

Antibiotic Resistant Gut Bacteria (Carbapenemase-producing Enterobacterales or CPE) in Pregnant Women and Newborns - Information for patients, family and visitors



What are Enterobacterales?

Enterobacterales are bacteria normally living harmlessly in everyone's bowel (gut). If these bacteria move from the gut into other organs or the blood they can cause infections such as urinary tract infections (UTIs) or blood stream infections. This happens most often in people with a weakened immune system or certain long-term health conditions.

What are carbapenemase-producing Enterobacterales (CPE)?

Enterobacterales have developed resistance to many antibiotics (i.e. many antibiotics no longer work) but antibiotics known as carbapenems still usually work. Unfortunately, enterobacterales now sometimes produce an enzyme (carbapenemase) which stops the carbapenem antibiotics from working. The bacteria are then resistant to carbapenems and known as carbapenemase-producing enterobacterales (CPE). You can develop CPE if you have lots of antibiotics, or you can catch these resistant bacteria from other people or from objects or surfaces contaminated with CPE.

For most people who have CPE, it lives harmlessly in their bowel without causing any problems. This is called colonisation or being a carrier of CPE. If you are a carrier you do not need to be treated. This is different to an infection, which is when the organism makes you feel unwell and may require different antibiotics to treat the infection.

All of us get minor general infections quite commonly but serious infections mainly happen to people who are already in poor health for other reasons and those with weak immune (infection-fighting) systems. Having an operation, being on a breathing machine, or having tubes in your body also increases the risk of infection. Having CPE colonisation does not increase the risk of the baby (or the mother) developing infection. However, if an infection develops in a baby or mother with CPE colonisation, the infection is harder to treat.

Pregnant women and babies

If a pregnant woman carries CPE, this can sometimes spread to her baby during or after birth or in the days and weeks after birth. If the baby is born early (preterm, that is before 37 weeks of pregnancy), the baby is more likely to get sick from the CPE than if born after 37 weeks.

Preterm/premature babies are more vulnerable to infections because their immune systems are not very strong. This means it is harder for them to fight off bacterial infections in the same way that full-term babies may be able to.

Infection in a premature baby can come from many sources including the mother's uterus (womb) and birth canal, or the environment (people and things). If a premature baby is infected with CPE it is more difficult to treat as the usual antibiotics won't work.

If the mother, father or baby carry CPE (especially if we don't know about it) and the baby goes to the nursery there is a chance the CPE bacteria will spread to other parents and babies.

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All pregnant women who received medical care overseas in the past 12 months need to have a swab.

CPE is uncommon in Australia, but quite common in some overseas hospitals. Therefore, people who have been treated in hospitals overseas are at increased risk of carrying CPE.

Because a woman who is carrying CPE can pass it on to her baby, it is a good idea to check whether pregnant women who have been treated overseas are carrying CPE.

A midwife/nurse will take a swab from inside the rectum (bottom) at around 22 weeks of pregnancy. This is tested in the lab for CPE.

If the CPE result is positive:

- You may be cared for in a single room with your own toilet while you are in hospital.
- Your baby will be cared for either in your single room or in a single room in the nursery if admitted there, even if the baby's CPE swab is negative'
- Staff will clean their hands before and after touching you or your baby and may wear gloves
- Staff may also wear an apron or gown when caring for you or your baby and will clean equipment and surfaces often.
- Visitors will be asked to wash their hands or use an alcohol based hand rub before and after visiting. In some cases, they may also be asked to wear a gown and gloves.

If you give birth from 36 weeks (usual outcome), your baby may need to be reviewed by the neonatal team but can stay with you if well.

But if you give birth before 36 weeks, the baby will be cared for in the nursery.

You and others can help prevent your baby from getting an infection by:

- Regularly washing your hands with soap and water and drying them thoroughly, including during the following circumstances:
 - After going to the toilet
 - Before and after touching your baby
 - Before and after changing your baby's nappy
 - Before preparing and eating food
 - Before and after touching items or surfaces in public
 - After touching animals
- Using your own towels face cloths, nail scissors, tweezers, razors and toothbrushes and not sharing them with other people
- Covering any skin wounds

Note that: All your clothing and towels, dishes and cutlery can be washed the way you normally do. The same applies to your baby's things at home too.

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FREQUENTLY ASKED QUESTIONS

If I am a CPE carrier, will my baby also become a CPE carrier?

- Where the mother is a carrier of CPE, most babies will also eventually become carriers of CPE – either at birth or during the days and weeks afterwards. No treatment can prevent this although careful handwashing can reduce the spread to others. If you and your baby are able to avoid antibiotics, you will usually both eventually get rid of the CPE

What is the chance of my baby getting sick with CPE if born healthy at term?

- Having CPE does not increase the risk of your baby getting an infection. However, if an infection does occur, a baby with CPE may require different antibiotics than a baby that does not have CPE.

What is the chance of my baby getting sick with CPE if born healthy but preterm?

- Preterm babies in general have a higher risk of developing an infection of any type. Having CPE does not increase the risk of getting an infection. However, having CPE may mean that different antibiotics are required to treat an infection.

Is the risk lower if I have a caesarean section rather than a vaginal birth?

- There is no evidence to suggest that babies born by caesarean are less likely to become CPE carriers. Eventually as CPE is usually picked up by the baby in the days and weeks after birth even if it is not picked up at birth. It is not recommended to perform caesarean birth just to avoid CPE transmission.

Can I breastfeed my baby if I carry CPE?

- Breast milk appears to protect the baby from infection and breastfeeding is strongly encouraged. However, if the mother is receiving antibiotics for CPE treatment, this advice may change for a short period, especially if the baby is in the nursery

Can I have skin-to-skin contact with my baby if I carry CPE?

- For babies who are staying with their mothers, there are no limits on skin contact. However, for babies in the nursery, each situation is different and the nursery team will give you individual advice.

Does my term baby need to be checked after we go home?

- Testing of babies for CPE or other resistant organisms is not usually required once the baby goes home.
- Personal hygiene is important and the usual post discharge recommendations for cleaning and sterilising of any of the baby's equipment and things should be followed.

What are the risks to my other children and family?

- There is no additional risk to other children or family members who are healthy.
- However, other children or family members undergoing current medical care should check with their treating doctors and let them know about your CPE result.

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Should the other people in my immediate family be tested for CPE?

- Routine testing of other family members is not required. If you are CPE positive, your partner is assumed to also be CPE positive while you are in hospital.
- However, if other household members are being admitted to hospital for medical care then they should let their treating doctors know that you had CPE so they can be screened for CPE.
- Similarly, if you know a member of your household has previously been colonised with CPE and you need to go to hospital, you should let the staff at the hospital know.

How can I get rid of CPE?

- There is currently no recommended treatment to get rid of CPE carriage. It is very important that you follow the tips given earlier (especially frequent handwashing) to reduce the spread of CPE.

Can it go away by itself eventually?

- CPE carriage generally disappears by itself with time (months to years) especially if you don't have any more courses of antibiotics.
- Having antibiotics is likely to keep CPE in your body for longer.

Should I have a CPE check with my GP every year?

- Having a regular check for CPE is not recommended. However, if you are being admitted to hospital for medical treatment, swabbing for CPE is recommended if you have had CPE in the past.

If I need antibiotics for a caesarean or fever in labour, will I get the same ones everyone else gets?

- Different antibiotics *may* be required depending on the exact type of CPE and the exact reason why antibiotics are needed. Your doctor will decide what antibiotics are required.

Where can I find more information?

Ask your doctor or midwife/nurse. You can also ask to speak with someone from the hospital's infection prevention and control team.

Further online information is available at:

<http://www.cec.health.nsw.gov.au/keep-patients-safe/infection-prevention-and-control/healthcare-associated-infections>

and the Australian Commission on Safety and Quality in Health

www.safetyandquality.gov.au/wp-content/uploads/2017/12/CPE-Guide_Patient-information.pdf

The Healthcare Associated Infections (HAI) Program assists local health districts and specialty networks in NSW to manage and monitor the prevention and control of HAIs.