Letter to Editor

Journal of Nutritional Biology

The Northern Italian Diet Compared to the Mediterranean Diet: Prevalence Rates of Obesity and Diabetes

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Rec date: Apr 26, 2018; Acc date: May 08, 2018; Pub date: May 14, 2018

I am writing in response to your recent articles on the conference proceedings of the World Congress on Nutrition and obesity prevention. I wish to call attention to the data on the prevalence of obesity in Italy, which are some of the lowest in the Western world, and which seem to be relatively stable [1]. The table 1 below shows that the northern part of Italy had significantly lower prevalence of overweight and obesity in 2007 than the southern part of Italy [2].

The Northern Italian diet differs significantly from the Mediterranean diet of the southern part of Italy, being richer in calories, animal fats and meat products than the typical Mediterranean diet. It also uses butter more often than olive oil as a condiment.

For years the Mediterranean diet has been portrayed as one of the healthiest. The concept of the Mediterranean diet reflected "food patterns typical of Crete, much of the rest of Greece, and Southern Italy in the early 1960s" [3]. American biochemist Ancel Keys had first originated the concept of the Mediterranean diet after discovering a high proportion of centenarians in the Cilento area of Southern Italy [4]. However, according to the World Health Organization, Greece only ranked 24th among world countries in 2015 with respect to life expectancy with an average life expectancy for men of 78.3 years and for women of 83.6 years, behind Germany and the United Kingdom. Like many Western countries, Greece is also experiencing an obesity epidemic [5].

With particular regards to type 2 diabetes mellitus, Northern Italy has a very low prevalence of the condition (3.2%), lower than that of Southern Italy (6.3%) [6]. The Mediterranean diet has even been proclaimed an intangible cultural heritage by Unesco in 2013 (Inscription: 8.COM 8.10), supposedly for its great health benefits. The American College of Cardiology promotes the Mediterranean diet on its website claiming that it lowers the risk of diabetes. However, analysis of the available data does not support this conclusion. The table 2 below lists the diabetes type 2 prevalence rates of several countries and of Northern and Southern Italy: as it will be apparent some "Mediterranean" countries (including Greece) have higher prevalence rates than the United States. I therefore feel that we are giving the wrong advice to the public: to follow a "Mediterranean" diet.

We have detailed statistics and the evidence is just not in favor of the Mediterranean diet. I therefore dare to suggest that the diet of northern Italy is better than the Mediterranean diet with respect to diabetes and obesity, despite a higher consumption of meat, animal fat and butter. The cuisine of Provence, Savoy, Corsica and Nice, in France, has

Table 1: Obesity and overweight and obesity rates in the various regions of Italy, expressed as percentage of the total population. The Northern regions have lower rates than the Southern regions. The Southern regions are the home of the traditional Mediterranean diet.

Region	Obesity Rate	Overweight and obesity rate
Piemonte and Val D'Aosta (North)	8.70%	40.20%
Lombardia (North)	8.90%	39.40%
Trentino (North)	8.30%	39.50%
Veneto (North)	9.20%	42.80%
Friuli Venezia Giulia (North)	9.00%	42.70%
Liguria (North)	9.50%	41.70%
Emilia Romagna (North)	10.50%	44.70%
Toscana (Central)	9.60%	42.90%
Umbria (Central)	10.70%	45%
Marche (Central)	10.90%	44.10%
Lazio (Central)	7.90%	43%
Abruzzo (Central)	11.40%	48.10%
Molise (Southern)	12.80%	49.30%
Campania (Southern)	11.10%	50.70%
Puglia (Southern)	11.60%	49.80%
Basilicata (Southern)	12.40%	48.60%
Calabria (Southern)	10%	45.90%
Sicilia (Southern)	10.90%	50.60%
Sardegna (Southern)	9.70%	42.20%
Italy	9.80%	44.40%

Table 2: Prevalence rate (expressed as percentage of the total population) of type 2 diabetes mellitus in Northern and Southern Italy and in various countries, including Mediterranean ones such as Greece, France, Spain, Portugal and Turkey. Several Mediterranean countries have higher prevalence rates than the United States. Surprisingly Japan and China also have higher prevalence rates.

Geographical area	Diabetes prevalence rate	Reference
Northern Italy	3.20%	[6]
France	6.00%	[7]
Southern Italy	6.30%	[6]
United States	9.10%	[8]
Japan	9.6% to 11.9%	[9]
Greece	10.68%	[10]
China	10.90%	[11]
Iran	11.40%	[12]
Portugal	11.70%	[13]
Spain	13.80%	[14]
Turkey	16.50%	[15]

also much in common with that of Northern Italy. As it can be seen from the table above, both China and Japan have surprisingly high prevalence rates of diabetes, and therefore cannot really offer a dietary alternative to the Mediterranean diet.

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