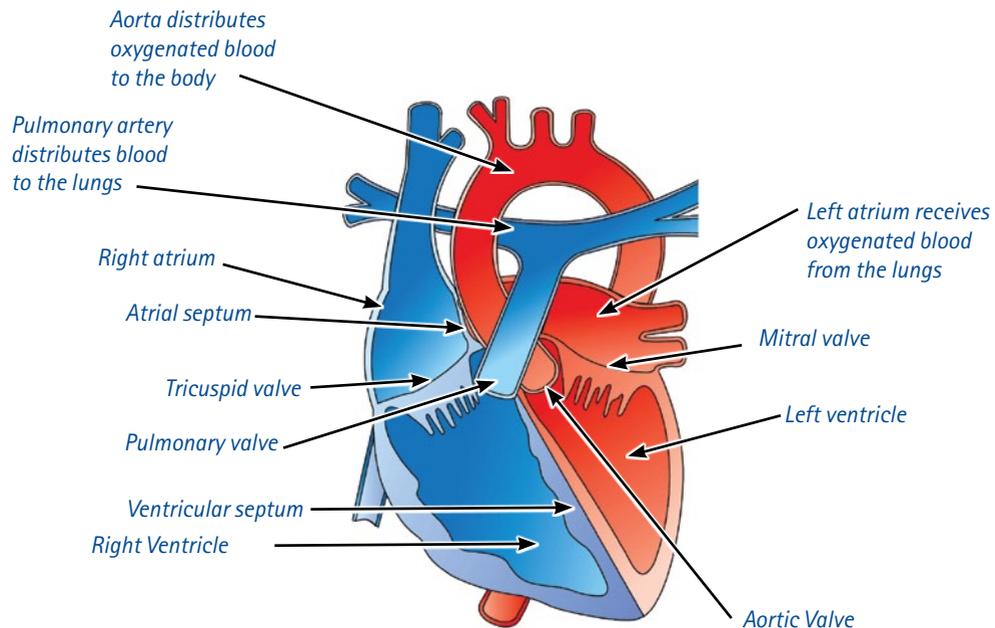
This leaflet **does not** cover congenitally corrected Transposition of the Great Arteries nor the Arterial Switch

> What Is Transposition of The Great Arteries?

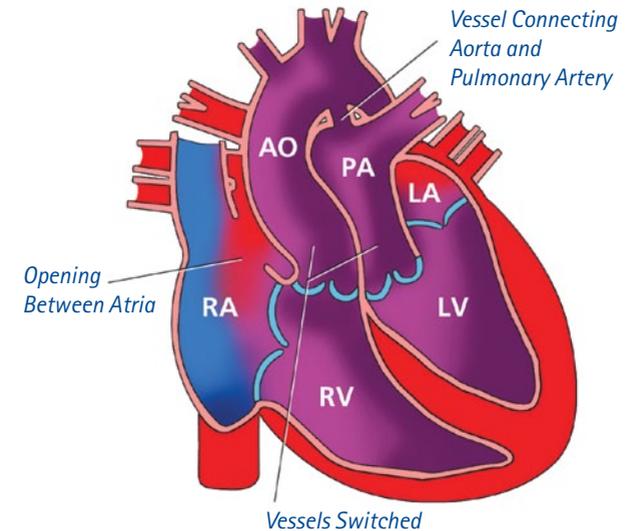
Transposition of the Great Arteries (TGA) describes the condition where the two main arteries leaving the heart, namely the aorta and pulmonary artery, are swapped over (transposed). This means that blue, deoxygenated blood, instead of being sent to the lungs, is pumped back around the body and pink oxygenated blood goes back to the lungs instead of being sent around the body.

You will have been a 'blue' baby and will have had an emergency procedure to increase the amount of oxygenated blood flowing around your body.

> The Normal Heart



> Transposition of The Great Arteries



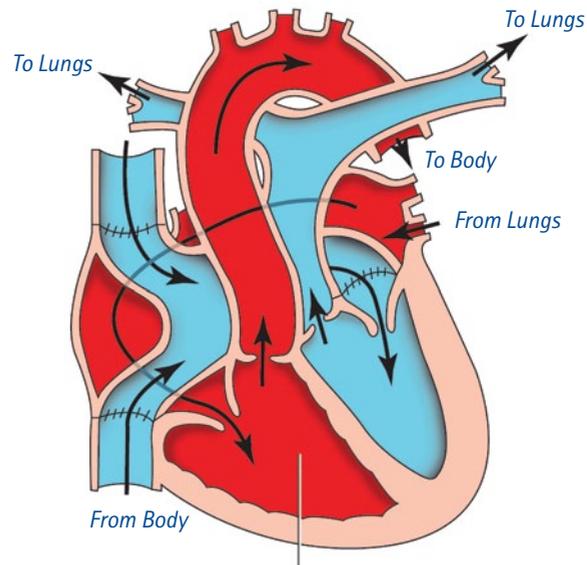
> What operation did I have as a child?

Until the 1980's the standard operation for this condition was either a Mustard or a Senning procedure. The operation involved redirecting the blood between the right atrium (RA) and the left atrium (LA) via a series of channels sewn into the heart. These channels are called baffles in the Mustard procedure and an atrial flap arrangement in the Senning procedure. These procedures allow:

- Deoxygenated (blue) blood to enter the right atrium and be directed across to the left ventricle (LV). The deoxygenated blood is then pumped through the pulmonary artery and then on to the lungs to get more oxygen.
- Oxygenated (pink) blood returning from the lungs enters the left atrium and is directed behind the channels (i.e. baffle or atrial flap) and into the right ventricle (RV) to the aorta and around the body.

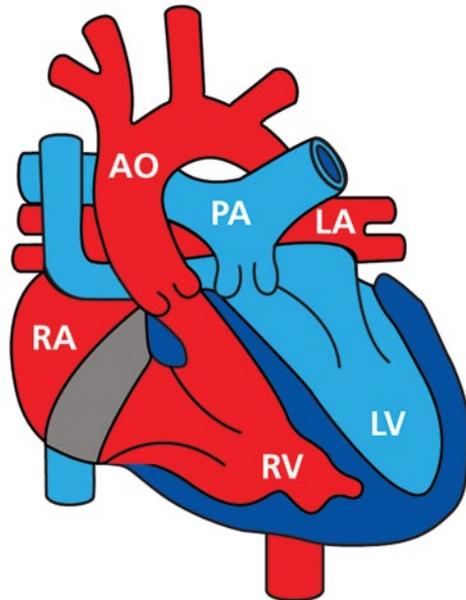
Since the mid to late 1980's the arterial switch operation has become the standard treatment. In this procedure the aorta and the pulmonary artery are 'switched' back into their correct positions.

> Mustard Operation



The Morphologic Right Ventricle acts as the System Ventricle

Senning Operation



> Reasons for long-term follow-up

It is important that you are followed up for life by a Cardiologist who specialises in Congenital Heart Disease as some people who have had a Mustard or Senning procedure may develop issues later in life.

- Over many years the right ventricle may become weaker. This is because in a normal heart the right ventricle is designed to pump blood under low pressure to the lungs. When you have had a Mustard or Senning Procedure your right ventricle has to pump blood around your body and is therefore pumping at a higher pressure than it was designed to.
- The channels (i.e. a baffle or atrial flap) that were sewn into to your heart when you were a child may become narrowed or they may leak.
- You may develop heart rhythm problems including slowing of your heart rate. This is due to the scar tissue left by your heart operation when you were a baby.

> What tests will I need?

As well as an echocardiogram (ECHO) and electrocardiogram (ECG) your Cardiologist may also suggest one or more of the following tests that are used to assess the condition of your heart:

- Right and Left Heart Catheter
- Cardiac Magnetic Resonance Imaging Scan
- 24hr ECG
- Cardio-pulmonary exercise test
- Specialised electrophysiology studies
- Trans-Oesophageal Echo

> What treatment options could be available to me?

Your Specialist GUCH Consultant cardiologist will discuss various options with you depending on your individual needs, for example:

- If your right ventricle weakens you may need to start taking certain medication.
- If you develop heart rhythm problems you may need to start taking certain medication, have further tests such as electrophysiology studies to examine the electrical pathways of your heart, specialised treatment such as an ablation procedure or you may need to have a pacemaker fitted.
- If there is a problem with your heart channels (i.e. the baffle or atrial flap becomes narrowed or leaks) then you may require a further procedure or operation.

> What symptoms should I tell my Cardiologist about?

It is important to inform your health care team such as your cardiologist, nurse or GP of any new symptoms as they occur.

These may include:

- Decrease in exercise tolerance
- Increase in breathlessness
- Palpitations
- Dizziness
- Fainting

An individualised management plan, developed by you and your GUCH medical team will provide details of who and when to contact in changes of symptoms or circumstances.

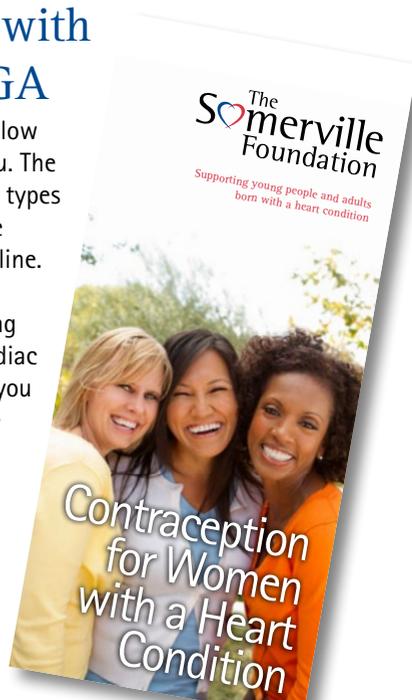
> Exercise with a Mustard or Senning repair of TGA

You may be able to enjoy a moderate amount of exercise. Your specialist cardiologist will be able to help you make an informed decision regarding the level of exercise that is safe for you to undertake. Depending on your preference, it may be that you will need to have additional tests before and during your elected form of exercise which will be explained to you by your medical team.

> Contraception and Pregnancy with Mustard or Senning repair of TGA

Your specialist team will be able to give you information to allow you to choose the most suitable form of contraception for you. The Somerville Foundation has produced a leaflet on the different types of contraception available. Please contact us for a copy of the leaflet, or visit www.thesf.org.uk and view the information online.

To reduce any risk it is advisable to plan your pregnancy, taking into account information given to you by your congenital cardiac team. It may be necessary to alter or change any medication you may need, or should you need an operation it may be possible to have surgery prior to becoming pregnant. You should have the opportunity to enjoy a shared care arrangement during your pregnancy and delivery from both your Consultant Cardiologist and Consultant Obstetrician.



Lifestyle choice

There are few restrictions on types of jobs, travelling and life experiences you could enjoy, but discussion with your medical team will allow you to make an informed choice.

Life Assurance / Insurance

At the moment there are no long term survival tables for congenital cardiac conditions. Insurance companies rely on these types of tables to offer individual policies e.g. critical illness, life insurance and assurance relating to a mortgage. The Somerville Foundation is striving towards making insurance available for you. You may be able to obtain cover through your employer, or an insurance broker may be able to help, although this could result in a higher premium than normal.

Travel insurance is available, although sometimes at a higher premium than normal. There are different companies that can be used depending on your individual health issues, please check our website or ring our helpline for the most recent 'GUCH friendly' insurers.

The Somerville Foundation would like to thank the North West Adult Congenital Cardiac Service team for allowing us to reproduce information in this leaflet.



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