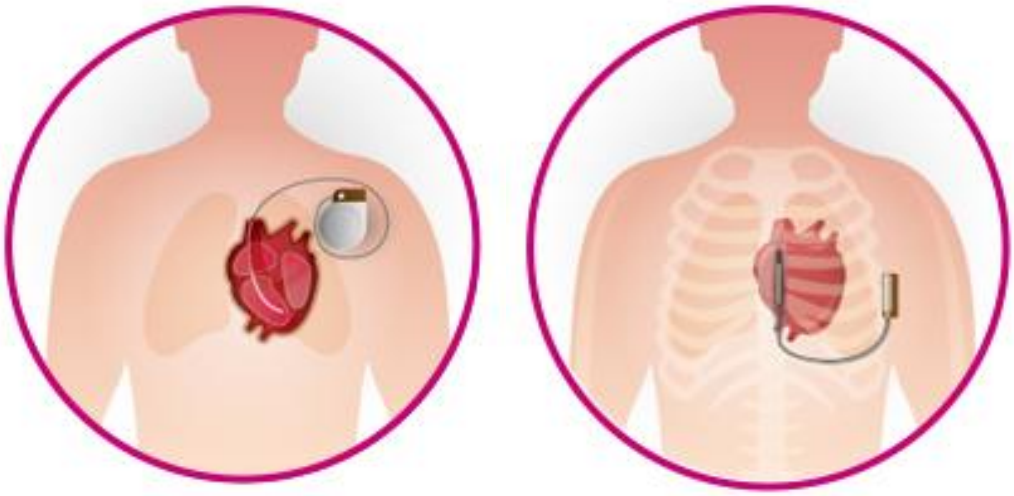
Do you have a defibrillator? Could you become pregnant? Ask for advice

This leaflet gives you information about having a pregnancy if you have a cardiac implantable electronic device (CIED). It covers:

- **pacemakers;**
- **cardiac resynchronisation therapy (CRT) devices, including CRT-pacemakers (CRT-Ps) and CRT-defibrillators (CRT-Ds); and**
- **defibrillators, including implantable cardioverter defibrillators (ICDs) and subcutaneous-ICD (S-ICDs).**



ICD **S-ICD**

Image provided courtesy of Boston Scientific.
©2022 Boston Scientific Corporation or its affiliates. All rights reserved.

SOCN SCOTTISH OBSTETRIC CARDIOLOGY NETWORK

Publication: 16 September 2026
Review: 31 March 2029
NSD610-025.19 V1

Unless this document is being accessed from www.socn.scot.nhs.uk it may not be the current version.

While many women with a cardiac implantable electronic device (CIED) will cope with pregnancy well, this leaflet describes how important it is to plan your pregnancy, how to get advice about any risk to you in pregnancy, and your care during pregnancy. If you have any questions, please speak to your cardiology specialist.

How do these devices work?

Pacemaker: a pacemaker is a small electronic device that prevents slow heart rhythms. It contains a battery, computer and pulse generator in a small box that is usually placed under the skin under the left collarbone (or sometimes in the abdomen or on the right side of the chest). One or two leads or wires are placed into the right side of the heart and connected to the box. When the computer recognises that the heart rate is too slow, it will send an impulse to the heart to increase the heart rate.

Cardiac resynchronisation therapy (CRT): CRT is a pacemaker that has three leads designed to help the two sides of the heartbeat at the same time. In some heart conditions (usually those associated with heart failure), the electrical signals that trigger the heart to pump can have small delays in the circuit, causing the pumping chambers of the heart (the right and left ventricles) to contract at slightly different times. When the heart pumps like this, it is not as efficient as it needs to be. A CRT helps both sides of the heart to pump at the same time. Like a pacemaker, a CRT box is placed under the left collarbone, and has a computer, a battery and a pulse generator. Some CRT devices also have a defibrillator.

Defibrillator: an internal cardioverter defibrillator (ICD) is used to treat dangerous fast heart rhythms. A defibrillator box is placed under the skin, either just below the left collarbone, on the left side of the chest next to the ribcage (if a subcutaneous-ICD) or, rarely, the abdomen. The box contains a battery, a computer and a pulse and shock generator. Leads are then connected to the box and into the inside of the heart for an ICD, or on the outside of the heart for a S-ICD or abdominal ICD. The computer monitors every heartbeat through the leads to detect life- threatening rhythms.

Once these rhythms are recognised the defibrillators can do the following:

Unless this document is being accessed from www.socn.scot.nhs.uk it may not be the current version.

ICD: An ICD also has a pacemaker function so it can prevent the heart from going too slow. Once it recognises an abnormally fast heart rate it can send a series of fast pulses to try to get the heart rhythm back to normal. While it is doing this, the defibrillator is also charging. If the pulses do not slow the heart down when a life-threatening heart rhythm is detected, the defibrillator will deliver one or more electric shocks to try to restore the heart back to a normal rhythm.

S-ICD: The S-ICD does not have a pacemaker function. The defibrillator works in the same way as the ICD. When it detects a life-threatening heart rhythm, the generator will charge and deliver one or more shocks to get the heart rhythm back to normal.

Pregnancy and the heart

The heart needs to work harder throughout pregnancy, even from the early stages. The extra demands around the time of giving birth can place an even greater stress on the heart and circulation. Many women with a heart condition can cope with these changes well. For a small number of women, these changes are associated with an increased risk of complications. These complications vary depending on the heart condition, but can include arrhythmia (abnormal heart rhythms), heart failure or complications with main blood vessels. These complications can also affect the baby and may result in babies being born smaller or delivered earlier.

Can I have a pregnancy with a pacemaker or defibrillator?

Having a pacemaker or defibrillator will not stop you from having a pregnancy. However, the reason you need the device may affect how you plan your pregnancy, use contraception, are monitored in pregnancy and your risk of heart complications during or after pregnancy. For example, the risk in pregnancy of a slow heartbeat where there are no other heart issues is different to the risk in a pregnancy with a history of heart failure or life-threatening heart rhythms.

If you have a pacemaker or defibrillator, you should speak to your cardiology healthcare professional (nurse, physiologist or cardiologist) about planning your pregnancy. They can give you more information about your heart and pregnancy or refer you to an appropriate specialist.

Unless this document is being accessed from www.socn.scot.nhs.uk it may not be the current version.

Planning your pregnancy is important because of the following.

- It means you can make sure your pacemaker or defibrillator has enough battery to last throughout the pregnancy without the need for a new device. If the battery is due to be replaced, it should be changed before you become pregnant.
- It allows you to have an up-to-date assessment of your heart.
- You can discuss with your care team how your condition may affect your pregnancy and whether any changes to your device or management plan are needed

Will a shock from my defibrillator harm my baby?

If your device delivers a shock while you are pregnant it is unlikely to harm the baby. Treating the abnormal heart rhythm is safer than allowing your heart to beat abnormally.

Will I need extra follow-up appointments during pregnancy?

Yes. How often you have follow-up appointments will depend on your heart condition and any changes to your heart in pregnancy. If you are on medication to help your heart or heart rhythm, your pregnancy team may arrange for a few extra scans of the baby.

For many women with CIED, there may only be one or two extra visits to a cardiologist during pregnancy. This helps to monitor your heart and heart rhythm as well as help plan the baby's delivery. You should have a written plan in your patient records for managing your CIED around the time of labour and delivery, especially if you are having a caesarean (c-section).

What about medication in pregnancy?

If you take prescription medication it is important to speak to a healthcare professional who has experience of prescribing in pregnancy. They will talk to you about the benefits of staying on your medication and any risks there may be to the baby. For women with a history of fast heart rhythms, beta blockers are often prescribed. These are commonly used in pregnancy, but it is still important to get advice. If you have long-QT syndrome, you should continue your beta-blocker as this reduces the risk of a life-threatening heart rhythm in pregnancy and after delivery.

Unless this document is being accessed from www.socn.scot.nhs.uk it may not be the current version.

If you have another health condition and are taking medication, speak to your GP or specialist healthcare team about how this may affect a pregnancy.

What happens to my device when I deliver the baby?

It will be helpful for your healthcare team to have details of your device. This includes its manufacturer, the date it was last checked, its battery life, whereabouts it is on your body and where you have your follow-ups.
If you have a defibrillator, your pregnancy heart team will plan how they will manage your device during delivery. During a vaginal delivery, you should have ECG monitoring but no changes are usually needed to your defibrillator. If you have a caesarean, your defibrillator will often deactivated. During this time, you will have ongoing ECG monitoring and an external defibrillator will be available in the unlikely event you have an abnormal heart rhythm. Your defibrillator will be reactivated after the baby is born.

What if my device needs a new battery during pregnancy?

If the CIED battery runs low, you should have a new device implanted before you become pregnant. Having your device checked regularly and planning your pregnancy helps to prevent changes to the battery during pregnancy. However, your battery can be changed during pregnancy if this is necessary. It is important that this is co-ordinated by your pregnancy heart team, as they will be able to adjust the usual procedure to reduce the amount of radiation you and the baby are exposed to from x-rays.

Contraceptive choice with a heart condition

Some forms of contraception may be unsuitable for certain heart conditions. In general, **long-acting reversible contraceptives** such as progesterone injections or implants are **effective, reliable and well tolerated for most heart conditions**. If you are someone who remembers to take tablets, the progesterone-only pill (mini-pill) can also be used with most heart conditions.

We strongly advise you to speak to a healthcare professional about the safety and effectiveness of contraception for you.

If you have long-QT syndrome, ask your specialist team for advice, as some progesterone contraceptives can slightly increase your risk of cardiac complications.

Unless this document is being accessed from www.socn.scot.nhs.uk it may not be the current version.

You can get contraception from a GP, practice nurse, sexual-health clinic, Young People's Clinic and most pharmacies.

Emergency contraception

Emergency contraception can prevent pregnancy after unprotected sex or if regular contraception has failed. This might happen if you forget to take the contraceptive pill or if the condom splits.

There are two types of emergency contraception.

- Emergency contraceptive pill (sometimes called the morning-after pill)
- Intrauterine device (a coil)

While these are generally safe for people with a heart condition, it is important that you tell the healthcare professional about your heart condition.

You can get the emergency contraceptive pill and the intrauterine device free from:

- a GP practice that provides contraception;
- a sexual-health clinic; and
- some Young People's Clinics.

The emergency contraceptive pill is also free from:

- pharmacies; and
- some minor injuries units and A&E departments.

I have a heart condition, will my baby have the same one?

If you have congenital (born with) heart disease, there is an increased risk that your baby could have a congenital heart defect. In general, this risk is around 8 to 12%. This won't necessarily be the same heart condition as you have.

For some people with an inherited heart condition, there is up to a 50% chance of the baby inheriting the condition. For these reasons it is important to find out more from your healthcare team about what could be considered to reduce the risk of these conditions being passed on to your baby.

Unless this document is being accessed from www.socn.scot.nhs.uk it may not be the current version.

Importance of a healthy lifestyle

Maintaining a healthy lifestyle throughout your life will help reduce other risks in pregnancy for you and your baby. Avoiding smoking and keeping a healthy weight are two very important ways to reduce these risks. Keeping other health conditions, such as diabetes, epilepsy and mental health, stable is also very important. If you are planning a pregnancy, taking folic acid can help reduce some development problems for the baby.

Unless this document is being accessed from www.socn.scot.nhs.uk it may not be the current version.

Questions to ask your healthcare professional:

It's okay to ask for your healthcare professional to explain your heart condition to you and what it means for your future and pregnancy. You could ask the following.

- What is my risk in pregnancy?
- Can this risk change in the future?
- Can a pregnancy affect my current heart condition?
- Will my baby have the same heart condition?
- What methods of contraception are safe for me and how can I access them?
- If they become pregnant, who should I tell?
- Who can I speak to if I want more advice?
- What can I do to help keep myself healthy?

Write any other questions you may have here:

Unless this document is being accessed from www.socn.scot.nhs.uk it may not be the current version.

Where else can I get advice?

You can find more information about contraception and pregnancy with a heart condition at **www.socn.scot.nhs.uk**

Contact us: nss.socn@nhs.scot
If you need this leaflet in an alternative format (such as large print), please:

- **email psd.contact-us@nhs.scot;**
- **phone 0131 275 6000; or**
- **contact Scotland BSL at www.contactscotland-bsl.org**

Crystal Mark 24190
Clarity approved by Plain English Campaign

This document has been prepared by Public Services Delivery Scotland (PSD Scotland) on behalf of the Scottish Obstetric Cardiology Network (SOCN). Accountable to Scottish Government, PSD Scotland works at the heart of the health service providing national strategic services to the rest of NHS Scotland and other public sector organisations to help them deliver their services more efficiently and effectively. SOCN is a collaboration of stakeholders involved in obstetric cardiology care, who are supported by a PSD Scotland Programme Team to drive improvement across the care pathway.

©PSD Scotland 2026. You can copy or reproduce the information in this resource for use within NHS Scotland and for non-commercial educational purposes under creative commons CC BY-NC 4.0 Deed | Attribution-Non Commercial 4.0 International | Creative Commons. Use of this document for commercial purposes is permitted only with the written permission of PSD Scotland.

SOCN
SCOTTISH OBSTETRIC CARDIOLOGY NETWORK

Publication: 16 September 2026
Review: 31 March 2029
NSD610-025.19 V1

Unless this document is being accessed from www.socn.scot.nhs.uk it may not be the current version.