

Lessons of healthy lifestyle with the Science in the Kitchen

Donatella Lippi, Francesco Sofi, Alessandro Casini, Rosanna Abbate, Gian Franco Gensini

Dipartimento di Medicina Sperimentale e Clinica, Università degli Studi di Firenze

Summary. Lifestyle behaviours such as healthy diet, physical activity and abstinence from tobacco smoking are widely known to be significantly associated with reduced occurrence of chronic degenerative diseases. Actually, a growing interest on wellness and lifestyle-related habits for prevention of disease and maintenance of good health status has been recently reported. A holistic approach to the health, which include not only risk factor's management but also some lifestyle measures as sleep quality, meditation and stress are placing a relevant role in the recent preventive medicine. Nevertheless, the interest on these lifestyle behaviours is something that comes from the ancient Medicine, since one of the most famous attributed to Hippocrates statements is "if we were able to furnish the optimal dose of nutrients and physical activity we would have found the right way for health". Aim of this paper is to highlight the contribution of Pellegrino Artusi, who, in 1891 published his masterpiece "Science in the Kitchen and the Art of Eating Well". Some statements reported in this book need to be restored and remembered in the light of this increasing interest on lifestyle habits for the prevention of disease in the modern society.

Key words: Lifestyle, food, prevention

«LEZIONI DI STILI DI VITA CON LA "SCIENZA IN CUCINA E L'ARTE DI MANGIARE BENE"»

Riassunto. Gli stili di stile di vita come la dieta salutare, l'attività fisica e l'astinenza dal fumo di tabacco sono ampiamente noti per essere significativamente associati ad una ridotta insorgenza di malattie croniche degenerative. In realtà, l'interesse sul benessere e sugli stili di vita per la prevenzione delle malattie e il mantenimento di un buono stato di salute non è qualcosa di recente, poichè già nell'antichità la Medicina poneva grande attenzione a questo aspetto. Infatti, una delle affermazioni più famose di Ippocrate è "se fossimo in grado di fornire la dose ottimale di sostanze nutritive e di attività fisica avremmo trovato il la strada per la salute". Un approccio olistico alla salute, che comprende non solo la gestione del fattore di rischio, ma anche alcune misure di stile di vita come la qualità del sonno, la meditazione e lo stress stanno ottenendo un notevole rilievo nel campo della medicina preventiva. Scopo di questo lavoro è quello di evidenziare l'immagine di Pellegrino Artusi, il quale nel 1891 ha pubblicato il suo capolavoro "La scienza in cucina e l'arte di mangiar bene". Alcune dichiarazioni riportate in questo libro hanno bisogno di essere riprese e ricordate alla luce di questo crescente interesse sulle abitudini di vita per la prevenzione della malattia nella società moderna.

Parole chiave: Stili di vita, alimentazione, prevenzione

Introduction

The risk of developing a major non-communicable disease, the leading cause of death in the world, is decisively affected by lifestyle choices (1). Smoking, physical inactivity, unhealthy diet, obesity and other lifestyle

behaviours are associated with the development of diseases such as cancer, cardiovascular and metabolic diseases (2). Over the last few years, a growing interest on wellness and wellness-related behaviours for the maintenance of a good health status and a better prevention of chronic diseases has been reported. An

integrative approach that include also some “novel” measures such as quality and quantity of sleep, meditation and stress came to the attention of physicians and researchers (3,4). However, the attention to all these preventive strategies for an optimal health started from the ancient medicine.

Historical background

In the Hippocratic medicine, health was considered a sort of balance (*eukrasia*) of four humours (blood, phlegm, yellow bile and black bile), which were influenced by many aspects of life, in strict link with the environment. In the 2nd century, Galen merged Hippocratic theories giving birth to a following literary genre, the *Regimina sanitatis* (health rules), which were structured as practical and professional works that entered into everyday life. In this genre, the individual was placed at the centre of a very complex system in which two sets of factors play a role: *res naturales* and *res non naturales*, i.e. elements inside and outside the body, that could interact positively or negatively, influencing health status (5). The *Regimina* usually began by illustrating the effects of the environment on humans. This set of factors was defined as *aer*, but the concept was far broader and encompassed the entire ecosystem: the environment, the winds, the home and clothing. Physical exercise (*motus* vs. *quies*) was considered fundamental and included not only an exercise for performance but also *exercitia* for pleasure. Furthermore, other lifestyle measures were taken into consideration. For example, the relationship between sleep and wakefulness (*somnus* and *vigilia*) and inanition/repletion (*inanitas/repletio*), was also relevant. While no mention is made of the emotions tied to sexuality, the *passiones* played an important role, as they generate somatic alterations.

Diet and health: is it a matter of today?

The Greek word *δίαιτα*, *diaita*, lit. “diet” derives from the verb *ζῶω*, *zào*, that is “to live”. Differently from the modern concept of the term, which relates to the meaning of a specific dietary profile used for losing weight, the old meaning was far broader, encompassing

all the areas that were not determined automatically by nature and that humans thus had to plan of their own accord (6). Indeed, dietetics was one of the three main branches of ancient medicine, alongside surgery and pharmacology (7). The importance of food (*cibus/potus*) was never neglected, but in recent times, thanks to many scientific evidence and to sanitary information, a revival of interest in lifestyle health care has spread again, encompassing also other aspects of life, whose roots can be found in the past: sports and exercise (*motus/quies*), rest and relax (*somnus/vigilia*), yoga and meditations against stress (*passiones*), spas (*inanitas/repletio*), reformed smoking and condemn of pollution (*aer*).

The new dietetics developed during the 19th and early 20th centuries into the science of nutrition and it was used as a resource for government at a time when population thinking and management practices became increasingly central to the modern state: it provided also the basis for government intervention in dietary practices and in expert contributions to the definition of a healthy diet (7).

Pellegrino Artusi: the science in the kitchen

Like a Karst river, which may disappear underground a number of times and spring up again in different places, the old attitude towards health and the old dietetics seemed to have been faded away, but they were well covered in Italy, in the late 19th century. The government of the new-born State, in fact, was worried about the strength of Italian population, where deep differences highlighted old historic and social disparities, wrong alimentary beliefs and behaviours and it became necessary to educate people to follow a different life style. The only way to make this kind of advertising was to instruct women at first, who had the task to prepare food and manage family’s life. Many doctor addressed their suggestions to housewives, providing sanitary recommendations as far as the breeding of the children and the hygienic rules to prevent contagious diseases were concerned.

These booklets, however, had a limited diffusion, as the most of Italian population was functionally illiterate. It is generally acknowledged that family doctors and parsons had a very important part in spreading these

concepts, but the role of Pellegrino Artusi was till now neglected: in 1891, two decades after Italy's unification, Artusi published his masterpiece "Science in the Kitchen and the Art of Eating Well," the first cookbook to include fundamental recipes of many Italian regions and give a unitary vision to Italian cuisine (8).

Artusi was born in 1820 in Forlimpopoli, a small town in Romagna at that time part of the Papal States; he lived there until 1851 and worked as merchant, taking care of the family grocer's shop. He then moved to Florence, where, thanks to the success of his activities, he could dedicate himself to his passions, literature and gastronomy: in 1891 he published at his own expenses, his cookery handbook and collection of recipes, which rapidly became very popular as it is demonstrated by the 15 editions printed up to the death of Artusi in 1911. The fourteenth edition, published in 1910, included a part about cooking for people with weak stomachs. Artusi experimented all the recipes with the help of his servants, Francesco Ruffilli and Marietta Sabatini and his book, an expression denoting a positivist approach to the craft of cooking, was in fact the result of various culinary experiments following Artusi's praise for the scientific method. Science in the kitchen and the art of eating well is still today a text of reference for Italian home cooking and it has been translated into many different languages.

Scattered in Artusi's book there are many details which confirm his wide knowledge of Medicine and Physiology, but the pages he placed at the very beginning of his work, quoting also the poet Lorenzo Stecchetti, confirm the survival of the health rules provided by the Middle Ages *Regimina Sanitatis*, which also give the possibility of a comparison with current medical evidence.

Lessons from the past...

By reading the masterpiece by Pellegrino Artusi some statements that have a relevance also for the modern preventive medicine.

The first statement reminds us the high target of the book's readers:

A conscientious doctor would say: have fun, amuse yourself, take frequent walks in the open air, as much of

your strength permits, travel in good company, if you can afford, and you will feel better (p. 14).

As far as *aer* is concerned, Artusi affirms: *First of all, as concerns wardrobe, I turn my attention to Ladies, and perhaps mothers, by saying: start dressing your children lightly, from infancy; when they will grown up, they will be less sensitive to sudden changes of the atmospheric temperature and less sensitive to colds and bronchitis. In winter do not let the stove raise the heat in your apartment higher than 12 or 14 Celsius degrees and you will probably be safe from pneumonia, which has become so prevalent during these days.*

Try to live in healthy houses, full of light and well ventilated: illness flees where the sun shines in... (p. 15).

Regarding the relationship between *motus* and *quies*, Lorenzo Stecchetti, quoted by Artusi, stated: *God bless bicycle, which lets us know the joys of a hearty appetite! Let us go out in the open air, into the free-flowing, healthy air! It reddens the blood and strengthens the muscles! (p. 10).*

"Exercise" (Artusi quotes Agnolo Pandolfini) is also taken into consideration, with the sentence: *Preserves life, kindles the body's natural warmth and vigour, skims off excess and harmful material and humours, fortifies every faculty of the body and of the nerves. It is necessary for the young, useful for the old. Those who does not exercise, does not wish to live in health and happiness" ... (p. 18).*

*Up at six, lunch at ten, dinner at six, in bed at ten makes a man live ten times ten: with this rhyme, Artusi refers to *somnus et vigilia*: As for sleep and rest, these functions are entirely relative and should conform to the needs of the individual, since we are not all made in the same way... (p. 20).*

As far as the duo *inanitas/repletio* is concerned, a hint could be found also in Pandolfini's abovementioned statement, but Artusi went further on: *Stay away from laxatives, which are disastrous if used frequently: they should be taken very rarely, and only when absolutely necessary... deplore those pitiful mothers, who, in an excess of maternal sentiment, keep a watchful eye over the health of their little ones for ever... (p. 19).*

It's not by chance that many terms, which can be related to this semantic field, regarding *passiones*, have entered into Artusi's book: *Nervous and oversensitive persons, especially of idle and apprehensive, imagine themselves as having a thousand ills that, in actual facts, exist only in their imaginations* (p. 13).

Is it any wonder, then, that among women one finds so many hysterics, neurotics and anaemic? (p. 15). *The blame, no doubt, must lie with the tyrannical sway of the brain now holds over all the organs of the body. They are all nerves, neuroses, and neurasthenia* (p. 10).

The worrying for the degeneration of the race comes to the surface: *The height, chest-size, strength and reproductive powers of this ingenious, rachitic breed of sages and artists, all refinement and glands, are in daily decline. Indeed, they do not even eat, but rather overstimulate themselves and keep going by dint of coffee, alcohol and morphine. Thus, are the senses that direct the brain's functions deemed nobler than those that preside over self-preservation—and the time has come to right this unjust verdict.*

The concept of prevention is encompassed in the aphorism attributed to the Emperor Tiberius: *Men after the age of thirty-five, should no longer have any need of doctors, having gained so much experience about themselves to know what things are harmful and beneficial to them. By means of a good diet, one should be able to govern him in such a way as to keep his health in perfect balance* (p. 13).

The duo *cibus/potus*, that is food and drink, is dealt with in the whole book, as he provides general suggestions and detailed prescriptions as well, in the single recipes: *Don't let yourself become a slave of your stomach; it's a capricious organ that takes offense for naught and seems to take special pleasure in tormenting those who overeat* (p. 17).

In the recipe of Spaghetti allay Rustica (*Recipe nr. 104, Rustic spaghetti*), for instance, Artusi wrote a short introduction about garlic, explaining the reasons of its beneficial use:

The ancient Romans left garlic to the down and out, while King Alfonse of Castile abhorred it to the point that he would punish anybody who dared appear at court with

its odour on his breath. Wiser were the ancient Egyptians, who venerated it as a god, perhaps because they had discovered its medicinal qualities. Indeed, it's said that it provides relief to those suffering from hysteria, promotes the secretion of urine, bolsters the stomach, aids in digestion, and, since it cures worms, is a preventive against endemic and epidemic diseases ...

Conclusions

These behavioural rules, which were formulated in the centuries of the Middle Ages, have never disappeared from medical and non medical culture, as Artusi's book shows: the medical system of the medieval *Regimina sanitatis* was preventive as it was concerned with the preservation of health.

Fascinating, the six non-natural factors do not seem to have lost their topicality up to day: *"The lethal diseases of the modern industrial age, most prominently cardiovascular disease and cancer, have been shown to be intimately bound up with sociocultural and personal intentionality; that is, lifestyle, emotions, environmental agents, habits of diet, drug use and exercise"* (9).

In the light of modern scientific research, they still deserve special attention: new insights can be gained from a detailed investigation of the influence of environmental factors, the necessity of physical exercise, the regulation of phases of sleep and wakefulness, purging the body, emotion and states of the mind, food and drink.

References

1. World Health Organization Study Group. Diet, Nutrition, and the Prevention of Chronic Diseases. Geneva, Switzerland: World Health Organization; Technical Report Series, 916, 2003.
2. Loeff M, Walach H. The combined effects of healthy lifestyle behaviours on all cause mortality: a systematic review and meta-analysis. *Prev Med* 2012; 55: 163-170.
3. Sofi F, Cesari F, Casini A, Macchi C, Abbate R, Gensini GF. Insomnia and risk of cardiovascular disease: a meta-analysis. *Eur J Prev Cardiol* 2012; doi: 10.1177/2047487312460020
4. Fjorback LO, Arendt M, Ornbøl E, Fink P, Walach H. Mindfulness-based stress reduction and mindfulness-based cognitive therapy: a systematic review of randomized con-

- trolled trials. *Acta Psychiatr Scand* 2011; 124: 102-19.
5. Emch-Dérian A. The non-naturals made easy. In: *The Popularization of Medicine 1650-1850*. Ed. Roy Porter. London: Routledge, 1992; 134-159.
 6. Dáita. The rules of health in the manuscripts of the Biblioteca Medicea Laurenziana. Edited by Donatella Lippi, Mandragora, Firenze 2010.
 7. Edelstein L. The Dietetics of Antiquity. In: *Edelstein, Ancient Medicine: Selected Papers of Ludwig Edelstein*. Ed. Temkin O & Temkin CL. Baltimore, MD: The Johns Hopkins Press, 1967; 303-316.
 8. Artusi P. *Science in the Kitchen and the Art of Eating Well*. Baca M, Sartarelli S. Ed. University of Toronto Press. Toronto, 2003. 1st edition, *La scienza in cucina e l'arte di mangiar bene*. Landi, Firenze 1891.
 9. Rather LJ. The six things non-natural: a note on the origins and fate of a doctrine and phrase. *Clio Medica* 1968; 3: 337-47.

Indirizzo per la corrispondenza:
Dott. Francesco Sofi
Dipartimento di Medicina Sperimentale e Clinica, Università degli Studi di Firenze
E-mail: francescosofi@gmail.com