Cigarette Smoking and Multiple Sclerosis

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Learning Objectives

• Describe how cigarette smoking contributes to the risk of developing MS and to disease progression in smokers diagnosed with MS.
• Identify the benefits of quitting for people with MS
• Identify one way to work with the MS Society to better help clients with MS quit
• Discuss how strategies to help people with MS quit smoking can be utilized to help other individuals living with disabilities and/or chronic conditions.
Multiple Sclerosis (MS)

- The most common chronic neurological disease affecting the central nervous system (CNS) in young adults

- Characterized by relapses of symptoms, periods of remissions and worsening disability over time.

- The pathology includes inflammation and damage to myelin (covering on nerves) and to nerves
  - Interferes with or stops normal nerve conduction within the brain and spinal cord

Multiple Sclerosis

• Immune system problem
  – Immune system is believed to be the cause of the damage in MS

• Symptoms vary in type and severity and are related to the location and extent of damage
  – Some symptoms associated with a MS relapse may resolve over time
  – Other symptoms are permanent or may worsen over time
Epidemiology of MS

- Estimates indicate 400,000 cases in the United States
- The chances of developing MS are 1:1000 in the general population
- Estimated 2.5 million cases worldwide
- Higher prevalence in those with northern European ancestry
- Highest incidence in Caucasians
- Higher incidence in women (>2:1)
- 3/4 of cases present between ages of 15-45

Symptoms of MS

- Fatigue
- Pain
- Visual impairment
- Impaired gait
- Imbalance
- Elimination dysfunction
- Cognitive changes
- Numbness/Tingling
- Depression
- Spasticity
- Weakness
- Change in coordination
- Swallowing difficulties
- Dizziness
MS Modifiable Risk Factors

• Low Vitamin D
• Obesity
• Smoking
Smoking and MS
(Slides 8-10 courtesy of Bryan Walker PA-C Duke University)

- The prevalence of smoking in patients with MS is thought to be 15-17% [4,5] which is similar to the US population [1]

- In the veteran population may be as high as 28.5% [2]

- Factors related to smoking in patients with MS include: younger age, lower economic/educational background, being single, and lack of available or affordable cessation strategies [3,4,5]

1. https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/
Smoking and MS

• There is strong evidence that smoking cigarettes puts an individual at a higher risk for the development of MS than non-smokers [1,2,3]

• There is evidence that children of smokers are at higher risk of developing MS from passive smoke

• There are also data to suggest a relationship between the length of time smoking and the quantity smoked on disease severity [1]

1. Semin Neurol 2016; 36(02): 103-114
2. https://doi.org/10.7717/peerj.1797
3. Mult Scler July 2016 vol. 22 no. 8 1021-1026
MS and Smoking

• Several studies have suggested that current cigarette smoking will accelerate the time to the progression of disability [1, 2, 3, 4]

• In one study, the rate of acceleration to a progressive form of MS increased by 5% per year with continued smoking [2]

• Current smokers with MS has a poorer reported quality of life and more described disability

2. JAMA Neurol. 2015;72(10):1105-1106
3. JAMA Neurol. 2015;72(10):1117-1123
4. Neurology April 5, 2016 vol. 86 no. 16 Supplement P1.387
The National Multiple Sclerosis Society

- **Vision:** Create a world free of MS

- **Mission:** People affected by MS can live their best lives as we STOP MS in its tracks, RESTORE what has been lost, and END MS forever.
The National Multiple Sclerosis Society

- Funding for MS Research: ~$56 million in 2015
- Nationwide programs and services to support people living with MS to lead their best lives
- Advocacy: Support for policies and legislation that maximize access to care, funding for research and that benefit people with MS
Resources for People Living with MS

MS Navigator Services: 1-800-344-4867

MS Navigators (highly trained human services professionals)

• Locate the information and resources needed to maximize health, safety and independence
• Are trained to deal with crisis situations
• Provide access to comprehensive case management
• Connect individuals living with MS to each other
• Referral to Case Management professionals for comprehensive assistance with community services, legal referral, family support, benefits, etc.
Resources for People Living with MS

Website: nationalMSsociety.org

- Robust website with videos, online courses and resources
- Live Chat with an MS Navigator
- Breaking news about research and treatment advances
- MSConnection.org – social site to connect individuals living with MS to each other
- Calendars of local programs and events
Resources for People Living with MS

Community Programs
– Education, support and social programming

Wellness Programs
– Monthly webinar series on wellness and lifestyle topics
– Wellness Discussion Guide to support conversation between providers and patients
– Local programs: e.g. yoga, aquatics, mindfulness

Support for Families
– Local programs that engage family members

Peer support
– Support through self-help groups, e-mail, phone, online communities, social media and local events
Resources for People Living with MS

**Financial Impact**
- Guidance on resources to help contain the financial impact of MS
- Financial support for students who are enrolled in college or technical school

**Pediatric MS**
- Network of Pediatric MS Centers
- Information for parents, schools
For Healthcare Professionals

Professional Resource Center

Information on comprehensive, interdisciplinary MS management:

- Clinical bulletins and expert opinion papers
- Discussing Difficult Topics with Patients: Literature Series
- Discipline-specific slide decks
- Continuum of Care Guidelines

http://www.nationalmssociety.org/For-Professionals
For Healthcare Professionals

Tools for Clinicians

- Consultations and literature search services
- MS App: Multiple Sclerosis Diagnosis and Management – available on ITunes and the Android app store
- Professional Education Calendar:
- Online Continuing Education programs by discipline

Financial Support for Continuing Education

- Scholarships to attend MS specific conferences

Fellowships and Training

- Post-doc Clinical Fellowships
- Mentorships for Medical Students
- Research Fellowships
How Can NAQC and the MS Society work together?

- Mutual referrals
- NAQC to provide training to MS Navigators
- MS Society to provide information to local Quitlines
- MS Society to provide web-based training to Quitline counselors

Discussion:

What would be most effective in helping smokers with MS to quit?