

## Epidemiology and current treatment of multiple sclerosis in Europe today

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**Abstract**—Multiple sclerosis (MS) is a chronic disease affecting the central nervous system, usually leading to early disablement in young adults. At least 350,000 persons in Europe have the disease. Wide variations exist both between and within European countries in the incidence and prevalence of the disease as well as in the general standard of care for MS patients. The needs, well-being, and social participation of people with MS are systematically influenced by their physical and cultural environment and the nature of the community services. Moreover, the rate of introduction of the new disease-modifying therapy also widely differs from country to country. This article helps clinical researchers to understand better the differences in epidemiology and in the current treatment of MS in Europe.

**Key words:** *incidence, multiple sclerosis in Europe, prevalence, treatment.*

### EPIDEMIOLOGY OF MS IN EUROPE

During the past 50 years, more than 150 descriptive studies on multiple sclerosis (MS) in Europe have been published. Despite considerable scientific effort, much of the variations of the distribution of MS found in different European countries may reflect, at least in part, methodological differences in surveys, especially in case ascertainment and selection.

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Most recent descriptive studies based on more appropriate methods contradicted the accepted belief that the distribution of MS in Europe is related to latitude (1). Until 1980, European countries from 36° to 46° north latitude were regarded as having a much lower prevalence rate of MS, about 5 to 25 cases per 100,000, compared to countries of central and northern Europe. This view was mainly based on old surveys done in Italy between 1959 and 1975. More recent studies performed in Italy and in other countries of southern Europe showed that MS prevalence is, in fact, much higher than had been previously believed (2). Therefore, the MS distribution in Europe appears to be more complex than supposed in the past, with great variations not only between areas at the same latitude but also within the countries. There are highly significant deviations from homogeneity, and the high-rate areas tend to be contiguous, forming clusters or foci. In Europe, MS is common in southern Scandinavian but not the north, in the Orkney and Shetland Islands but not the Faroes or Iceland, in Sardinia but not in Greece or Spain, and in Sicily but not in neighboring Malta.

### Scandinavia

The distribution of MS in Scandinavia was studied over several years by Kurtzke (3–5). The high-frequency areas in the north appeared to describe a "Fennoscandian focus," in the southern inland lake region of Sweden. This probably is where MS originated in the early 18th century and diffused across the Baltic states, northern Europe, and other countries (4). Actually, the frequency of this disease is variable, and in some areas, incidences