Pregnancy and contraception in renal disease

Kidney diseases affect fertility (how easy it is to become pregnant) and they affect pregancy itself. These are important questions for people with kidney diseases

Can women become pregnant if they have kidney disease?

Yes. Kidney disease makes women a bit less fertile, but as our management of kidney disease improves, so the numbers of women who become pregnant with kidney disease, with a kidney transplant or even when on dialysis are increasing.

How do you detect pregnancy in renal disease?

Kidney disease interferes with the hormones that normally regulate periods, so many women with kidney disease find their periods become irregular or stop completely. It can become difficult to detect pregnancy. Some women only suspect that they are pregnant when they develop other unexplained symptoms like nausea and fatigue. Standard pregnancy tests including home kits are still reliable in kidney disease, unless your urine output is very low when a blood test can be done.

Does having kidney disease make pregnancy more complicated?

Having kidney disease can make pregnancy more complicated. The more severe your kidney disease, the greater the risk of having a difficult pregnancy. By ‘risk’, we mean risk to the baby and risk to the mother.

For most people with mild kidney disease, the risks are quite low, even though they are higher than for someone with normal kidneys, but if no one has discussed this with you, you should ask your doctor. For some people, usually those with quite significant kidney disease, or with other health problems, the risks may occasionally be very high.

Three things are important for working out the risks:

- Level of kidney function
- High blood pressure
- Protein in your urine

The risks include the fact that pre-eclampsia is more likely (see next section), the risk that your kidneys may suffer further damage during pregnancy, and the risk to the baby.

What is pre-eclampsia?

Pre-eclampsia is a complication of the second half of pregnancy. It most commonly causes high blood pressure, and there can also be leak of protein from the kidneys into the urine, and sometimes other problems. Most cases are mild, but some are serious and require early delivery of the baby. Babies may be small as well as premature (born at less than 37 weeks).

High blood pressure is more common in people with kidney disease, and this makes pre-eclampsia more likely.

Pre-eclampsia is more common in women with kidney disease. The worse your kidney function, the higher your blood pressure, and the more protein in your urine, the higher the risk.

Blood pressure in pregnancy

A lot of attention is paid to the blood pressure in pregnancy. The higher and more difficult it is to control a woman's blood pressure before pregnancy, the more likely it is that pregnancy will be complicated.

Does having kidney disease harm the baby?

Having kidney disease itself does not harm the baby. However a few kidney diseases are inherited and may be passed onto a child. The table below lists some common examples. If you are not sure, ask your doctor if your kidney disease is inherited.

Kidney Disease	Risk of inheritance
Polycystic Kidney Disease (usual adult type)	1 in 2 risk
Alport's Syndrome	variable
Reflux Nephropathy	unknown

Having more serious kidney disease may result in earlier delivery than the usual 40 weeks, and the baby may grow more slowly. Both of these may cause problems

for the baby's health.

The earlier a baby is born, the more likely it is to have problems with breathing, feeding and growth. Babies who are born early often need special care in hospital for a while. If a baby is born before 24 weeks the outlook for survival is poor. From 24 weeks to 28 weeks the chances for survival improve with each extra week in the womb but still this prematurity carries a risk of complications. From 30 weeks on the overall outlook for the baby is better, but if born soon after 30 weeks the baby is likely to still need to spend some time in a special care baby unit.

Medicines in pregnancy

It is known that many drugs cross the placenta and could harm a baby. If you are on any medications, especially those used to control blood pressure, you may find that they are stopped and changed for others instead. You may be prescribed a small dose of aspirin as this may be helpful. You should remember that smoking, drinking alcohol and the use of non-prescription drugs could all harm a baby.

The best thing for a healthy baby is a healthy mother! It is important to balance the risks as best as possible, and not to stop important medicines that are keeping you well. Drugs.com lets you look up some information about risk of drugs in pregnancy, but remember they don't know anything about you – discuss with your obstetrics and renal team. The information they provide can be quite complicated. Some drugs that are definitely harmful to babies are:

- ACE inhibitors (such as enalapril, ramipril) and ARBs (angiotensin receptor blockers, such as candesartan, irbesartan)
  ACE inhibitors are taken by many patients with kidney disease or high blood pressure. They are dangerous in mid and late pregnancy, but the risks from becoming pregnant while on when are probably quite low. If you are taking these drugs and thinking of having a baby, you should discuss the risks versus benefits of changing these before you become pregnant. Stopping as soon as you are pregnant may be an option.
- Some immunosuppressive drugs including MMF, methotrexate, cyclophosphamide, are dangerous at the time you become pregnant and during early pregnancy. You shouldn't get pregnant while taking these.

Some transplant drugs are quite safe, but you may need to change to drugs that

are *known* to be safe.

THESE ARE ONLY EXAMPLES. Others may need to be altered or stopped.

Does being pregnant harm the kidneys?

A kidney that is already diseased might suffer some further damage during pregnancy. This is more likely if the kidney disease is severe at the start. People with kidney failure who expect to need dialysis in the future may find that pregnancy hastens their progression to dialysis. Rarely it is necessary to start dialysis during pregnancy.

The risk of losing kidney function during pregnancy increases with increasing severity of kidney disease (lower GFR, higher creatinine) before pregnancy. The risk is probably low if your creatinine was below about 140 micromols/l; and moderate if it is 140-170. However there is a lot of variation. Having a lot of proteinuria or difficult blood pressure increases the risk.

If you have proteinuria, this often gets worse in pregnancy and may become severe.

>What if I become pregnant when I'm on dialysis?

Women on dialysis rarely become pregnant; those who do usually develop complications. Dialysis needs to be done more frequently, sometimes every day. Your baby is very likely to be born early (sometime extremely early), and unfortunately miscarriages are common. Overall this isn't a good time to become pregnant.

What if I become pregnant with a kidney transplant?

A transplant that is functioning very well gives the best chance of a perfectly normal pregnancy. If the transplant is not absolutely normal, then all the possible complications noted above will apply, including the chances of a deterioration in the function of the transplant itself. It is essential to take anti-rejection therapy throughout pregnancy, and careful attention to drug doses will be needed. However if you want to become pregnant, you should discuss this with your medical team and make sure you are taking safe medicines.

Who will look after me when I'm pregnant?

The team who normally look after your kidney disease will keep a close eye on you. You will also see specialist obstetricians who have a detailed knowledge of pregnancy and kidney disease; they will have a team including specialist midwives. If you live a long way from a city, you may find that to get the best specialist care, your clinic visits are not at your local hospital, but in the city. Clinic visits can become very frequent, and sometimes admission to hospital is necessary during the pregnancy in order to monitor everything safely.

How will my baby be born?

If at all possible, delivery will be by the normal vaginal route. If pregnancy is complicated, especially if an early delivery is needed, then a caesarean section may be needed. These options will be discussed with you.

Breast Feeding

Breast feeding is best. Some medication comes out in breast milk; your doctors will try to alter your medication to allow you to breast feed, but this may not always be safe.

Planning pregnancy

If you have kidney disease, and you wish to become pregnant, it is advisable to discuss this with your doctors. They will be able to say when or whether pregnancy is advisable, and they will be able to adjust your medicines appropriately. Folic acid supplements to reduce the chances of spina bifida should be started early if pregnancy is planned.

Contraception and renal disease

If you have kidney disease, avoiding pregnancy by using contraception is advised, until your pregnancy plans are made. Many women with kidney disease have irregular periods, and therefore think that they are infertile. Even if periods have disappeared completely, you may not be infertile. There are no problems in using barrier methods of contraception eg. condoms. Coils are not usually advised for women who are on immunosuppressive drugs. The pill is convenient but some types may interfere with blood pressure control. Your GP or kidney specialist will advise you on what may be best.

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