

Pregnancy and MS



New research sheds light on effects of the disease.

by **Lori DeMillo**

New research focusing on women with multiple sclerosis who are pregnant is shedding light on how the disease can affect them both during and after pregnancy. Key findings of two studies conducted by Maria Houtchens, MD, and her research team at Harvard Medical School and Brigham and Women's Hospital show that more women with MS are getting pregnant, although most do not use disease-modifying therapies for a year before and a year after pregnancy. Women with MS also tend to have more complications around the time of pregnancy compared to women without MS.

"Two-thirds of people with MS are women, and most are young when they get the MS diagnosis. The question of childbearing is at the forefront of most of our patients' lives. It is crucial to understand what happens when they get pregnant and during pregnancy," Dr. Houtchens says. She is an assistant professor in the department of neurology at Harvard Medical School and an associate neurologist and director of the Women's Health Program at the Partners MS Center at Brigham and Women's Hospital.

Researchers used data from nine years of medical insurance claims (2006–2015) to study pregnancy rates and outcomes, as well as relapses and treatments with disease-modifying therapies (DMTs). They published their results in *Neurology* in 2018.

These are the first studies on pregnancy in MS to use medical insurance claims databases. "Database studies allows researchers to look at a large number of patients over time," says Wendy Gilmore, PhD, associate professor of research emerita and research adjunct associate

professor at the Keck School of Medicine of University of Southern California.

Higher rates

Pregnancy rates in women with MS increased from 7.9% to 9.47% between 2006 and 2014. At the same time, the pregnancy rates for women without MS decreased from 8.83% to 7.75%. “That was very surprising. I would have expected similar trends or slightly lagging pregnancy rates for women with MS,” says Dr. Houtchens. Pregnant women with MS were also older (average age: 32.5 years) than pregnant women without MS (average age: 29.3 years).

“Women with MS appear less afraid of pregnancy than in the past,” adds Gilmore. While these studies were not designed to show the “why” behind the results, Dr. Houtchens believes that women with MS and their doctors are more comfortable with pregnancy now.

Low use of DMTs

Not taking a DMT is generally known to increase the risk of relapse, which could delay childbearing and cause long-term disability. Yet, researchers found that less than 25% of women with MS took a DMT during the year before getting pregnant and the year after giving birth. Of 2,158 women with MS:

- About 20% took a DMT at any time before getting pregnant
- 12% took a DMT during the first trimester; this decreased to 3% during the third trimester
- 25.5% were taking a DMT 9 to 12 months after giving birth.

“This is a big concern,” Dr. Houtchens says. “We need a lot more education for patients and providers about the safety of some of these medications.” While some DMTs are not compatible with pregnancy, many can be taken until the time of pregnancy. Injectable DMTs tend to be safer than oral DMTs. “Talk to your doctor about how each medication interacts with pregnancy,” Dr. Houtchens says.

Breastfeeding may be one reason for the low use of DMTs after childbirth, but the data did not include breastfeeding. “While it’s probably OK to use an injectable and breastfeed, there are no guidelines about this, so most doctors would tell patients not to take anything while breastfeeding,” says Dr. Houtchens. Some studies indicate that exclusive breastfeeding may provide a modest protective benefit against postpartum relapses during the first six months in women with MS. Women who wish to breastfeed should discuss the possibility with their healthcare providers.

More complications in pregnancy

Researchers found that women with MS had more complications than women without MS, including premature labor, infections during pregnancy and birth defects or damage. However, Dr. Houtchens advises, “Take these finding with a grain of salt.” More research is necessary, and many factors may have contributed to the data. For example, doctors may

provide extra care and order more tests for pregnant women with MS, where complications could be discovered.

“Although complications were not much higher in women with MS than women without MS, there is still a need for more information to help with pregnancy decisions and care,” Gilmore adds.

Known relapse rates

Relapse risk decreased during pregnancy, increased within six months after childbirth, and decreased at six to 12 months after childbirth. “It’s not a surprise that women (with MS) do better in pregnancy,” says Dr. Houtchens. “Pregnancy is a state of reduced immune reactivity and many auto-immune conditions get better during pregnancy.”

Safer pregnancies

At the Women’s Health Clinic at the Partners MS Center, Dr. Houtchens is raising awareness of the need to better manage DMTs for women who plan to become pregnant. She recommends that women who are thinking about having a baby discuss this at every doctor’s visit.

Cautions about the studies

Some important information isn’t available in medical insurance claims and couldn’t be studied. For example, the results don’t cover MS types or severity. “Nevertheless, these studies do provide information that can lead to more definitive studies in the future,” Gilmore says.

Future research

More research is needed to help women with MS make decisions about pregnancy and to help doctors provide the best care during pregnancy. Dr. Houtchens also leads PREG-MS: New England MS Pregnancy Registry, designed to learn more about the effects of MS on pregnancy and childhood development up to three years. Women with MS who live in New England and are pregnant or trying to get pregnant can join the registry.

Gilmore would like to see more research on changes to the immune system in each trimester of pregnancy, along with before and after pregnancy. “Understanding what changes in the immune responses can tell us a lot about what happens with the disease,” she says.

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