



Multiple Sclerosis The Basics

Transition Center Nurse for MFP
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Available Statistics



**Women Twice
as Likely**



Colder Climates



**North/Central
European Descent**



400,000 in USA



20-50 years old



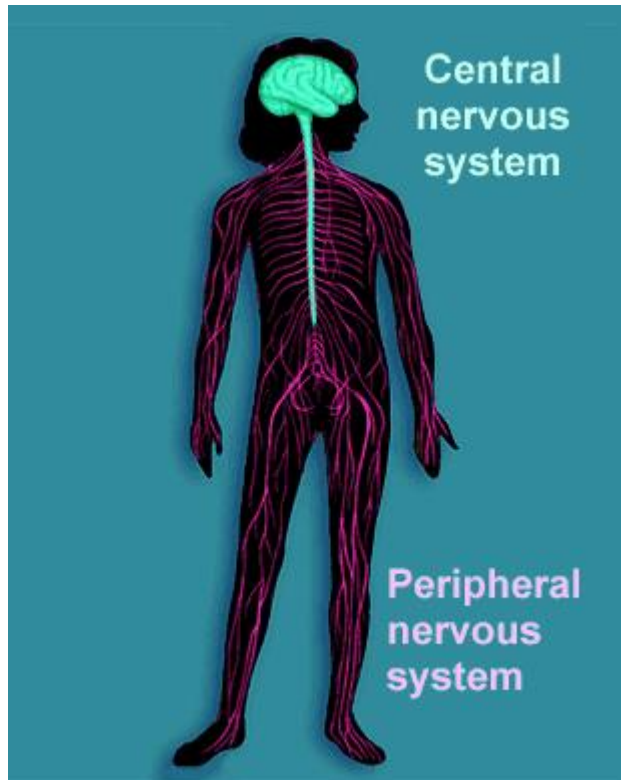
**2.3 Million
Worldwide**

What MS Is

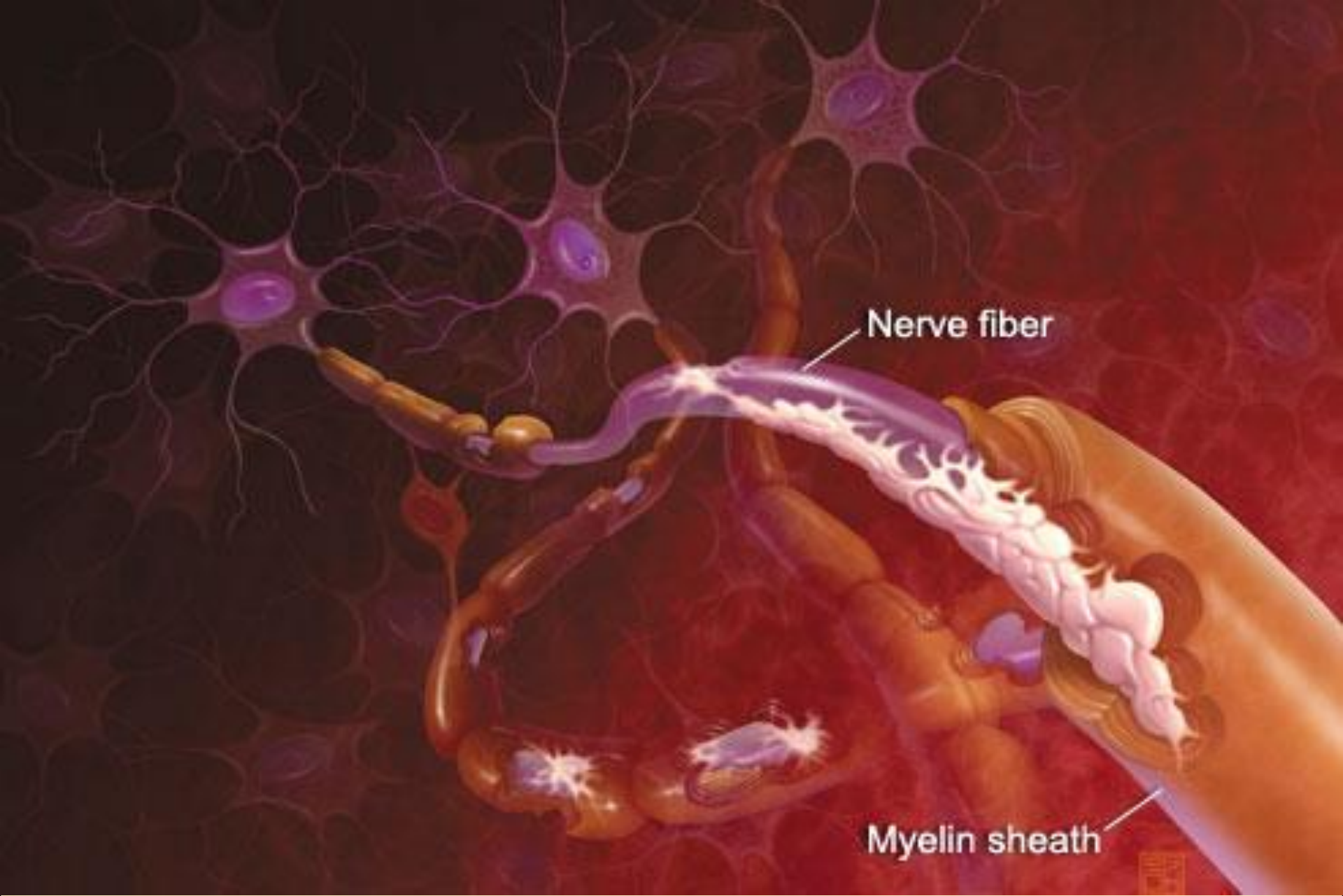
- A central nervous system disease that damages the myelin coating that covers and protects nerves.
- This damage slows or blocks messages between the brain and body.
- The effects are unpredictable.



Central Nervous System



- Brain
- Spinal Cord
- Optic Nerves



Nerve fiber

Myelin sheath

Clinically Isolated Syndrome - CIS

- First episode of neurologic symptoms
- Lasting at least 24 hours
- Cause is inflammation or demyelination
- Can be an isolated symptom or multiple
- Followed by complete or partial recovery
- Not all with CIS will progress to MS

Types of MS

1. RRMS - relapsing-remitting MS

**most common form- characterized by flare-ups
more than 50% will progress to secondary**

2. SPMS - secondary and progressive

relapses are followed by progressive worsening

3. PPMS - primary-progressive MS

15% - steady progression, no remissions

4. PRMS - progressive relapsing MS

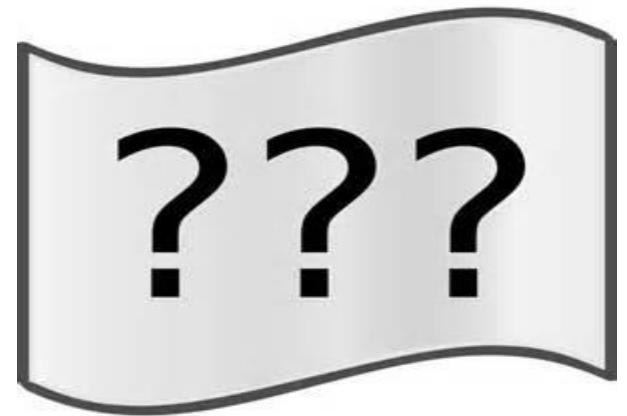
5% - progressive with sudden, clear relapses

Common Symptoms

- Thinking and memory problems
- Emotional changes, depression
- Vision and perception problems
- Trouble with coordination and balance, dizziness
- Sensations – one side or bottom half of body
 - **Pain, numbness, weakness, prickling, "pins and needles"**
- Muscle weakness, spasticity or tremor
- Loss of bowel and bladder control and function
- Sexual dysfunction
- Fatigue- 2 primary kinds
 - **Related to sleep disruption, exertion, depression**
 - **Unique to MS is called "Lassitude"**

Cause – Unknown

- Experts are divided
 - Auto-immune
 - Immune-mediated
- T-cell (white blood cell) involvement
- Associated with inflammation
- Linked to some viruses
- Combination of factors
 - viral exposures
 - genetic predisposition



Diagnosis

Medical History

Rule out other possible causes.

Physical Exam

Evidence of damage in 2 separate areas of CNS.

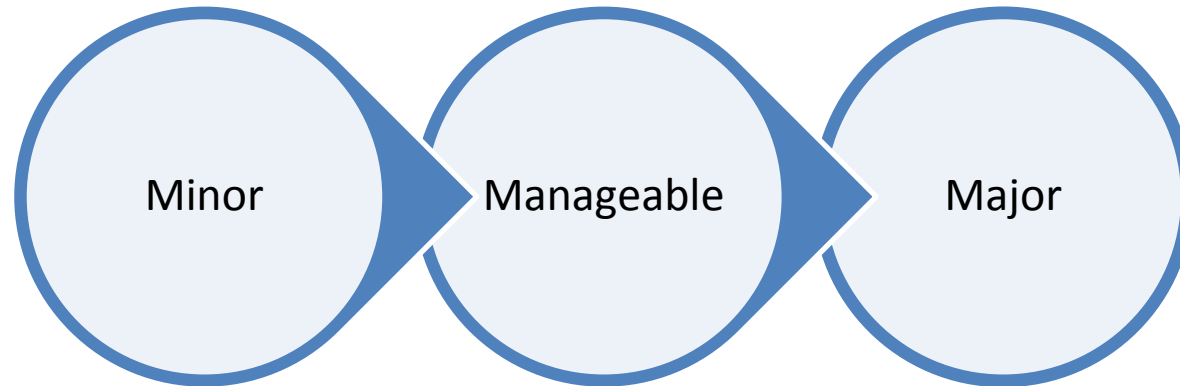
Neurological Eval.

Evidence of episodes at least 1 month apart.

Testing

Evoked Potentials, MRI, spinal tap, blood work.

Impact of an Attack/Relapse



- Often a matter of perspective
 - How much does this affect me?
 - Is there anything I can do about it?
- Health Literacy
- Empowerment

Associated Physical Conditions

- Type 1 Diabetes
- Autoimmune Thyroid
- Irritable Bowel Disease
- Fibromyalgia
- Urinary Dysfunction and Infections
- Sleep Disorders
- Asthma
- Respiratory Infections
- Seizures
- Muscle Atrophy



Neurological Rating Scale

- Expanded Disability Status Scale (EDSS)
 - 0-10/ Higher scores reflect greater disability
 - On line calculators for “MSers” to use themselves
- Quality of Life Instruments
 - Disease specific to MS – near a dozen available
 - Self-assess levels of fatigue, depression, cognition
- Scales are never perfect
 - variations dependent on time of day
 - variations with evaluators
 - score heavily impacted by mobility

Available Treatment

- There is still no cure for MS
- Medications may slow it down and help control symptoms
- DMTs (disease-modifying therapies) to reduce the number and severity of relapses
- Early use of DMTs slows the progression of disease and disability
- www.needymeds.org

Medications

DMT Maintenance

- Start ASAP
- Reduce frequency of attacks
- Slow progression
- Minimize new lesions

Attack Management

- Corticosteroids- IV or oral
- Muscle relaxants
- Botox injections for spasticity and some bladder issues

Symptom Management

- Bowel & Bladder
- Depression
- Spasticity & pain
- Erectile Dysfunction
- Seizure
- Sleep

Complimentary and Alternative

'CAM'

Cannabis

Fish Oil

Bee Sting Therapy

Yoga

Hyperbaric Oxygen

Acupuncture

Massage

Magnetic Therapy

“Probably...”

“Possibly...”

&

Interactions with conventional
MS therapies is an unknown.

Vitamins and Supplements

- Vitamin D associated with lower risk of developing MS
- Antioxidants- vitamins A, C, E- may be beneficial if MS is caused by free radicals

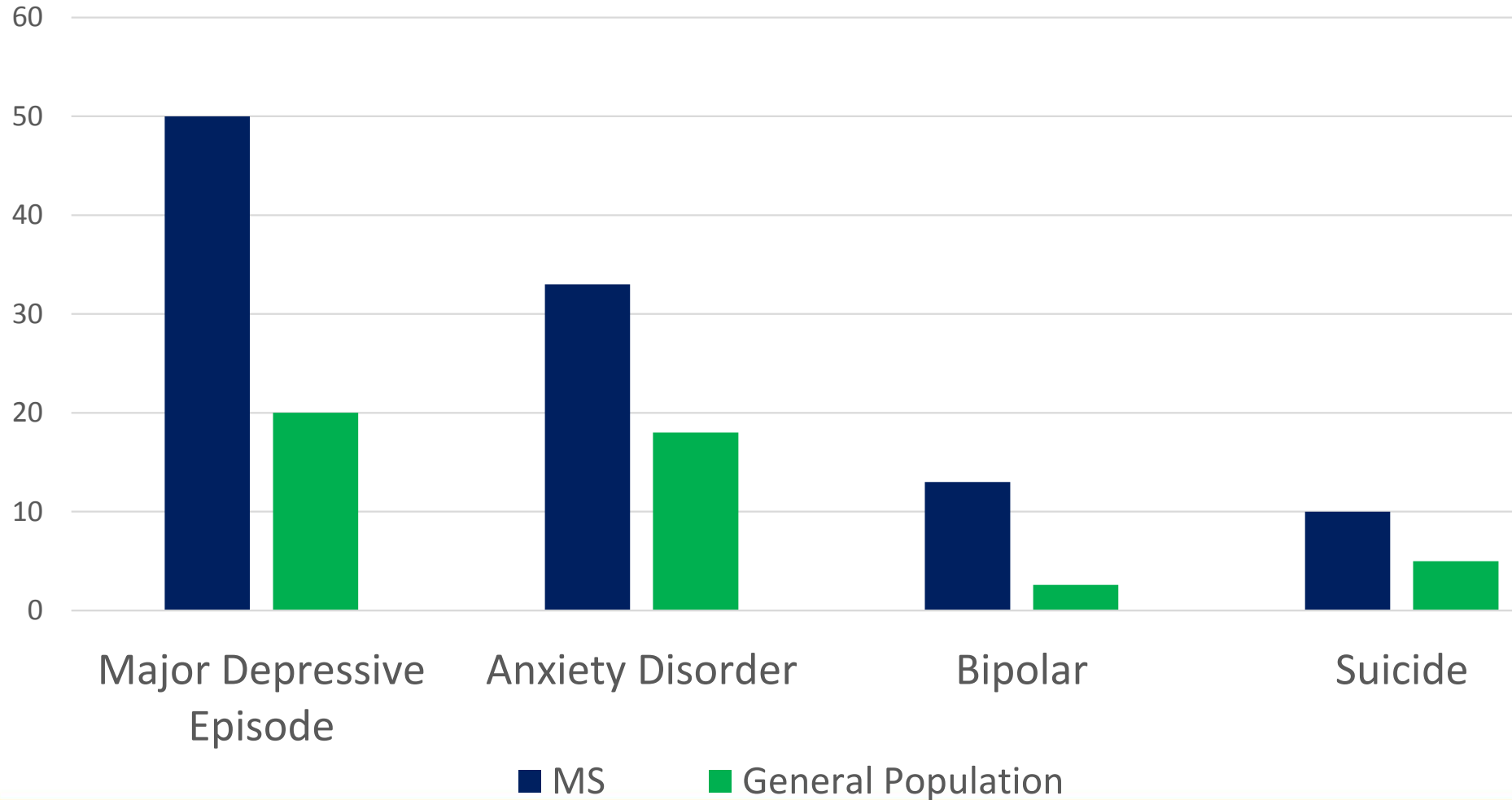
Since they stimulate the immune system,

Cranberry is a better choice for UTIs.

- Vitamin B's- can test levels and supplement if needed, but too much causes nerve problems (tingling).
- Calcium, Selenium, Zinc, Magnesium
- Herbs (many interact with conventional meds)

Mental Health

Comparison



Emotional Needs

- Repeated relapses - each one having an uncertain outcome
- Symptoms may not always be noticed
- Neurologists may focus on physical issues
 - **Doctors are being pressured to stay within a scheduled amount of time for each patient**
 - **Visit times too short for multiple issues to be addressed adequately**

Maintaining Independence

- Self directed help at home
- Family/community support and involvement
- Delivery Services- grocery, pharmacy, on-line
- ILC assistance- vocational, applying for disability, equipment, transportation
- Therapies – assistive devices
- Pursuit of activities and hobbies
- Regular exercise routine “as tolerated”

Peer Exercise Recommendations

- From activemusers.org, “MS is BS”
- Aim for 30 minutes of activity 3-4 times/week
- Stretch daily
- Exercise in the cool part of the day
- Core strengthening exercises
- Break when needed
- Don't forget brain exercise
- Senior classes may work well
- Consult a professional

Foundation Therapies

- PT- improve strength, posture, balance, pain and maintain mobility. Use of mobility aids, braces and gait training.
- OT- promote independence, safety and productivity. Adaptive tools and strategies to simplify ADLs and IADLs.
- ST- speech, communication, swallowing, poor cough reflex.

Other Useful Therapies

- Support Groups
- Vocational Rehabilitation
- Cognitive Rehabilitation
- Individual, Marriage, Family Counselling
- Sex/Intimacy Therapy
- Service Animals
- Art/Music
- Dietician



Useful Equipment

- Individualized- what function is affected and how fast is the progression?
- DME – shower chairs, grab bars, ramps, beds
- Mobility aids- joystick, puff controls
- E-mods for the home, car and work
- Recorded books
- Communication devices
- Useful websites

www.elderstore.com

www.abledata.com

www.iCanConnect.org

Advanced Disease Considerations

- Pressure Sores
- Osteoporosis
- Strategies for Compensation in ADLs
- Assistive Technology
- Altered Nutrition and Hydration
- Neurogenic Bladder
- Pain Management – Multiple Causes

Special Populations

- **Pregnancy Considerations**
 - Does not affect fertility
 - No DMTs are approved during pregnancy or breastfeeding
 - No special considerations for anesthesia based on MS
 - Mobility issues worsened
 - Bowel and Bladder issues complicated
- **Parenting**
 - Multiple Sclerosis Society of Canada for downloadable library on talking to kids about MS
 - Important to include children and be honest
 - Teens- allow for social development outside the home

Support- National MS Society

- MS Navigators are available by
 - Phone at 1-800-344-4867
 - or online
 - <http://www.nationalmssociety.org/Resources-Support/Find-Support/Ask-an-MS-Navigator>
- Will assist in finding local resources
- Edward M. Dowd Personal Advocate Program
- Peer Support

Self-Care



Caregivers' Needs

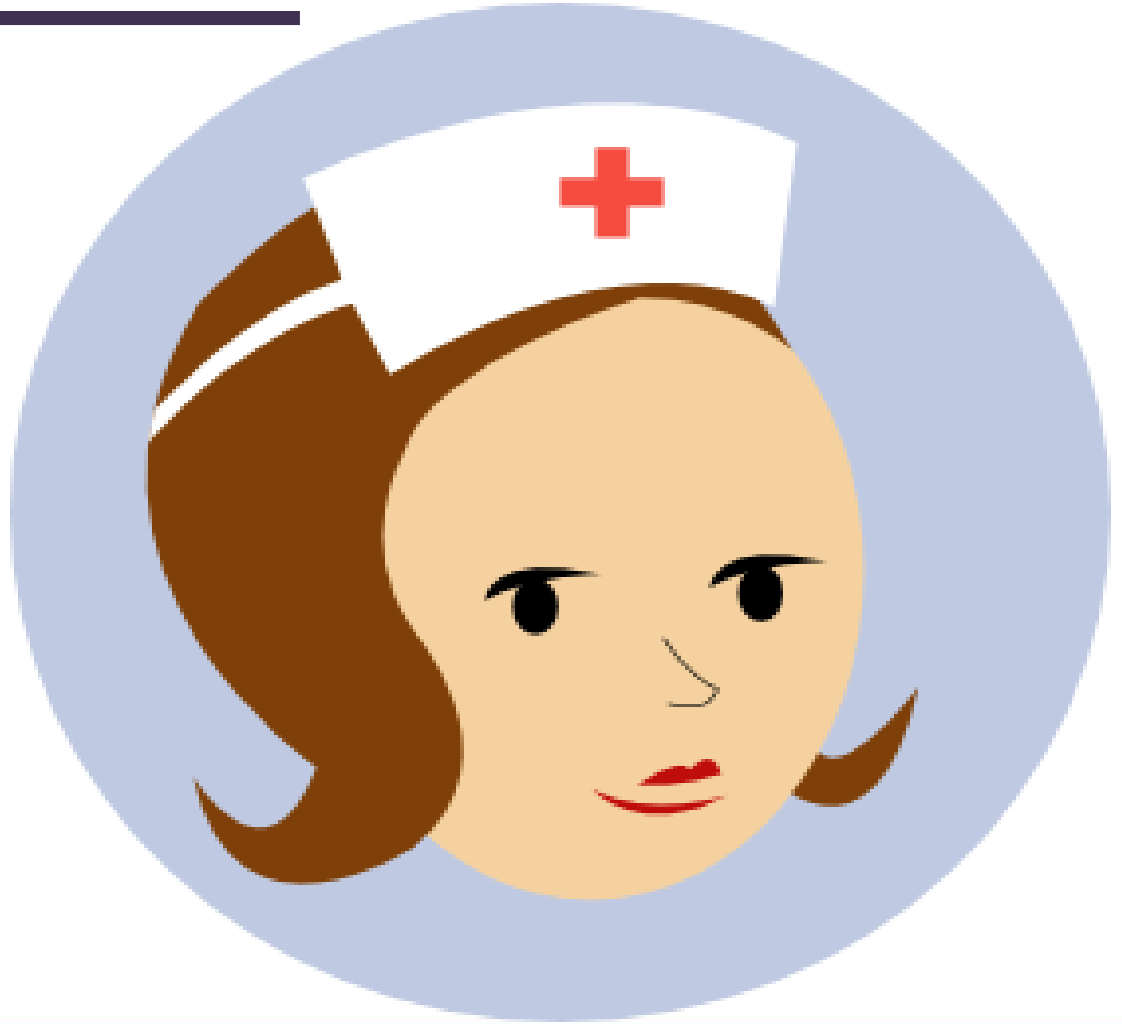
- Respite
- Homecare
- Maintaining own health-mental and physical
- Caregiver support groups
- Delivery services-
 - **grocery**
 - **Pharmacy**
 - **on-line**



Research

- Biomarkers
- Stem Cell Transplant
- Stimulating Repair of Myelin
- T-cell Involvement
- T-cell Suppression Therapies
- Genetics and Cluster Occurrences

Questions?



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Resources

- www.nationalmssociety.org/
- <https://medlineplus.gov/multiplesclerosis.html>
- www.AAN.com
- www.nimh.nih.gov/
- www.neurology.org
- www.ncbi.nlm.nih.gov/
- www.sciencedaily.com/releases/2011/08/110810132848.htm
- www.activemsters.org
- https://www.health.ny.gov/regulations/medical_marijuana/faq.htm
- www.nccam.nih.gov/research
- <https://www.aan.com/Guidelines/Home/GetGuidelineContent/642>
- <https://mssociety.ca/resources/library>
- <http://www.lookingglass.org/>
- www.bing.com/images
- <http://www.activemsters.org/>
- Mymssa.org