

# The relationship between crohn's disease and conception



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I chose to research about the relationship between Crohn's disease and conception because I have Crohn's disease and I want to know how difficult it might be for me to conceive later in life.

Crohn's Disease is an irritable bowel disease (IBD) that can affect any part of the gastrointestinal tract from the mouth to the anus, but it is most commonly found in the colon and the end of the small intestine. Irritable bowel diseases are autoimmune, meaning that the body's immune system is overactive and is attacking parts of the body that it thinks is an invader when it's not. In Crohn's disease, the immune system is attacking the gastrointestinal tract. Symptoms of Crohn's disease often includes diarrhea, abdominal pain, bloating, fecal urgency, blood in stool, fatigue, and overall discomfort (L. Gawron, Goldberger, A. Gawron, Hammond, & Keefer, 2015).

#### Likelihood of Infertility

Since Crohn's disease is typically diagnosed during the reproductive years, those who have the disease tend to become concerned that it could cause them to be unable to conceive. A working definition of infertility is the inability to become pregnant after having unprotected sexual intercourse for one year (Martin, Kane, & Feagins, 2016). Marri et al, (as cited in Martin et al., 2016), found that women with Crohn's disease who have not had bowel surgery are likely to have normal or only slightly reduced fertility compared to those who do not have the disease. For those who have undergone bowel surgery, conception may be much more difficult.

There are many types of surgery that are performed on patients who cannot control their Crohn's disease with only medications. Devaraj, (as cited in <https://assignbuster.com/the-relationship-between-crohns-disease-and-conception/>

Martin et al., 2016), found that an effective surgery used today for those with disease mainly in the colon, is a total proctocolectomy with ileal pouch-anal anastomosis. A total proctocolectomy is done first, and it consists of the removal of the entire large intestine, rectum, and anus. Then, an ileal pouch-anal anastomosis (IPAA) is performed, which connects the small intestine to the anal canal and forms a pouch out of the small intestine that replaces the large intestine. A study performed by Waljee et al (as cited in Martin et al., 2016), found that the risk of infertility for someone with IBD is three times greater after an IPAA. A different study, done by Oresland et al (as cited in Martin et al., 2016), looked at the anatomic changes of the fallopian tubes after abdominal surgery. The study used hysterosalpingography, a procedure where contrast is injected into the uterus through a catheter, allowing x-ray images of the uterus and fallopian tubes to be taken. These images showed that over half of the women with previous abdominal surgery had at least one fallopian tube that was blocked and just under half had fallopian tubes that were adhered to the pelvic floor. This finding leads to the presumed conclusion that abdominal surgeries, including those used for treatment of Crohn's disease, can cause severe damage to the fallopian tubes, causing severely reduced fertility. Though this evidence may appear straightforward, there has not been enough research performed on the different kinds of abdominal surgeries and their effects on the reproductive system to conclude that these infertility results are likely for every woman who needs bowel surgery due to their Crohn's disease.

The severity of Crohn's disease at the time of conception can also play a major role in conception. A person with Crohn's disease is constantly either

in a flare or remission. A flare is when the disease is active, which usually causes the patient to experience the typical symptoms of Crohn's disease, such as diarrhea, fecal urgency, and abdominal pain. Remission is when disease activity is under control, and the patient does not experience the typical bowel symptoms of Crohn's disease. It is commonly suggested that women who intend on conceiving should achieve remission before doing so. This is because the likelihood of being able to conceive during a flare is lower than in remission. Active bowel inflammation has been found to cause the organs around the intestines to also become inflamed, including those of the female reproductive system. Along with this, active disease has a connection to increased likelihood of depression, malnutrition, and anemia. All of which can confound the ability to conceive, according to Mahadevan et al (as cited in Martin et al., 2016). It has also been found by both Mahadevan et al and Moody et al (as cited in Martin et al., 2016) that patients with Crohn's disease often experience dyspareunia (difficult or painful sex) and fecal incontinence (the inability to control bowel movements) during sexual intercourse. It is likely that women with Crohn's disease who are experiencing these discomforts are less likely to want to engage in sexual intercourse, making conception that much harder.

### Possible Infertility Solutions

For those who are struggling to conceive due to their Crohn's disease, in-vitro fertilization has been found to be overall successful. In-vitro fertilization (IVF) is a procedure where oocytes (premature egg cells) are taken from the ovaries and are incubated with sperm. The embryos produced are then transferred to the uterus for implantation (Oza et al., 2016). For those who <https://assignbuster.com/the-relationship-between-crohns-disease-and-conception/>

have had previous abdominal surgeries, their infertility is likely due to the scarring and/ or occlusion of the fallopian tubes. Since IVF does not require the patient to have operational fallopian tubes, this is a good solution for those who have undergone bowel surgery (Martin et al., 2016). It is not clear whether a woman experiencing a flare would have as much success with IVF as a woman in remission. Oza et al (2016) found that disease activity was not associated with IVF outcome, but acknowledged that this was likely due to the fact that almost all of the patients in the study were in remission at the time of IVF. Further research needs to be performed on patients who have active disease at the time of IVF in order to know whether or not IVF is a plausible solution for those who cannot achieve remission.

It is largely agreed upon in the scientific community that women with Crohn's disease should be in remission before attempting to conceive, but this suggestion is not only made because conception is more likely to be successful during remission. There is evidence from many studies, including those by Heetun et al, Khosla et al, and Abhyankar et al, that there is a direct link between the severity of disease at the time of conception and the likelihood of flares throughout the pregnancy. Patients who conceive during active periods of Crohn's disease are more likely to experience active disease during pregnancy, while patients who conceive while in remission are likely to stay in remission throughout the pregnancy (as cited in Marchioni Beery & Kane, 2015; L. Gawron, Goldberger, A. Gawron, Hammond, & Keefer, 2015). This relationship between disease activity at the time of conception and throughout pregnancy is very important, because it has been found that Crohn's flares during pregnancy are associated with

increased rates of miscarriage, preterm delivery, low birth weight, and other negative outcomes (Marchioni Beery & Kane, 2015).

### Patient Concerns

Women with Crohn's disease are often concerned that their current medical treatment would negatively affect their fertility or the health of their child, and because of this, many of them think to stop taking their medications and deal with the active disease (Shand, Chen, Selby, Solomon, & Roberts, 2016; Martin et al., 2016). Doing this is strongly advised against, as most medications used to treat Crohn's disease do not affect fertility and are safe to use during pregnancy, with the exception being methotrexate (Marchioni Beery & Kane, 2015; Martin et al., 2016). A study by Van Assche et al (as cited in Marchioni Beery & Kane, 2015), found that the effect of uncontrolled disease at the time of conception and throughout pregnancy is far more dangerous than the possible effects of medications approved for use during pregnancy. The only case where this is not true is if the future mother is on methotrexate. Methotrexate is not safe for use during conception or the duration of pregnancy because it has teratogenic properties, meaning that it can disturb the maturation of the embryo, cause birth defects, or even bring an end to the pregnancy. Because of this, the FDA recommends discontinuing the use of methotrexate at least three months before attempting to conceive (as cited in Marchioni Beery & Kane, 2015).

### Conclusions

Women with Crohn's disease are likely to have normal or only slightly reduced fertility depending on the severity of the disease. For those who are <https://assignbuster.com/the-relationship-between-crohns-disease-and-conception/>

in remission and have not previously had bowel surgery, fertility rates are similar to women who do not have an IBD. Women who are not in remission and have no history of bowel surgery have, only slightly reduced fertility. Women who have had an IPAA due to their Crohn's disease have an increased risk of infertility of over three times that of those who have not had abdominal surgeries. It is unclear though, whether all bowel surgeries increase the risk of infertility the same way an IPAA does. IVF has been found to be just as successful in women with Crohn's disease who are in remission or have had bowel surgery compared to women without IBD. It is still unclear whether active disease at the time of IVF would affect its success, and should be researched further. Patients who conceive while in remission are likely to stay in remission throughout pregnancy, while patients who conceive while experiencing a flare are likely to flare during pregnancy. Most medications are safe to continue to use during conception and pregnancy, and treatment should continue as is unless the patient is taking methotrexate.

## References

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