



*Accelerating research towards a cure for multiple sclerosis*

## Multiple Sclerosis and Becoming a Dad

The role of a man as a bachelor, husband or father is seen differently in many families and cultures. To his partner, he may be a protector or a lover. To his child, he may be a role model or a caregiver. He may come from a traditional culture in which men and women are slotted into traditional roles, or a more modern culture where they are considered equals. All men should pay attention to their reproductive health, regardless of their circumstances. A healthy reproductive system not only affects overall health, it allows for a greater sense of fulfillment in many regards. Multiple sclerosis (MS) and its treatments can impact a man's reproductive health in a number of ways.



Sexual dysfunction (SD) is an issue that most men struggle with at some point in their lives, whether they have MS or not. SD is common in men with MS and may occur at any stage of the disease, even without severe disability.

The ways in which MS can affect sexual function can be divided into three categories: primary, secondary, and tertiary SD. Sexual arousal begins in the central nervous system, as the brain sends



messages to the reproductive organs along nerve pathways in the spinal cord. Primary SD stems directly from demyelination of these nerve pathways that affect the sexual response. In both men and women, this can include a decrease or loss of sex drive, altered genital sensations, and problems having an orgasm. Men may experience erectile or ejaculatory dysfunction.

Secondary SD is caused by MS symptoms that do not directly involve nerve pathways to the reproductive system, but still have a negative impact the sexual response. Symptoms that may cause secondary SD include [bladder and bowel problems](#), fatigue, spasticity, or sensory changes. Tertiary SD results from the emotional factors related to living with MS. These may involve loss of self-esteem, depression, anxiety, anger or the stress of living with a chronic illness. In a long-term relationship, MS can sometimes cause role reversals that can affect a couple's sex life. MS can also lead to other stresses, such as job loss, that can change the experience of sex for an individual or couple. These powerful feelings have the potential to contribute to SD as much as, or possibly more than demyelination of nerve pathways.

Erectile dysfunction (ED) is one of the most common symptoms of MS in men, affecting up to 91 percent. Nerve demyelination is one of its many causes. Erections occur when signals from the brain cause the muscles of the penis to relax, allowing blood to flow into two chambers on the underside of the penis. The increased blood supply causes the penis to swell and become rigid. Erections happen in response to either sexual arousal or physical stimulation of the penis. These are important distinctions as they involve two different mechanisms: Erections that occur in response to erotic thoughts or visual cues are processed by the brain and travel down the spinal cord to trigger an erection. Erections that happen as a result of genital stimulation only use nerves in the lower part of the spinal cord. Depending on where the demyelination occurs, the cause and symptoms of ED can vary. For example, some men may be able to achieve an erection in response to physical but not visual stimulation, or vice versa. It's important to note that ED can be caused by a number of other factors, including stress, mood, high blood pressure, obesity, diabetes, bladder and bowel dysfunction, excessive alcohol use, and certain medications.

ED can be treated with oral medications, such as [Viagra®](#), [Levitra®](#), or [Cialis®](#). As an alternative to oral ED drugs, injectable medications such as [alprostadil](#), [papaverine](#), and [phentolamine](#) can often enhance erection by increasing blood flow in the penis. In cases of severe ED in which other options have



failed, [penile implants](#) can help. When considering treatment options for ED, it's important to consider its contributing factors. For example, abnormal sensations can often be controlled through use of other medications. For those with urinary problems, intermittent catheterization may be used to control urinary leakage during intercourse. Anticholinergic medications, which are often used to treat urinary dysfunction, are also known to cause ED. In some cases, psychological factors related to mood or self-esteem play a role in ED and should be addressed separately. It's important to note that antidepressant medications may also cause or contribute to ED.

Between 35 and 50 percent of men with MS experience problems with ejaculation. These problems may include premature, delayed or [retrograde](#) ejaculation, or not being able to ejaculate at all. Although the treatments described above can help with ED, there are no treatments that help with ejaculatory dysfunction. While a man's sexual performance may be improved by being able to maintain an erection for longer, ejaculation may remain a problem.



Sexual problems can be demoralizing for men. Many find it difficult to talk about them, even with their significant other or doctor. It is important to discuss them, however, especially with your partner. Sharing with your loved one may bring you closer and help resolve concerns relating to sexual intimacy. Often the strain of living with MS can challenge a couple's efforts to communicate with each other about their needs. Individual or couples therapy can help both partners work on sources of stress or depression that may interfere with sex, improve communication, and facilitate ways to be more supportive of each other.

Male fertility does not appear to be impaired in MS, although ED and ejaculatory dysfunction may interfere with a man's ability to conceive a child. As discussed earlier, ED can be treated with a number of medications and therapeutic strategies. Couples dealing with ejaculatory dysfunction have been able to successfully conceive a child with the help of such techniques as [penile vibratory stimulation](#) or [electronic ejaculatory stimulation](#), followed by artificial insemination. Men who are concerned about fertility issues should consult a urologist experienced in this area.

When a man with MS considers having children, he may question the safety of any disease-modifying therapy he may be taking. The areas of possible concern with MS medications are they may



affect either the quality or quantity of sperm, transfer chemicals that could affect the fetus, or cause mutations. This is an important topic to discuss with one's healthcare team. Researchers have gathered a lot of information in this regard, however they still have much learn. No adverse side effects for the unborn child have been reported with a father's use of beta-interferon (Avonex, Betaseron, Extavia, Plegridy or Rebif) or glatiramer acetate (Copaxone). There is no information to date on the reproductive side effects of Tysabri or Gilenya in men. There are some [data](#) to suggest that mitoxantrone (Novantrone) and cyclophosphamide (Cytoxan) can harm sperm. Men who want to have children and plan to start treatment with either of these medications should consider freezing healthy sperm ahead of time. Dimethyl fumarate (Tecfidera) has been associated with reproductive toxicity in [animal studies](#), however it isn't known if this is relevant in humans. In order to be drug-free at conception, men need to be off MS treatment for about 10 weeks, as it takes approximately 70 days for the body to produce new sperm. The exception is Aubagio, which can be detected in [human semen](#) and takes a very long time to be eliminated from the body. If a man is taking Aubagio, it's recommended that he stop taking it and undergo an [accelerated elimination procedure](#) to remove the drug from their systems (in addition to the 70-day clearance time), or wait two years before they try to conceive. Prednisone and methylprednisone (Solumedrol) are often used to treat MS relapses. Of note, these medications are known to cause decreased sperm count.

Despite the obstacles men may face on the road to parenthood, there is good news. MS in men has not been associated with spontaneous abortion, low birth weight, or premature birth. It's important for men living with MS to work with their partners and their healthcare team toward maintaining optimum reproductive health. Overcoming the barriers that MS presents with regards to intimacy allows for a more fulfilling personal experience and opens the possibilities for a rich family experience. As former Red Sox player, Wade Boggs, described his relationship with his father, "Anyone can be a father, but it takes someone special to be a dad, and that's why I call you dad, because you are so special to me. You taught me the game and you taught me how to play it right."

