

Bisphosphonate treatment

This sheet talks about exposure to bisphosphonates in a pregnancy and while breastfeeding. This information should not take the place of medical care and advice from your healthcare provider.

What are bisphosphonates?

Bisphosphonates are a class of drugs that prevent the loss of bone mass. Some examples of bisphosphonates are Risedronate (Actonel®), ibandronate (Boniva®), Alendronate (Fosamax®), pamidronate (Aredia®), and etidronate (Didronel®). They are commonly used for the treatment of osteoporosis (higher fracture risks due to loss of bone density). They are also used in the treatment of Gaucher disease. For more information on Gaucher disease, see the MotherToBaby fact sheet at <https://mothertobaby.org/fact-sheets/gaucher-disease-pregnancy/pdf/>. Bisphosphonates work to decrease the rate of bone remodeling (a normal process that replaces old bone with new bone deposits).

I take bisphosphonates. How long do they stay in the body?

People eliminate medications at different rates. Bisphosphonates leave a woman's blood very quickly. However, 20-80% of the amount of the drug that enters the blood is then stored in bone tissue. Bisphosphonates can stay inactive in the bone tissue for years. They can also be released into the blood as the bone is remodeled. Stored bisphosphonates might be released from bones during pregnancy.

Based on theoretical concerns about the effects on fetal bones, treatment with bisphosphonates is usually stopped before conception. However, in three women with severe bone disease, bisphosphonates were used prior to and in early pregnancy, with some evidence that normal pregnancy bone loss was lessened.

Does taking bisphosphonates increase the chance for miscarriage?

Miscarriage can occur in any pregnancy. Miscarriage has been reported in women with Gaucher disease treated with bisphosphonates in pregnancy. However, it is not known whether it was due to the bisphosphonate treatment, other medication(s)/treatment(s) for Gaucher disease, or the disease itself.

Does taking bisphosphonates in the first trimester increase the chance of birth defects?

In every pregnancy, a woman starts out with a 3-5% chance of having a baby with a birth defect. This is called her background risk. More studies are needed to better answer this question. Concern has been raised about the use of bisphosphonates in animal pregnancies. Studies found that rats given bisphosphonates during pregnancy developed calcium deficiency (hypocalcemia), which led to abnormal bone development, and also slow, difficult labor and delivery. Effects related to low calcium are not expected in women on bisphosphonates, as these medications typically do not cause low calcium levels in people.

Small studies and case reports that include around 78 women using bisphosphonates before or during pregnancy have not shown an increase in the rate of birth defects. Cases of preterm delivery (delivery before 37 weeks of pregnancy), lower birth weight and lower levels of calcium in the newborns were reported. Several small studies of the use of bisphosphonates in infants and young children have shown normal bone development.

Could taking bisphosphonates in the second or third trimesters cause other pregnancy complications?

Low birth weight has been reported in women with Gaucher disease treated with bisphosphonates in pregnancy. However, it is not known whether these complications were due to the bisphosphonate treatment, other medication(s)/treatment(s) for Gaucher disease, or the disease itself.

Does taking bisphosphonates in pregnancy cause long-term problems in behavior or learning for the baby?

There is one case report of a baby who was exposed to bisphosphonates throughout pregnancy. At age one year, the child appeared to have normal development. Since the information is limited, we are not sure at this time if the use of bisphosphonates can cause long-term problems in behavior or learning or not.

Can I breastfeed while taking bisphosphonates?

There are no studies on the possible long-term effects of bisphosphonates on the breastfeeding baby. These medications are expected to pass into breast milk. Bisphosphonates are very poorly absorbed when taken by the mother, and the amount a nursing infant might absorb is likely very small. There is a single case report of a nursing mother treated with bisphosphonates. Small amounts of bisphosphonate were found in her milk, but no harmful effects were seen in the baby. Talk to your healthcare provider about all of your breastfeeding questions.

If a man takes bisphosphonates, could it affect his fertility (ability to get his partner pregnant) or increase the chance of birth defects?

There are no studies looking at paternal use of bisphosphonates before or at the time of conception. In general, exposures that fathers have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/pdf/>.

Please click here for references.

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at [MotherToBaby.org](https://mothertobaby.org).

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