Nutrition in general practice in Italy

Aldo Lupo

ABSTRACT Since the early 1950s the health promoting qualities of the Mediterranean diet (characterized by low intakes of total and saturated fat and high intakes of fiber and complex carbohydrates) have been acknowledged. Unfortunately, this dietary pattern, effective in lowering the risk of coronary artery disease as well as oxidative stress and carcinogenesis, is widespread only in the southern part of Italy, whereas the eating style and morbidity pattern in northern Italy are similar to those in northern Europe. Moreover, trends in eating behaviors in southern Italy are at risk of impairing the comparative advantage given by the Mediterranean diet. The current eating profile in northern Italy and the trend in southern Italy are therefore a suitable field for educational interventions by general practitioners (GPs) to preserve and promote healthier dietary patterns. Nutrition training of GPs does not yet appear sufficient to enable them to tackle this need. The undergraduate curriculum used to include (and no longer does) only an optional course in basic nutrition; little more teaching is added during vocational training. In Piedmont, a northwestern region around Turin, two four-hour seminars for vocational trainees deal with the topics of basic nutrition in children, adolescents, and adults; malnutrition in the elderly; and diet treatment of chronic renal failure. Continuing medical education covers the same topics and a further module deals with diet in the control of diabetes. An effort is needed in the nutritional training of Italian GPs to enable them to give to their patients more than merely commonsense advice. Am J Clin Nutr 1997;65(suppl):1963S–6S.

KEY WORDS General practice, Italy, nutrition education, general practitioner, diet, Mediterranean diet

INTRODUCTION

Italy belongs to a group of countries in which a traditional dietary pattern known as the Mediterranean diet has been described. Operatively defined as the food habit in the early 1960s in Greece, southern Italy, and other Mediterranean regions, the Mediterranean diet is characterized by olive oil as the principal source of dietary fat, a high intake of fruit and vegetables, and a low intake of animal fats and proteins. It is acknowledged as carrying a reduced risk of coronary artery disease and of cancer at several sites; additionally, evidence links the Mediterranean diet to increased health and longevity (1,2).

The awareness of benefits linked to the Mediterranean diet, and somewhat lower mortality rates of coronary artery disease and other possibly diet-related diseases (3–8) in Italy compared with average rates for developed countries, may have contributed to a reduced perception of both Italian doctors and policymakers of the importance of nutritional issues as a public health priority. The National Health Plan of 1994–1996 (9), worked out by the Central Planning Service of the Department of Health and meant to act as a reference guide for the Regional Health Authorities, focuses on several targets (antenatal care, elderly care, prevention and care of cancer, organ transplantation, and care for people with chronic renal failure) but carries no explicit indication about nutritional issues and does not set any target linked directly to an improvement in alimentary habits of Italian people. According to the Health Plan, therefore, neither inadequacies nor need for action seem to exist in Italy as regards nutrition.

AT-RISK EATING PATTERNS

A few elements, however, raise questions about whether Italy is still enjoying a “Mediterranean advantage.” First, a trend has been observed during the past 40 y of an increased intake of animal foods, edible fats, and sugar (10). FAO (Food and Agriculture Organization) food balance sheets show an increase in consumption of animal fat and total meat and in the percentage of total energy available from fat (11) and these data are confirmed by population surveys. In a sample of adults living in a small town in northern Italy, diets were high in protein and fat and low in carbohydrate (12); a sample of 186 teenagers (aged 10–13 y) living in a farming and fishing village in Sicily showed an increase in cholesterol and fat intakes and a reduction in fiber intake (13) compared with the Mediterranean diet as defined in the EURATOM (European Atomic Energy Commission) study (14). A sample of children (aged 7–11 y) living in the surroundings of Milan consumed less carbohydrate and more fat and protein (15) than recommended by the National Institute of Nutrition (16).

Second, different dietary habits coexist in Italy: the analysis of data from the Italian Nine Communities Study on atherosclerosis risk factors showed a large variation in eating habits and nutrient intake (17). The eating profile in northern Italy has never been strictly of a Mediterranean type; a study carried out on a sample of 1400 subjects in northern Italy (in Turin and in the Varese province), where in the early 1960s there had been a considerable migration of people from southern Italy, showed that among the migrants intake of saturated fatty acids and cholesterol was significantly lower and intake of vegetables


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1 Address reprint requests to A Lupo, Via Oddenini 13, 10029 Villastellone, Torino, Italy.
higher than among people born in the North. The different intakes of saturated fatty acids and cholesterol seemed to be attributable mainly to consumption of butter (18). Surveys in Montegiorgio (19), a rural area involved in the Seven Countries Study, and Perugia (20), both in central Italy, showed that in these areas also diet was no longer of a Mediterranean type.

Third, there is evidence of inadequately high intakes of salt in different areas of the country (21). Additionally, a rise in consumption of alcoholic drinks is occurring in youngsters. There are two main drinking patterns in young people (22): on the one hand, daily drinking of moderate amounts of wine with meals, together with their parents, which is consistent with the Mediterranean habit (23), and on the other hand, occasional intake of alcoholic beverages in excess, out of the family and together with peers.

Fourth, a high frequency of increased concentrations of atherogenic serum lipoproteins has been observed, not only in elderly people, as in the 25-y follow-up of the cohorts first examined around 1960 in the Seven Countries Study (24), but also in children. A study carried out in Milan on 650 children showed higher mean total cholesterol and low-density-lipoprotein cholesterol concentrations than in southern Italy but similar to those in other Western countries (25).

Finally, there is an increasing prevalence of obesity and overweight. Data obtained as part of the Italian Household Multipurpose Survey (26) showed an overall prevalence of overweight of 31.6% and of obesity of 6.5% for people aged ≥ 15 y. The study surveyed 25 818 households randomly selected within strata of geographic area, size of municipality, and size of household, and can be considered to be representative of the general Italian population. Data according to age group and geographic area (northwestern, northeastern, central, southern Italy, and islands) are presented in Table 1. Prevalences of overweight and obesity in southern Italy in middle-aged males were as high as 54.5% and 14.2%, respectively; in middle-aged females, prevalences of overweight and obesity in the same area were as high as 44.7% and 16.3%, respectively.

Of even more concern are data from studies of adolescents and children. The prevalence of overweight and obesity in a random sample of 1411 adolescents (aged 12–15 y) in Turin is reported in Table 2 (27) and is consistent with data from other regions. A study carried out in a small rural town in central Italy of 368 schoolchildren aged 7–14 y showed a 17.7% prevalence of obesity (28); in Sicily, a study of 861 children showed prevalences of obesity in 6-, 10-, and 13-y-old children of 6.7%, 18.2%, and 17.7%, respectively (29).

Taking all the above-mentioned issues into account, it seems advisable to plan interventions aimed at restoring—or promoting—healthier dietary patterns (2). Educational efforts should be undertaken mainly by the medical profession and by schools (30), and a substantial part could be carried out by general practitioners (GPs). School-delivered programs of nutritional education have not proved to be able to modify eating behaviors unassisted (31). Whereas clinical nutrition specialists and dietitians deal mainly with nutrition in the management of disease, GPs are in the best position to take advantage of the opportunity of repeated contacts with patients to give advice—especially to adolescents and young adults (12)—on healthy eating. Some concern, however, can be fostered about GPs mastery of the required knowledge and skills.

NUTRITIONAL EDUCATION OF GPs

The average Italian GP—if we do not take into account only doctors eager and able to successfully implement self-directed learning programs—actually comes across scanty learning opportunities during completion of the basic curriculum and during his or her career.

Undergraduate curriculum

Until 1987 medical students used to have in the second year of the undergraduate curriculum the opportunity of attending an optional course of basic nutrition, run by a teacher attached

### Table 1

<table>
<thead>
<tr>
<th></th>
<th>Northwest</th>
<th>Northeast</th>
<th>Center</th>
<th>South</th>
<th>Islands</th>
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<td>OW</td>
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<tr>
<td>Males (n = 24 602)</td>
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<tr>
<td>15–24 y</td>
<td>10.4</td>
<td>0.9</td>
<td>13.7</td>
<td>1.1</td>
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<tr>
<td>25–34 y</td>
<td>28.6</td>
<td>2.6</td>
<td>29.8</td>
<td>4.2</td>
<td>33.0</td>
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<tr>
<td>35–44 y</td>
<td>39.5</td>
<td>6.9</td>
<td>44.9</td>
<td>6.8</td>
<td>46.6</td>
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<tr>
<td>45–54 y</td>
<td>48.5</td>
<td>8.1</td>
<td>50.3</td>
<td>11.3</td>
<td>53.0</td>
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<tr>
<td>55–64 y</td>
<td>49.0</td>
<td>9.6</td>
<td>50.1</td>
<td>11.1</td>
<td>52.9</td>
</tr>
<tr>
<td>65–74 y</td>
<td>42.2</td>
<td>8.0</td>
<td>46.7</td>
<td>11.3</td>
<td>51.1</td>
</tr>
<tr>
<td>≥ 75 y</td>
<td>32.9</td>
<td>7.4</td>
<td>46.2</td>
<td>6.3</td>
<td>41.4</td>
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|          | OW        | O         | OW     | O     | OW      |
|          |           |           |        |       |         |
| Females (n = 26 000) |           |           |        |       |         |
| 15–24 y | 5.3       | 0.6       | 5.7    | 0.7   | 6.3     | 1.0     | 8.9    | 0.3   | 7.0    | 1.2    |
| 25–34 y | 8.2       | 1.2       | 8.4    | 1.5   | 12.2    | 1.9     | 18.4   | 2.1   | 11.5   | 1.3    |
| 35–44 y | 16.1      | 5.1       | 22.3   | 3.9   | 21.4    | 4.1     | 28.3   | 6.8   | 20.8   | 2.8    |
| 45–54 y | 26.6      | 6.3       | 30.6   | 7.3   | 34.7    | 5.9     | 40.7   | 12.0  | 30.7   | 8.5    |
| 55–64 y | 33.7      | 8.7       | 39.7   | 11.3  | 40.6    | 11.4    | 44.7   | 16.3  | 40.6   | 16.4   |
| 65–74 y | 36.6      | 10.2      | 42.1   | 10.7  | 45.6    | 10.5    | 38.7   | 14.8  | 40.5   | 13.6   |
| ≥ 75 y  | 27.6      | 10.8      | 37.0   | 8.4   | 36.1    | 7.4     | 33.8   | 12.0  | 36.2   | 13.8   |

TABLE 2
Frequency distribution of standard weight, overweight, and obesity according to the Cole Index in a study population of 1411 adolescents aged 12-15 y randomly selected from Turin schoolchildren1

<table>
<thead>
<tr>
<th></th>
<th>Standard weight</th>
<th>Overweight</th>
<th>Obesity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males (n = 715)</td>
<td>268 (36.8)</td>
<td>276 (39.0)</td>
<td>171 (24.2)</td>
</tr>
<tr>
<td>Females (n = 696)</td>
<td>300 (42.5)</td>
<td>264 (38.3)</td>
<td>132 (18.2)</td>
</tr>
</tbody>
</table>

1 Modified from reference 27.

to the Human Physiology Chair; an informal request of data about attendance rates addressed to the Secretariat of the Medical Faculty in Turin showed that the course was never attended by > 10% of students. In 1987 a reform of the medical curriculum (referred to in Italy as the “18th Table”) resulted in the cancellation of this basic nutrition course and since then no other teaching of the subject has been provided at the undergraduate level.

Postgraduate education

Vocational training (VT) and continuing medical education (CME) for GPs are run on a regional basis. I will refer here to the situation in Piedmont (northwestern Italy, around Turin), which is approximately representative of the whole country, because the training of VT tutors and CME facilitators was developed by the Italian College of General Practitioners on a common nationwide basis and teaching programs are to some extent interchanged between regions.

During VT, mandatory in Italy since 1994, trainees attend two 4-h seminars on nutritional issues; the first deals with the basic principles of nutrition and with nutrition in childhood and adolescence, the second with malnutrition and dietary treatment of chronic renal failure. Questionnaires completed during these seminars, informally assessed as an indication of the need to deepen the coverage of topics unsatisfactorily mastered by trainees, have shown poor knowledge of some basic aspects of nutrition, especially the nutrient and energy content of foods and the principles for modification of the basic dietary pattern in the presence of disease.

The standard module of CME for GPs in Italy is a 4-h session, run on Saturday mornings and structured according to the principles of learner-centered and procedural knowledge-based training. The two topics mentioned for VT are dealt with in two CME sessions as well, and a further 4-h session is devoted to dietary treatment of diabetes in primary care. CME is stated to be compulsory in GPs’ contracts, but no penalty is provided for those who do not attend. Attendance rates therefore tend to be unsatisfactory, usually ~40–50% of GPs. As a consequence, a substantial number of GPs do not receive any structured teaching about nutrition.

Other educational interventions

The most thorough and widespread attempt to inform doctors about dietary issues was carried out in 1990 (16, 32) by the National Institute of Nutrition. Every GP was sent a package containing a booklet with tables of food nutrient contents, a booklet with the recommended dietary intakes of nutrients for the Italian population (proposed by the same institute), and a book reporting basic scientific evidence on nutrition and feeding guidelines for healthy Italian-style eating. The guidelines focused mainly on the following items: the relation between body weight and health, dietary fats, carbohydrate, fiber, salt, alcohol, and the need for a varied diet. The package was accompanied by leaflets for patients, listing the same guidelines and translating concepts on healthy eating into more practical tips: the section on food variation showed a six-group approach (meat, fish, and eggs; milk, dairy products, and cheese; bread, pasta, rice, cereals, and potatoes; legumes; fats; and fruit and vegetables) that appeared only in the leaflets and not in the basic book for GPs.

The effect of this initiative on doctors’ behavior has perhaps not proved to be as strong as could be wished. Should a repetition of the intervention be planned, improvement could be achieved by a closer link with the educational activities promoted by the Italian College of General Practitioners.

CONCLUSION

Current eating patterns in many Italian regions and the trend toward abandoning traditional dietary habits in southern Italy call for educational interventions aimed at promoting healthier eating behaviors. Health-promoting activities should actively involve GPs but their nutritional education is currently inadequate and needs substantial improvement.

Considering what is currently done in other countries about GP nutritional training, future attempts to improve GPs’ skills in Italy should certainly aim at increasing GPs’ knowledge of the principles of nutrition, but also at enabling them to perform a basic diet assessment and give practical advice based on foods rather than on nutrients. Regarding the latter point, teaching based on the four food group approach (33, 34) or the dietary pyramid model (35) could be implemented.

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REFERENCES