

Epidemiology of Multiple Sclerosis

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Disclosures

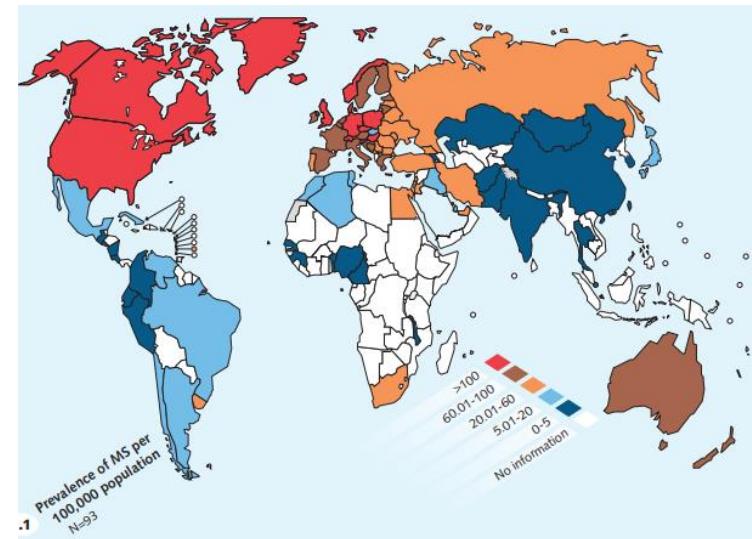
I have no conflict of interest, whether or not related to the content of this presentation.

Learning objectives

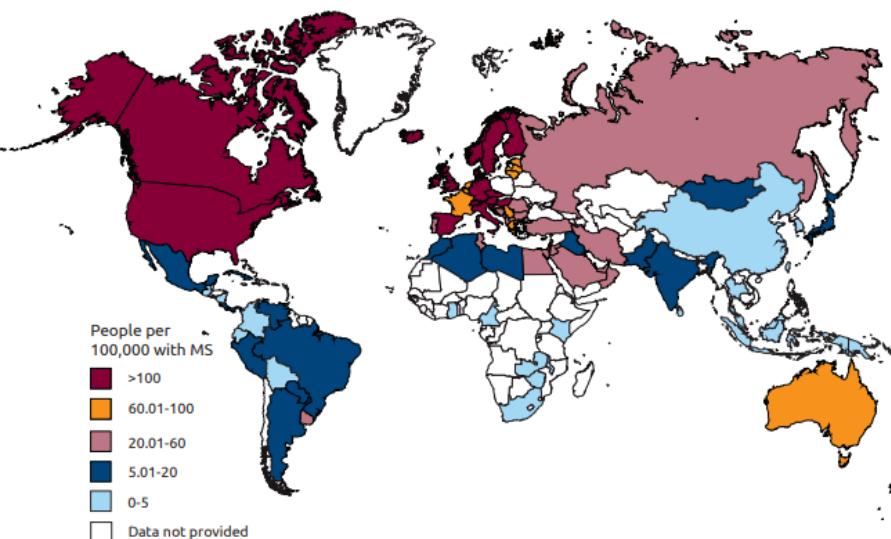
1. To observe that the prevalence of Multiple Sclerosis (MS) is clearly increasing worldwide.
2. To identify the phenotypic distribution and sex ratio of MS across the globe.
3. To investigate the underlying factors contributing to the changing prevalence of MS worldwide.

Worldwide distribution of MS:

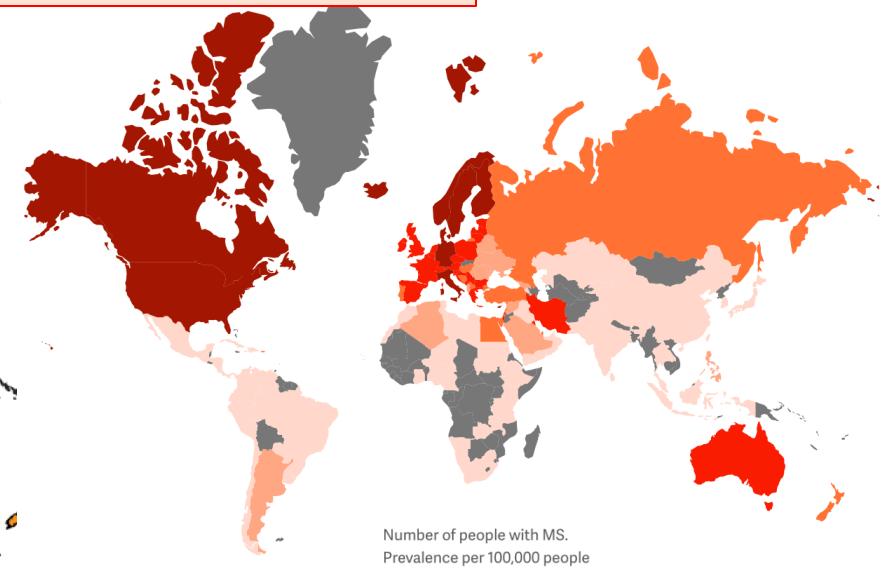
Evidence of rising prevalence (2008-2020)



ATLAS OF MS 2008



ATLAS OF MS 2013



ATLAS OF MS 2020

The number of people with MS around the world (prevalence of MS)



There are 2.8 million people living with MS in the world

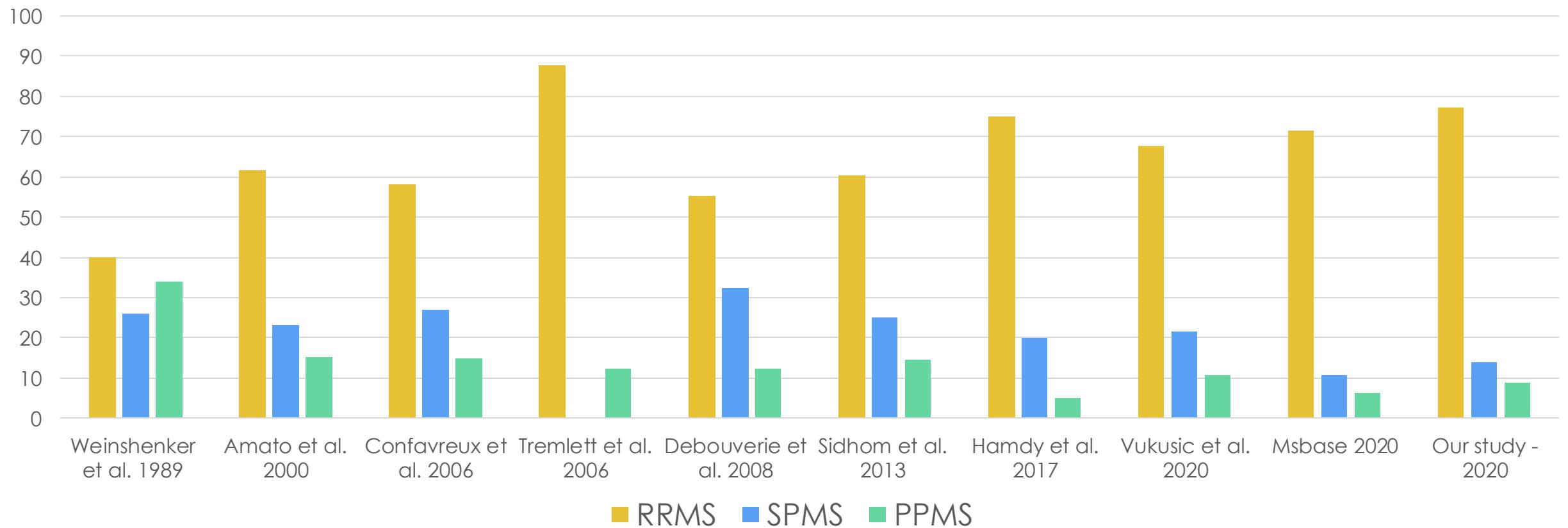
This means that 1 in every 3,000 people worldwide has MS

Global prevalence has increased since the estimate of 2.3 million in 2013

Prevalence has increased in all WHO regions since 2013

ATLAS OF MS 2020

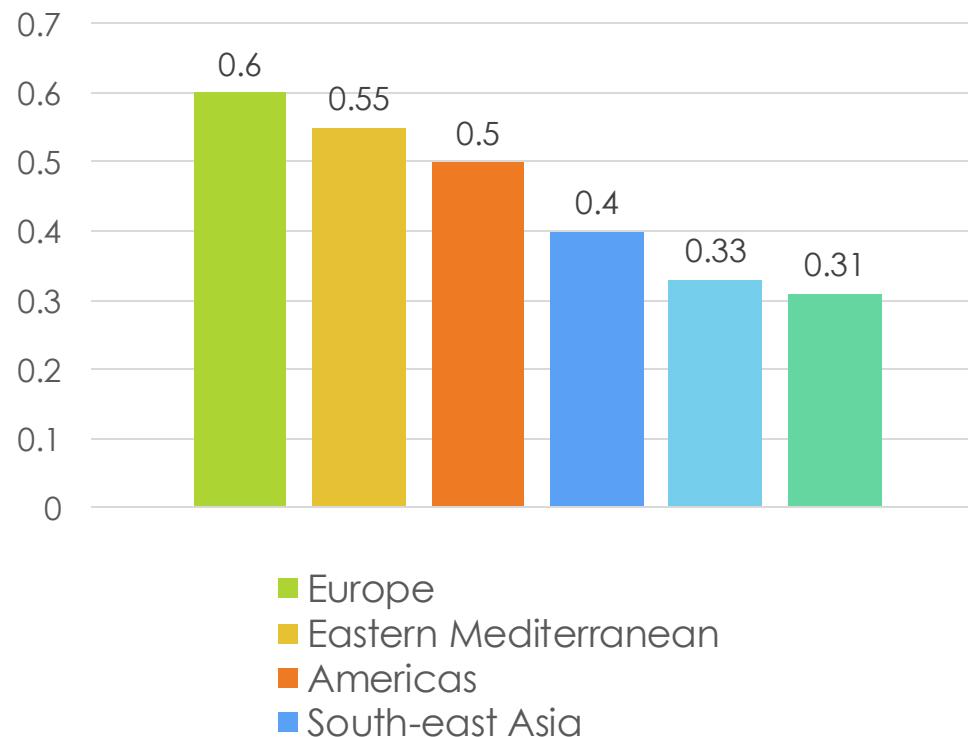
Worldwide distribution of MS: Focus on MS phenotype: relapsing vs progressive



Higher prevalences of relapsing MS worldwide

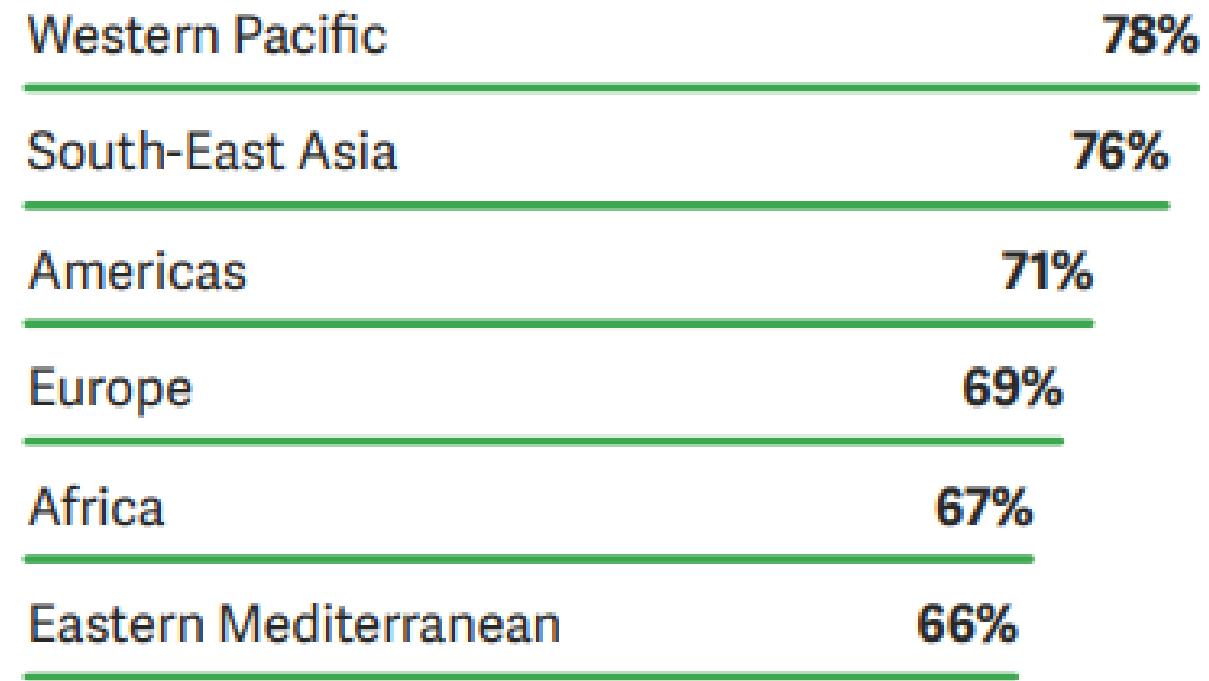
MS prevalence in the world: Focus on the sex-ratio

Male/Female ratio in 2013



ATLAS OF MS 2013

Percentage of people with MS who are female - WHO region



ATLAS OF MS 2020

Higher prevalence of MS among females

MS prevalence is increasing: What is changing?

- **Earlier diagnosis :**

- Advent of Magnetic resonance imaging in the 1980s

- More awareness

Cohen JA. Mult Scler. 2017

- New McDonald Criteria

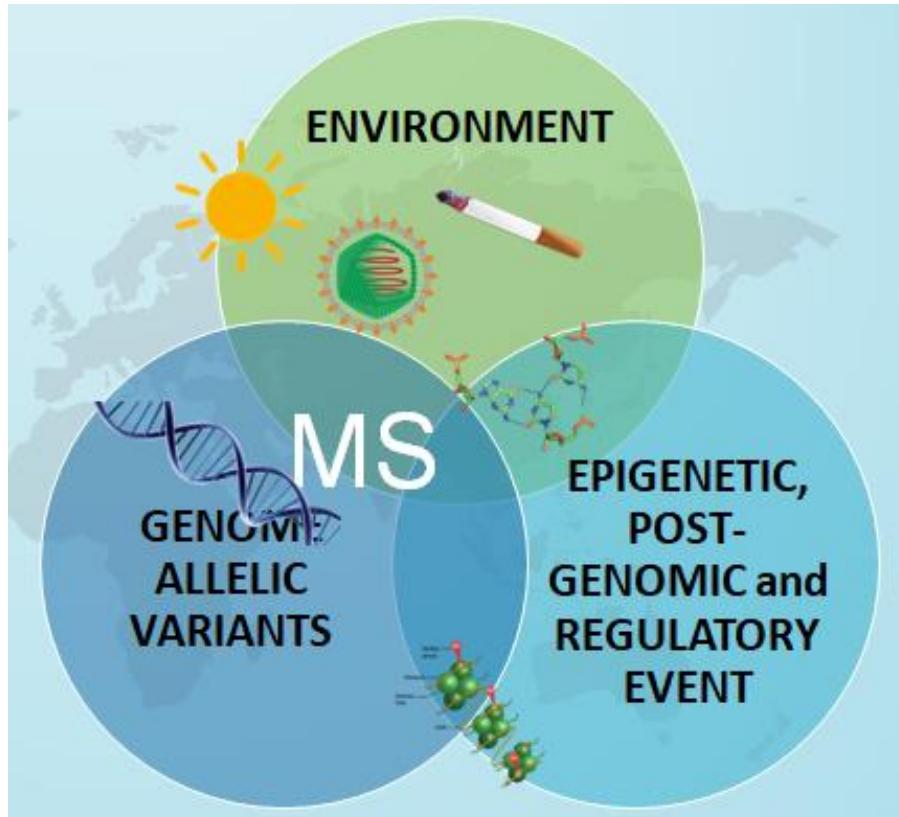
- **Prolonged Survival** → More MS patients reaching older ages

- **Better understanding of MS mimickers**

Marrie RA. Neurology. 2010

Interplay between genetics and environment

Increased MS frequency worldwide and in areas with previously low rates



Oksenberg JR. Expert Rev Neurother. 2013

- Environment:

- Vitamin D deficiency
- Low Sun Exposure
- Higher body weight
- Infections (EBV++)
- Increased Stress
- Increased Smoking