

Swank History

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About July 1948, I was offered a five-year-long opportunity to investigate Multiple Sclerosis with adequate financing for my family (wife and two children), and three months travel to observe others and their work. I was also given full financial support for my research.

September 1, 1948, I arrived in Montreal and established a home for my family. I spent the rest of the year examining the MS patients at the Montreal Neurological Clinic and researched information in the McGill University library. The four months of intense study of MS led to three possible leads:

1. Usually the onset of severe attacks developed rapidly.
2. The onset of most individual attacks suggested vascular origins.
3. The disease was found worldwide but particularly common in the industrial countries.

During the Second World War several countries in Europe occupied by the Germans had been deprived of much of their fat because it had been shipped to Germany. I elected first to go to Western Europe to see if this change in diet had influenced the frequency of the disease.

In Norway, Professor Monrad Krohn, Chief of Neurology, suggested that he seldom saw cases of MS from along the coast, where fishing was the primary industry, but further inland, where farming was the primary industry, and in the mountains the frequency of MS was more common. He suggested that I see Julia Backer who was in charge of recording the geographic distribution of the disease. She was very interested, and the same day we designed a questionnaire requesting age of onset of MS and its place of onset, among other things. The questionnaires were sent to all hospitals and neurologists in Norway.

I then traveled to Switzerland where it was known that MS was common where German was spoken, and rare where Italian was spoken.

Three months later I received a complete report of the Norwegian study. The existence of MS along the coast was rare (about 1 per 10,000 persons). In the mountains it was more common (about 9 per 10,000 persons).

Based on these and other figures, food consumption studies were done in these areas. In the mountains the rural families lived largely on meat, milk, eggs, and cheese, whereas along the coast, people consumed fish and other food sources found in the ocean.

The Norwegian study confirmed and amplified our previous impression and led to

our low-fat diet study of MS.

By 1950 we had established the low-fat diet maximum of 10 to 15 grams of animal saturated fat daily, plus 20 to 40 grams of unsaturated fat (oils). Protein was largely obtained by eating seafood, plus skim milk. In addition, vegetables, fruits and grains were consumed.

In 1950 no one had developed a low-fat diet. The problem of developing a diet based on our results fell to Aagot Grimsgard and myself. She not only developed a very good diet, but she closely supervised the food consumption of our patients and saw to it that they closely recorded their food intake.

During the first five years in Montreal we saw and examined 250 patients with MS. 150 chose to follow the diet and were followed by Aagot, other dieticians, and myself. Once a year, we traveled to Montreal and spent one month examining patients and checking their diet. During the next 20 years they were also contacted every three months by phone and mail, in which they responded with a record of their diet.

All patients did not follow the diet carefully and records of their diet revealed this. In 1991 a record of progress was published in *Nutrition*. 70 of the 150 patients consumed an average of 17 grams of fat daily, 21% died. Those eating an average of 30 grams of fat daily, 75% died. And those eating an average of 42 grams of fat daily, 81% died.

In the fall of 2000, I traveled to Canada to see the last 14 patients who we are still in contact with from the study that began in Montreal in 1950. Two were unable to walk, but otherwise their body function and mental and communicative abilities were normal. The remaining 12 were ambulant. Two were weak yet able to walk and care for themselves and lived alone. The remaining ten patients were normal physically, mentally, neurologically and very active and normal in appearance. Their ages varied from 72 to 82 years. We will see two others this year.