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PARKINSON'S DISEASE IN WOMEN

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Until recently little has been written regarding the effect that gender has on the development and management of Parkinson's disease (PD). Current research has focused mainly on the impact that sex hormones have on the development of the disease. Less has been written on the impact that Parkinson's disease has on menstruation, pregnancy and menopause. This article will review the most recent information on both the affect that Parkinson's disease has on women and the impact that gender has on Parkinson's disease.

While PD is usually thought of as a disease of the elderly, approximately 3-5 percent of women diagnosed with this disorder are under the age of 50. A large number of these women are still experiencing regular menstrual cycles. Studies that have reviewed the effect of hormone fluctuations and menstruation on PD have noted an impact of the menstrual cycle on disease control. During menstruation women described increasing Parkinson symptoms, decreasing medication responsiveness, and increased "off" time. They also complain of increased fatigue, cramps and heavier menstrual flow. This can lead to occasional humiliating self-care issues because of worsening dexterity. Premenstrual symptoms of depression, bloating, weight gain and breast tenderness also appear to increase in intensity in women who note a variation in their symptom control with menstruation.

Usually these symptoms improve after menstruation, but will reoccur with each cycle. A small sample of women in the studies used birth control pills. They reported that they had less intense fluctuations in their symptom control, but more research needs to be done before recommendations

can be made. However, it is important to recognize that these fluctuations occur so that women can be prepared for the changes in control. The use of regular exercise and relaxation techniques can help decrease symptoms and improve coping abilities.

There have been only a limited number of pregnancies in women with PD reported. The data have been divided into the impact that pregnancy has on Parkinson's disease and the effect that Parkinson's disease has on pregnancy. There is an increase in both motor and non-motor symptoms during pregnancy although it is rarely significant enough to impact the women's overall level of functioning. Non-motor symptoms (such as fatigue, constipation and depression) seem to improve after delivery, but any progression of motor symptoms (rigidity, slowness of movement and tremor) usually persists. While data has shown that increasing length of estrogen exposure (the amount of time from puberty to menopause) decreases the risk of developing PD, increasing amount of time spent pregnant seems to increase the risk of developing PD. This seems contradictory but may be due to differences in the effect that estriol (the pregnancy form of estrogen) and estradiol (the menstrual form of estrogen) have on the disease.

The main concern of pregnant women with PD is the risk of birth defects from antiparkinson's medications. The dopamine agonists, bromocriptine and pergolide, are considered relatively safe during pregnancy, but make it impossible to breast feed because they block milk production. The remainder of the antiparkinson's medications carries a category C rating, meaning that animal studies suggest some risk but human studies are not available or

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METRONOME THERAPY- AN EFFECTIVE TREATMENT TOOL FOR PARKINSON'S PATIENTS

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Interactive Metronome Therapy (IM) is a new technology used as a treatment tool for Parkinson's patients, but it is actually based on an old concept - the metronome. For any of you who have ever played piano, you know that the metronome is a device used to keep time-tick-tock, tick-tock... if you think about it, doing the same task over and over again at a perfectly consistent interval requires a lot of concentration and energy. With Interactive Metronome therapy, a Parkinson's patient is trained to do just that - to keep time by performing repetitive tasks such as clapping their hands or stomping their foot at regular intervals. The IM signals the patients with a cowbell-like ring to let them know if they are either falling behind or going too fast in their task. While these tasks might appear simplistic, the Interactive Metronome measures accuracy down to the mil-

lisecond and it is surprising how challenging it really is to achieve a perfect score!

The goal of Interactive Metronome therapy is to improve symptoms of Parkinson's patients struggling with issues such as rate of processing, attention, impulsivity, speech, and cognition. There appears to be a positive correlation between the increased accuracy of patients in their IM therapy sessions and their improved Parkinson's symptoms.

Michael Lobell, MD, a Tucson physician and Parkinson's patient currently undergoing IM therapy, attests to its efficacy with diminishing his Parkinson's symptoms. He said, "The reason that I came to HealthSouth initially was for impulsivity. Since I began my speech therapy, my entire outlook has changed. My impulsivity is better and my speech patterns are slower. The Interactive Metronome seems to be an effective and important

tool."

While IM therapy is relatively new, it is gaining popularity worldwide. There are more than 2,000 IM-certified therapists in more than 1,500 clinics, hospitals and universities in the U.S. and abroad. It has also received media attention by the CBS Early Show, CNN News, and US News and World Report. The Interactive Metronome therapy is an option for patients who are seeking new ways to complement their existing treatment regimen without adding new medications.

A typical course of treatment with IM is 10-12 sessions and each session will last approximately one hour.

For further information on where the therapy is available, call 877-994-6776, ext. 230.

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have not confirmed that risk. The data on levodopa with or without carbidopa suggest some risk in animal studies, but there were no reported birth defects in newborns in the small number of pregnancies reviewed. Amantadine is the only antiparkinson's medication that has resulted in heart malformations in babies with first trimester exposure. There were no reports of major malformations with the use of Selegiline (Eldepryl) and there are data available so far on the COMT inhibitors.

Women with PD do not have trouble with fertility but can have changes in self-image that lead to social avoidance and difficulty with sexual intimacy. This can lead to decreased pregnancy rates and sexual dysfunction. Women

who do become pregnant must then face the challenge of caring for a child postpartum. The American Parkinson Disease Association offers resources and helpful staff to provide information and support regarding pregnancy and parenting issues related to PD. Establishing a support system and planning are critical to being an effective parent, especially if you have a progressive disease.

It has been noted that women are more likely to develop Parkinson's disease later than men and usually when they are postmenopausal. Basic science research with rats has shown that there is an increase in the slow decline in dopamine producing cells coincident with menopause. Use of hormone replacement in rats that have had their ovaries

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