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RESEARCH PAPER MULTIPLE SCLEROSIS

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MULTIPLE SCLEROSIS

Multiple sclerosis (MS) is a chronic often-disabling disease that attacks the myelin sheath of the central nervous system (CNS). It is considered an autoimmune disease since the body's immune system attacks itself. The myelin sheath is the fatty substance covering the brain, spinal cord, and optic nerve. MS affects or damages the myelin sheath and may halt or destroy the nerve itself, and prevent the nerve impulses from traveling to and from the brain and spinal cord.

STATISTICS

Statistics from the US Bureau of Census extrapolated that there is a prevalence of 419,507 MS numbers in the USA population of 293,655,405. Which means that 1 in 700 persons have MS. Prevalence means; the estimated population of people who are managing MS at any given time. Incidents mean the annual diagnostic rate or the number of new cases of MS diagnosed each year. Both are statistical types and can reflect different numbers when used.

Other statistics found that no one knows how many people have MS. A belief that in the USA there are about 250,000 to 350,000 people diagnosed with MS. (Incidence) The estimates would be that 200 new cases are diagnosed each week.

Other beliefs are that MS is more prevalent in temperate climates such as in northern US, Canada, Europe rather than in the Tropics. The question than is whether the diagnostic tools are better in temperate climates than in the tropics. In my research that question was not answered.

MS statistics on environmental impact indicates that there may be a role for environmental factors in the cause of MS. It is possible that at the time of or immediately following puberty, the patient acquires an infection without producing MS symptoms. Other studies suggest that people of certain races or ethnicities may be more susceptible to the unknown geographic or climatic element. To date, no direct environmental factors have been identified or a direct link that daily stress leads to MS attacks. Also there is no direct evidence that MS clusters are caused by environmental factors. There is some evidence that MS can worsen after an acute viral illness.

MS STATISTICS ON ECONOMIC COSTS

MS is a lifelong disease usually occurring in young adults (20-40 yrs.) Lifetime expectations require that the associated costs of medical, personal, long term care and other needs will be costly and overwhelming. The estimated cost would vary as to what type of MS a person has.

EARLY SYMPTOMS OF MS

MS is more prevalent in women than men. Symptoms of MS are varied. They can occur as early as age 15. More commonly MS occurs between ages 20-40 and rarely before age 15 or after 60 yrs. of age. Symptoms are dependant on the area of the central nervous system that is affected. It can be mild or severe, brief or long lasting and can appear in combinations. Complete or partial remission of MS symptoms, especially in the early stages of disease occurs in about 70% of those affected.

Specific symptoms of MS in early stages can be: loss of balance, tingling or numbness, blurred or double vision, eye pain. The symptoms can be episodic or present in a "MS attack." The symptoms can last a few days or for weeks at a time. MS symptoms can halt, called "remission".

MS DIAGNOSIS

MS diagnosis is difficult in some cases. The MS yoga participants have shared their experiences in how and when diagnosed and oftentimes how many years elapsed before the MS diagnosis was final. It was an unknown time for them, and frightening. Advances in technology and diagnostic tools are helping doctors to diagnose the disease earlier. The "International Panel on the Diagnosis of MS" updated the criteria to establish the MS diagnosis. Most recently the criteria standard followed is the "McDonald Diagnostic Criteria for MS". MS can mimic other diseases, which produce similar symptoms, as mentioned above, the criteria for diagnosis have been established, to rule out other medical causes of the symptoms.

Criteria for MS diagnosis are: the signs and symptoms begin between ages 15 and 60; the symptoms indicate a brain or spinal disease; the doctors exam finds the evidence of brain or spinal cord disease; and an MRI (magnetic resonance image) shows at least two separate areas of scar tissue (sclerosis) in the brain.

The diagnostic tests consist of: taking a good medical history; blood tests; MRI Scan (shows the places where myelin is damaged;) spinal tap or lumbar puncture, (spinal fluid shows protein changes that are found in people with MS;) evoked potential which tests the function of the sensory nerves.

MS SYMPTOMS

MS symptoms, whether diagnosed or not are varied, intermittent or lasting. Common MS symptoms can include:

- Cognitive problems
- Bladder and bowel problems
- Muscle rigidity or stiffness
- Fatigue
- Depression
- Weakness or poor coordination
- Numbness or tingling
- Pain in arms and legs
- Visual disturbances

FOUR DIFFERENT FORMS OF MS

1. Relapsing-Remitting. The most common form. The person experiences flare-ups or exacerbations followed by remission. There is destruction of myelin fibers at the flare-up time but destruction can also continue during remission. (85% of MS are diagnosed with this type).
2. Primary-Progressive. The disease just progresses with no remissions. It can plateau but destruction continues at various rates. (10% may be diagnosed with this type)
3. Secondary-progressive. Follows an initial period of relapsing-remitting MS. The person develops a steady worsening of the disease. Before the new MS medications, about 50% of relapsing-remitting MS developed this form within 10 yrs. Long-term data is not yet available or conclusive to determine if treatment delays this transition.
4. Progressive-Relapsing. This is a rare course of MS. Person's experiences steadily worsening disease from the beginning, with worsening of CNS functions and the disease usually progressing without remissions. (5% may have this type.)

Sources of information re the forms of MS are: "The National Institute of Neurological Disorders"; The "Multiple Sclerosis Society"; and "Med TV" Health Information Brought to Life.

MS PROGNOSIS

There is no single MS prognosis. It can progress quickly or slowly over many years, with symptoms mild or severe. It is dependant on how soon a diagnosis is made, what kind of MS the person has and how well a person recovers from the attacks.

The life expectancy is difficult to predict and is based on the above diagnosis and prognosis. It is believe that the life expectancy is about 35 yrs. after an MS diagnosis, representing about 95% of someone who doesn't have the disease.

DISEASE PROGRESSION

There are few signs that would indicate the speed of MS progression. It is felt that MS may progress slowly if:

Fewer attacks occur after initial diagnosis
Longer intervals between episodes
Complete recovery from the attacks
Episodes are sensory causing symptoms like numbness and tingling

MS can progress more quickly if: multiple attacks occur in the first several years
Attacks occur more frequently
Incomplete recovery after the attacks
Motor symptoms, i.e. tremors, problems with coordination, and difficulty walking occur
More lesions are seen on MRI

MS is a disease that can be dormant with minimal CNS damage or it can devastate a person where they are unable to speak, write or walk. There is no effective treatment to date for MS.

PROBLEMS ENCOUNTERED IN HAVING MS

Numerous physical, mental and emotional problems are part of daily living for the person compromised by MS. They can experience problems such as: difficulty with vision; weakness; pain; bowel and bladder difficulties; balance/coordination problems; fatigue; cognitive impairment; mood changes/depression; intimacy difficulties.

With good support, family or others, many of these issues can be eased or ameliorated. Mobility is of utmost importance for the MS person. The goals in mobility are to maximize access to the home and community; maintain safety; conserve energy.

Mobility seems a great issue with the MS persons I see. Various methods are used to free the individual to attend yoga or enjoy reasonable physical movement. The issue is the proper prescription for maximum transportation especially walkers, wheelchairs and canes, and public transportation. Oftentimes I see an inappropriate and difficult wheelchair for mobility and the MS person has to work with what they are given. In order to obtain an evaluation (after years of enduring improper mobility tools) it takes a lot of effort and persistence on the part of the caregivers or the person with MS. The same goes for physical therapy or yoga. Usually the person seeks a yoga class on his or her own. Once they experience some stability in the disease process they feel encouraged and continue the classes. Others continue because there is a camaraderie, which is supportive, informative, and an opportunity to socialize.

Mobility, using the proper tools, allows many to maintain good posture, reduce fatigue; prevent deformity.

MEDICATIONS

The most informative and complete listing of MS medications is found in the National Multiple Sclerosis Association of America (MSAA) information, which can be obtained on the MSAA web site.

Medications may be specific for the disease itself; or for MS symptoms, and may or may not be approved by the FDA. The list is long.

Please see the attached MSSA information on the drugs that are more commonly used. There is ongoing MS research regarding the use of stem cells, and the development of new drugs. The FDA is slow to recognize new developments and their effectiveness on MS.

YOGA AND MS

There are yoga classes that are specific for MS only and other classes that encompass all disabilities. I am involved in teaching classes for MS and at times other disabilities like Parkinson's, and the aged with medical complications.

According to Eric Small, ("Yoga for Multiple Sclerosis"), the "MSAA" and the "National Center for Complimentary and Alternative Medicine", yoga is beneficial for the MS person however it continues to be studied as more people enroll in yoga.

There are many forms of yoga for MS. A program, which encompasses all the aspects of yoga, that means uniting the mental, physical, and spiritual bodies, should be considered. The yoga classes, taught by a yoga teacher with knowledge of MS, as chosen by the participant, should address: use of pranayama for MS; education of where the muscles are; how to strengthen the muscles; how to release tension and to reduce stress. Props such as pillows, bolsters, blankets, yoga straps, chairs, walls and other innovate material can be used by the yoga teacher. Impairment of the MS individual may influence their personal choice of yoga classes, as well as their mobility and ease of travel to class.

The benefits of yoga are used for other health conditions and relaxation. Research not well defined suggests that yoga may do the following:

Improve the sense of well-being

Lower the heart rate and blood pressure

Increase lung capacity

Lower levels of stress

Assist in muscle relaxation

Improve the physical body, strength and flexibility,

Helps with depression, anxiety, and insomnia

Also, The MS Yoga participants that I see also benefit greatly from the ability to socialize.

More studies are needed in order to conclude yoga's use for specific health conditions. My experience is that the yoga participants appear to make physical gains, state they feel better, seem less depressed, sleep better, and are more independent. At times, the positive results encourage them to return to their treating physician to request, better mobility equipment and physical therapy.

Conclusion

The research above is only a condensation of information available on MS. I enjoy and love my MS yoga participants and hope to continue assisting these great people, in their continuing yoga practice.