



CONGENITALLY CORRECTED TRANSPOSITION OF THE GREAT ARTERIES

What is it?

Unlike in the normal heart (see The Normal Heart), in congenitally corrected transposition of the great arteries (ccTGA), the pumping chambers of the heart and the blood vessels are inverted or reversed. Because of these differences in the heart, the main pumping chamber is the right ventricle, and can weaken and the heart valve attached to it can leak (medical term: tricuspid regurgitation).

In many people with congenitally corrected transposition of the great arteries, there may be other associated heart defects (hole in the heart called ventricular septal defects or narrowing of heart valve called pulmonary stenosis) and these can impact on the risks of pregnancy.

Some people have slow heart rates and require a pacemaker.

How safe is it for me to become pregnant?

Pregnancy is associated with increased demands on the heart (see Cardiovascular Changes During Pregnancy). The ability of a woman with ccTGA to tolerate these changes depends on the strength of the pumping chambers of the heart and the function of the heart valves. If you have good heart function, no valve problems, and no prior surgeries, the risks of heart problems during pregnancy is likely low. However, if you have a weak heart muscle, valve problems, or had previous surgeries, the risks are higher. If you have other heart defects such as holes in the heart, pregnancy may be higher risk.

Every pregnancy carries some risk for complications and this risk may be increased by underlying heart disease. All women have to consider the safety of a pregnancy taking their underlying heart disease into account. Every person's heart condition is different and therefore the safety of pregnancy differs too. Before proceeding with trying to have a baby you should discuss your specific condition and the details of your situation with a heart specialist who knows about the care of women with heart disease in pregnancy.

Issues for the mother

Which forms of birth control are safe?

Birth control (medical term: contraceptives) should be discussed with your doctor. Estrogen-containing contraceptives, usually in the form of pills, are associated with risk of blood clots. If your heart is weak, if you have holes in your heart, or if you have artificial heart valves, this form of contraception may not be suitable for you. There are alternative methods of contraception; such as those forms of contraception that contain only progesterone. (see Birth Control)

What are my risks if I become pregnant?

In order to determine your risks during pregnancy you should see your heart specialist before getting pregnant. You may be required to have additional heart tests such as an echocardiogram or a magnetic resonance imaging scan (MRI scan) to better determine the risks of pregnancy. Many women with ccTGA can have a successful pregnancy. The most common heart-related complications that can happen in women with ccTGA during pregnancy are heart rhythm abnormalities (abnormally fast or slow heart rates, medical term: arrhythmias) or weakening of the heart muscle (medical term: heart failure). If these occur, they often can be treated with medications. Some women may develop heart muscle weakening that cannot be fixed with medications and lasts after the pregnancy.

If you had heart failure or rhythm problems before pregnancy, your risk for complications during pregnancy is higher. There are other cardiac issues that can also have an impact on pregnancy risks. (see General Considerations) It is very important to see a congenital heart specialist before pregnancy to discuss your risks of pregnancy.

Some women with high-risk cardiac problems may seek alternatives to pregnancy such as adoption or surrogate motherhood.

Some medications are not safe in pregnancy. Do not stop medications without first checking with your doctor, but do check your medications out before pregnancy so you will have a plan. If you did not do that, then do so as soon as you know you are pregnant. The MOTHERISK website is an excellent resource. (<http://www.motherisk.org>)

Issues for the baby

Generally, babies of mothers with ccTGA do well. However, there is an increased risk of early delivery and having a low birth weight baby.

In the general population, the risk of having a baby with congenital heart disease is about 1%. If a parent has ccTGA, this risk increases to 5-10%.

Women with ccTGA will be offered ultrasound screening of the baby's heart (fetal echocardiogram) at the end of the fifth month (20 weeks gestation) of pregnancy. The ultrasound can detect most major cardiac defects in the developing baby. Minor defects may not be detected until after birth.

Medical care during pregnancy and delivery

Where should I be followed?

Once pregnant, you should be followed at a center that specializes in high-risk pregnancy. Your specialists will determine the frequency of follow up through your pregnancy.

What can I do and expect during pregnancy?

Your heart specialist will arrange for check up visits during your pregnancy. In addition to your clinic visits, your doctors will likely arrange ultrasound of your heart (medical term: echocardiograms) to help determine how your heart is adapting to the pregnancy.

Most women with ccTGA will do fine throughout pregnancy; however, you need to be pay attention to symptoms related to your heart. Notify your doctor if you develop any concerning symptoms such as

shortness of breath, swelling of the legs and/or heart palpitations. If you develop complications you may be admitted to hospital for closer care and monitoring.

If you are concerned about any symptoms and you cannot get in touch with your doctor, go to your nearest emergency department. It is helpful to keep a letter from your doctor explaining your condition so that other health care professionals can better help you in an emergency situation.

Labour and delivery should be planned carefully with a team including a specialist in congenital heart disease, a cardiac anesthetist and a high-risk obstetrician. A vaginal delivery is usually recommended. Good pain management is important.