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## PREGNANCY, DELIVERY, AND THE POST PARTUM PERIOD

### Information for women with MS to share with their physicians

- Multiple sclerosis (MS) does not interfere with a woman's ability to conceive ([Giesser, 2002](#)). Any form of birth control can be used, although some medications used to treat MS symptoms or secondary infections may reduce the effectiveness of oral contraceptives.
- In general, relapse rates drop over the nine months of pregnancy – particularly in the last trimester – and rise significantly in the three-six months post partum ([Confavreus et al, 1998](#)). The more active a woman's disease was during pregnancy and the year prior, the higher her risk of post partum relapse ([Vukusic et al., 2004](#)).
- Pregnancy has not been shown to have any long-term impact on disability level, although some data suggest that disability accumulation may be reduced significantly in women who have pregnancies after disease onset ([Verdru et al, 1994](#)) and that the time interval to secondary-progressive MS may be increased ([Damek & Shuster, 1997](#)).
- None of the available disease-modifying therapies (DMTs) are approved for use during pregnancy as almost all have been associated with potential fetal harm in animal or human models. The exception is glatiramer acetate (Copaxone®), for which there is no apparent harm in animal studies. Some neurologists permit use of Copaxone until the point of conception. For the other DMTs, there are variable washout periods before a planned conception (Voskuhl & Giesser, 2016). Women are advised to stop their medication at least one full cycle prior to trying to conceive. A woman can resume her medication immediately following delivery unless she is planning to breastfeed; if her disease has been particularly active prior to and during pregnancy, the recommendation may be for her to resume her medication as soon as possible.
- None of the DMTs are approved for use in nursing mothers. Exclusive breast feeding does not increase the risk of post partum relapse and there are limited data suggesting that exclusive breast feeding may in fact reduce the risk of relapse – but this has not been conclusively proven ([Hellwig et al., 2015](#)).
- An acute relapse requiring treatment during pregnancy can be managed after the first trimester with a brief course of corticosteroids, including methylprednisolone, prednisone or prednisolone, all of which are metabolized before crossing the placenta (Voskuhl & Giesser, 2016).
- MRIs should be deferred until the post partum period. Gadolinium contrast should generally be avoided in pregnancy women. A woman who requires a contrast-enhanced



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MRI during pregnancy should be instructed to pump and dispose of the breast milk for 24 hours after receiving the gadolinium ([Bove & Klein, 2014](#)).

- Many of the medications used to treat MS symptoms are Category C drugs (e.g., baclofen for spasticity; fluoxetine for depression; solifenacin succinate for bladder management) and should not be used during pregnancy; other management strategies should be implemented.
- MS-related fatigue may augment the normal fatigue of pregnancy; bladder and bowel symptoms may increase, including a higher risk of urinary tract infections and increased constipation; balance problems may worsen with weight gain.
- Management through labor and delivery in women with MS is similar to that in women without MS. Some women with MS may require a Caesarean delivery or use of forceps because of MS-related fatigue, weakness of the abdominal muscles, and/or inability to feel contractions (Voskuhl & Giesser, 2016).
- All forms of anesthesia are considered safe for women with MS; anesthesia management does not need to be altered. [This information should be discussed with the anesthesia team during the early weeks of pregnancy].
- Compared to the general population, women with MS are at significantly-increased risk for depression ([Feinstein et al, 2014](#)). Women and their doctors need to be alert to mood changes during pregnancy and the post partum period, since these can affect self-care and care of the baby. Antidepressant medications should be used with caution during pregnancy.

Please contact the National MS Society's Professional Resource Center for information or consultation (E-mail: [HealthProf\\_info@nmss.org](mailto:HealthProf_info@nmss.org)).

Recommended Reading:

Voskuhl R, Giesser BS. Gender and reproductive issues. In BS Giesser (ed.) *Primer on Multiple Sclerosis* (2<sup>nd</sup> ed.). Oxford: Oxford University Press, 2016, pp. 259-282.