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Chapter

Lifestyle Factors and Obesity

Anca Mihaela Hâncu

Abstract

Obesity, with growing prevalence around the world, is a disease and a major risk factor for noncommunicable diseases and death. Lifestyle medicine integrates modern lifestyle practices with scientific evidence-based medicine in order to lower risk factors for chronic diseases and to support therapy if the disease is already present. Considering adiposity-based chronic disease conceptual model and new abdominal obesity classification, this article intends to describe healthy lifestyle pillars that must be considered in obesity prevention and treatment. Right nutrition, regular physical activity, optimal sleep, moderation in alcohol consumption, absence of smoking, and mindfulness should be considered in the effort to prevent and treat obesity. Doctor-patient partnership, patient empowerment, and doctor as a role model will complete the basic principle of lifestyle medicine.

Keywords: lifestyle medicine, obesity, overweight, physical activity, sedentarism, nutrition

1. Introduction

Obesity prevalence is growing around the world, since 1975 it has increased by 300%. According to WHO, in 2016, overweight people were 2 billion and obese 650 million, meaning 39% overweight and 13% obesity around the world [1]. In 2020, worldwide, 39 million children under the age of 5 were overweight and obese and for the group between 5 and 19 years, more than 340 million children were overweight or obese [1]. In the USA, there are more recent data, from The National Health and Nutrition Examination Survey, evidenced by the US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics [2]. According to CDC, in the USA, in 2017–2018, the age-adjusted prevalence of obesity was 42% for adults, without significant differences between men and women. For severe obesity, age-adjusted prevalence is 9.2%, but higher in women vs. men. The age group 40–59 includes the highest prevalence of severe obesity.

1.1 Health concerns associated with obesity

Overweight and obesity represent major risks for noncommunicable diseases (NCDs), linearly correlated with BMI.

- cardiovascular diseases (CVDs) are the leading cause of death, ischemic heart disease representing 16% of total mortality globally in 2019, according to WHO [1].

- diabetes, the ninth position in mortality causes in 2019 [1]
- musculoskeletal disorders
- some cancers—breast, endometrial, ovarian, livers, prostate, gall-bladder, colon, and kidney.

Children's obesity is facing breathing difficulties, hypertension, insulin resistance, higher fractures risk, and psychological effects. Moreover, childhood obesity is correlated with a higher risk of obesity, premature death, and disability in adulthood.

The double burden of malnutrition and obesity is characterizing low- and middle-income countries. Infectious diseases, together with undernutrition, are common; meanwhile, an increase in risk factors such as obesity and overweight can be seen in urban settings. Co-existing undernutrition with obesity is common in the same community, where inadequate dietary patterns combined with lower levels of physical activity have increased childhood obesity in conjunction with an unsolved undernutrition issue.

2. Lifestyle medicine (LM) definition

Described for the first time by the famous Professor James Rippe, cardiologist, in 1989, lifestyle medicine is defined as:

"The integration of lifestyle practices into the modern practice of medicine both to lower the risk factors for chronic disease and/or, if disease is already present, serve as an adjunct in its therapy. Lifestyle medicine brings together sound, scientific evidence in diverse health-related fields to assist the clinician in the process of not only treating disease, but also promoting good health" [3].

3. Obesity new conceptual model

Prof Mechanick introduced, some years ago, a conceptual model that is adiposity-based chronic disease (ABCD), with four stages. The first stage means the risk—genetics, environment, and behavior. The second is when can be noticed an increased amount of adipose tissue with abnormal distribution or function. The disease is named in the third stage, diagnosed by biochemical, anthropometrical tests, measured by body mass index. The fourth stage associates cardiometabolic and biomechanical complications. ABCD is a part of cardiometabolic chronic disease stages that develop through dysglycemia-based chronic disease (DBCD) and cardiometabolic-based chronic disease (CMBCD). This is the new frame describing all metabolic interrelations and evolution through obesity [4]. This is a more comprehensive model to define obesity and explain its treatment.

4. Bioimpedance

The use of bioimpedance to measure tissue's resistance during the passage of low-intensity electric current, based on the principle of variation of the rate of passage of electric current through the body in relation to body composition is widely used, is a good tool in clinical practice. This analysis is offering almost good data about body composition and may be a good tracker of treatment performances [5].

BMI kg/m^2	WC—women (cm)	WC—men (cm)
18,5–24,9	≥80	≥90
25–29,9	≥90	≥100
30–34,9	≥105	≥110
≥35	≥115	≥125

Table 1.
Abdominal obesity classification, adapted after [6].

5. Abdominal obesity classification

A new classification is proposed since February 2020 (**Table 1**) [6].

For each BMI category, another level of waist circumference WC is recommended to identify abdominal fat (adapted after reference [6]) in order to have a more reliable picture of the abdominal distribution of fat.

6. Eating behaviors General indications for people with obesity

This is emphasized by guidelines: European Association for the Study of Obesity EASO 2019 guidelines are emphasizing the importance of eating behaviors [7]. The energetic density of the food should be decreased by eating a lot of vegetables and fruits, within the limit of five portions. Eating less refined carbohydrates and less fatty foods, especially saturated fats and small portions, may support these indications EASO guidelines recommend:

1. To avoid skipping meals but also snacking continuously between meals,

2. Eat slowly, in order to facilitate the satiation sensation that will appear after 20 min,

3. Eat in response to your hungry sensation and stop eating when you feel full,

4. Keep a diary in order to increase awareness of eating habits, and

5. Eating mindfully—slowly, responsible, taking a relaxing moment, sitting down at the table, observing emotions, paying attention to taste, texture, flavor, and temperature of the food.

7. Eating disorders

It describes a group of mental illnesses characterized by disturbed feeding behavior and body weight regulation, compromising key physiological systems, including cardiovascular and gastrointestinal functions [8]. They are as follows:

- anorexia nervosa (AN)

- bulimia nervosa (BN)

- binge eating disorder (BED)

- other unspecified or specified eating disorders that do not fit within these diagnoses.

The shared symptoms for eating disorders are caloric restriction, binging, purging, over-evaluation of body weight.

Detailed anamnesis should reveal these symptoms and a multidisciplinary approach with a psychologist/psychiatrist should be performed in such situations.

8. Nutrition for a healthy lifestyle in treating and managing obesity

Modern nutrition emphasizes that not only singular food or nutrient is important, but also the combination of nutrients in different foods and dishes. That means healthy models will be used instead of pointing out single nutrients.

9. A healthy model

A healthy model, the latest 4-year winner, as the best nutritional model (US News and World Report 2021) is a Mediterranean model (Med Diet).

Mediterranean model: Like was firstly described by Ancel Keys on the occasion of Seven Countries Study, Med Diet is a plant-based diet, with abundant seasonal vegetables, fresh fruits as deserts, olive oil as the main source of fats, fish for 2–3 times/week, regularly nuts and seeds, daily whole cereals, dairies many times per week, red meat only rare, spices and herbs for tasty recipes. The important feature is unprocessed food cooked at home or in small restaurants, in antagonism with the Western diet, characterized mainly by highly processed food [9]. The uniqueness of this model derives from the combination of biologically active foods, with the right proportion between sources of fat, proteins, starches, fibers, minerals, vitamins, and bioactive compounds.

9.1 What are the mechanisms supporting these benefits? Several clinical pathways and molecular mechanisms have been studied, suggesting beneficial changes induced by this dietary pattern

Oxidative stress reduction and anti-inflammatory properties are attributed to bioactive components of food. The high content of polyphenols and low diet inflammatory index (DII) are correlated with all benefits. For example,

- DNA methylation and tumor suppressors are associated with polyphenolic compounds found in grapes, peanuts, extra virgin olive oil (EVOO) [10].
- Anthocyanins—pigments found in eggplants, berries, pomegranates, cruciferous stimulate DNA repair mechanisms [11].
- Fisetin is a flavonoid contained in strawberries, apples, cucumbers, which prevent cancer growth [12].
- Sulforaphane from cruciferous vegetables exerts epigenetic actions through histone deacetylase enzyme inhibition [13].
- A key mechanism explaining Med Diet benefits is gut microbiota, an important player in the relation health/diet, particularly through short-chain fatty acids (SCFAs) metabolites derived from microbial fermentation. Decreased Firmicutes and increased Bacteroides and fecal SCFAs are in line with high adherence to Med Diet, conversely for a healthy microbiota. High SCFAs lead

to increased production of butyrate, acetate, and propionate [14]. High-fiber content is another hallmark of the Med Diet. It has to be mentioned that 2 h of psychological stress may change completely gut bacteria. Butyrate-producing bacteria are increasing the quality of life.

9.2 Studies supporting med diet

Historically, the first study was done in the years 50, Seven Countries Study, which launched the concept defined by Angel Key, Med Diet. Later, Predimed, SUN, and LION are studies that proved different benefits of this eating model.

9.3 Benefits

Benefits proved already in significant studies mentioned before are increased longevity, cardiovascular protection, diabetes decreased incidence, diabetes management, prevention of cognitive decline, dementia, depression, obesity, metabolic syndrome, chronic respiratory diseases but also impact on sustainability [15].

Important in obesity management and higher Med Diet adherence, realized in participants from EPIC-PANACEA study, showed lower weight gain at 5 years vs. participants with low adherence, but also the risk of becoming obese decreased by 10% [16].

Not only a diet, but a lifestyle model, Med Diet means daily consumption of whole grain products, various fresh vegetables and fruits, nuts, seeds, and legumes several times per week. The main source of fat is olive oil and adding herbs and spices will help to decrease salt at recommended intake of <2, 3 mg sodium per day. Sweets will mostly be replaced by fruits. Dairies' daily consumption was mainly represented by yogurt or kefir, cheese in smaller quantities. Up to three times per week were fish and seafood, eggs were 2–4 times/week, and red meat in small portions was very rare (1–2 times monthly). Hydration will be done mainly through water, drinking may be allowed in small quantities, and the wine will be preferred instead of beer (1 drink per day for women, 2 drinks for men). Med Diet means also

Two servings per day	Vegetables like cabbage, tomatoes, eggplants, broccoli Fresh fruits—apples, oranges, cherries, bananas, occasionally fresh juice 100% Whole grains—bread, oat, cereals for breakfast, biscuits
One serving daily	Low GI cereals rice, barley, whole grain pasta Nuts and seeds—almonds, nuts, sunflower seeds, pumpkin seeds Extra virgin olive oil Unflavored yogurt
Four servings/week	Legumes Fish, fresh, frozen, all types white, but also salmon, cod, mackerel, shellfish, tuna
Maximum three portions/week	White meat—unprocessed turkey, poultry Eggs Cheese—Parmesan, Roquefort, Emmental Milk
Less than two servings/week	Starchy food with high GI—white bread, potatoes, biscuits, refined rice Red meat—unprocessed pork, beef, lamb Butter
Occasionally	Processed meat

Table 2.
Suggested food model for consumption.

a philosophy of cooking at home or with friends, with a preference for local food, minimally processed, connection with nature, respect for nature, sustainability, moderate portion sizes, moderate physical activity, appropriate rest, eating in other people company.

A recent review published in Cardiovascular Research 2021 [17] points some elements related to cardiovascular/atherosclerosis protection. Moderate quantities of cheese and regular yogurt are linked with a protective effect, to replace high glycemic index food with whole grain and low glycemic index (GI) cereal food. A future target will be to promote appropriate food choices for atherosclerosis prevention in the general population, the authors are suggesting.

9.4 A suggested food model for consumption

It is presented in **Table** 2 adapted after [17].

All these recommendations should be followed, in a frame of negative energetic balance, in order to lose weight.

10. Energy balance

Creating a negative energy balance is the first principle for lifestyle intervention in obesity. A daily caloric deficit of 0.5–1 kg will ensure a healthy weight decrease. A healthy weight decrease means 0.5–1 kg/week weight decrease. The decrease has to be mainly from fat mass and not muscular mass, proportion has to be 80% fat and 20% lean mass.

11. As dietary guidelines for Americans for 2020–2025 is mentioning

11.1 Sodium

This is an essential nutrient consumed primarily as salt—sodium chloride—is indicated in a daily maximum intake of 2–3 mg [18].

11.2 Coffee

After some irrelevant studies, a new meta-analysis found that three cups of coffee per day are related to a 10%, respectively, 16% risk reduction of CHD incidence and mortality. But this benefic effect disappears at doses higher than five cups/day [17]. Coffee consumption is associated with higher insulin sensitivity and lower risk of type 2 diabetes together with a low concentration of inflammatory markers such as C reactive protein and E selectin. These benefits are due to its phenolic compounds and magnesium, potassium, and niacin. It has to be mentioned that unfiltered coffee, which contains cafestol may increase total cholesterol levels, with a detrimental effect. Special conditions, like hypertension and arrhythmias, will require special caution for coffee consumption. In conclusion, a moderate coffee consumption, below three cups/day may be suggested.

11.3 Tea

Tea intake is also associated with coronary heart disease (CHD) risk reduction, mainly green tea, and 20% risk decrease being reported at three cups per day. Atherosclerosis prevention is related to catechin content, with high antioxidative

properties, contributing to modulate plasma lipid profile, decreasing inflammation at endothelial level, atherogenesis and thrombogenesis.

12. Chrono-nutrition

It is a concept detailed in lifestyle recommendations for the prevention of metabolic syndrome. Potential health problems may arise for shift workers. Overall night working or rotating working is associated with a higher risk of insulin resistance, metabolic syndrome, and heart disease. The recommendation is to eat the main meal of the day before 3 PM [19].

Actual society, westernized, 24/7 means that eating moments are distributed over day and night without a clear schedule. Many people eat late in the evening or even during the night, this leading to a metabolic risk similar to shift workers. Even short-term misalignment, like jet lag or long flights, may cause bowel problems or fatigue. Not surprisingly, circadian misalignment may contribute to different medical conditions, being incriminated in the etiology of type 2 diabetes. The mechanism is insulin resistance at the tissues level, caused by disrupted tissue clocks. As Oosterman is mentioning, it is maybe the time to include in dietary guidelines, in addition to quantity and quality of food the concept of time of meals, which is a critical determinant of metabolic health. Increasing awareness about the relation between eating time and metabolic implications will be a part of the complex system to fight against obesity [20].

13. Sustainability: Food for planet health

In January 2019, The Lancet published the Summary Report of the EAT-*Lancet* Commission, 2019 named Food, Planet, Health [21]. This report is a manifesto for sustainability, proposing a nutrition model for sustainable eating for 10 billion people. This model assumes that until 2050, substantial dietary shifts are necessary. Globally, the consumption of red meat and sugar has to be reduced by more than 50%, and fruits, vegetables, nuts, and legumes have to be doubled. The rich plant-based diet will confer health but also environmental benefits. This model is aspirational and will be implemented step by step, in accordance with country's educational development.

14. Healthy models

DASH and Nordic models are also healthy models, with similarities with Med Diet, and may be applied successfully, in accordance with cultural traditions and personal preferences in order to maximize adherence.

15. Sedentarism

It is the fourth risk factor for death [22] and large studies are revealing a great mortality risk associated with sedentarism. Ekelund investigated in a large meta-analysis sedentary behavior effects on more than 1 million persons, revealing an association between all-cause mortality and the level of physical activity. There have been compared sitting periods of less than 4 h/day with the highest quartile of moderate or intense physical activity. One metabolic equivalent (MET) is defined as

the amount of oxygen consumed while sitting at rest and is equal to 3.5 ml O_2 per kg body weight × min**.** "The metabolic equivalent of task, or simply metabolic equivalent, is a physiological measure expressing the intensity of physical activities. One MET is the energy equivalent expended by an individual while seated at rest.

There is no risk for people sitting more than 8 h/day, but having more than 35, 5 MET h/week of activity (HR = 1.04, 95% CI–1.1). But those being in the lowest physical activity PA quartile, below 2.5 MET h/week and sitting <4 h/day had an increased risk. *The study conclusion is that 60–75 min/day of physical activity may attenuate or even eliminate the detrimental effect of sedentary style on health outcomes* [23, 24]. **Definition of sitting behavior** (SB): The common behavior that is considered a health threat is sitting. There are two modern definitions of SB [25].

1. The first of these definitions is purely physiological and is synonymous with the lower end of the energy expenditure continuum <1.5 METs [25], which includes also standing quietly.

2. The second definition has three components:

   Postural—in a sitting or reclining posture.

   Contextual—walking time.

   Physiological <1,5 METs.

16. Physical activity (PA)

16.1 Definitions (based on WHO 2020 guidelines)

Light PA (1.6–3.0 METs), moderate (3–6 METs), and intense (>6 METs) [26].

Light-intensity physical activity.

Light-intensity physical activity is between 1.6 and 3 METs, that is, activities with energy cost less than three times the energy expenditure at rest for that person. This can include slow walking, bathing, or other incidental activities that do not result in a substantial increase in heart rate or breathing rate.

Moderate-intensity physical activity.

On an absolute scale, moderate-intensity refers to the physical activity that is performed between three and less than six times the intensity of rest. On a scale relative to an individual's personal capacity, moderate-intensity physical activity is usually a 5 or 6 on a scale of 0–10; intense PA is at a level higher than 6 MET's..

16.2 Physical activity

This is essential for health and is an important component of a healthy lifestyle. Promoting continuously all PA benefits will lead finally to a higher percentage of people adopting healthy behaviors. The latest WHO guidelines [26] include the major developments vs. 2010 guidelines, being realized based on larger scientific evidence. Additional health benefits are supported by studies-cognitive health improvement, mental health, sleep, and health-related quality of life, and are emphasized beyond traditionally known benefits for cancer prevention, metabolic diseases prevention, cardiorespiratory fitness improvement, and musculoskeletal and functional health. All these documents are reflecting a maturity of the research, but also the complexity of WHO's definition of health as "a state of complete physical, mental and social wellbeing" [27].

Mentioning that a relation between cardiovascular cause mortality, all-cause mortality, and PA is well proved, WHO guidelines are reaffirming that any level and all intensities of PA are associated with low mortality risk. The incidence of type 2 diabetes is decreasing proportionally with PA level. Benefits are also proven in hypertension, cardiovascular disease, colon cancer, and breast cancer. Meanwhile, adiposity is inversely related to PA and sleep and quality of life (QOL) may be considerably improved according to the level of PA. Development of depression and anxiety may be slower for active people. Guideline's conclusions are that any level of any intensity of PA is associated with lower mortality from all causes but also with reduced incidence for type 2 diabetes, hypertension, and cardiovascular disease.

16.3 Recommendations for adults 18: 64 years

- Regular physical activity for all adults, a strong recommendation.
- Period: About 150–300 min of moderate PA or at least 75–150-min high-intensity PA or a combination of both, also a strong recommendation.
- Muscle training activities have to be performed >2 days/week, providing supplementary benefits and strong recommendation.
- Period of PA may be extended to more than 300 min/150 min for moderate/intense PA in order to gain additional benefits for health, and this is just a conditional recommendation.
- In conclusion, any type of PA is better than none, even if not meeting these recommendations, at least some PA will be beneficial.
- The level of PA should be increased gradually in frequency and intensity, adapted to the training stage.

There are specific recommendations for limiting sedentary behavior, which are as follows:

- The time spent sedentary should be limited and replaced with PA of any intensity, even if light PA in order to provide some health benefits.
- For compensating the detrimental effect of sedentarism, levels of PA should be overcome.

16.4 Recommendations for older adults

Older adults (> 64y) usually have a very low level of physical activity. WHO guidelines are emphasizing rules even for this period of life, bringing the same benefits as for the other adults. Additionally, for older adults, PA may prevent falls and injuries, a decline in bone density and functionality also will attenuate the decline of muscular mass.

Recommendations for older adults are (as described by WHO guidelines 2020) as follows:

- PA should be regularly performed by any older adults.

- For moderate level, 150–300 min/week.
- For intense level, 75–150 min/week will be enough, bringing substantial health benefits.
- Additionally, 2 or more days for strengthening major muscle groups will substantiate benefits.
- Weekly training should be performed in multiple activities that support functional balance 3 days/week.
- If possible, the period of moderate activities will be increased, together with additional benefits for health and quality of life.

Important for older adults is that any activity is better than inactivity and PA should be increased gradually, based on personal functional capacities and fitness level.

17. Optimal sleep

Optimal sleep is a condition for a healthy lifestyle. The quality of good sleep will be recognized by three elements:

- Duration, that has to be sufficient for remaining alert and rested for the whole day
- Continuity, sleeping without fragmentation
- Depth, in order to restore functional capabilities

17.1 Sleep disorders

These disorders, like insomnia or sleep apnea, are related to obesity. In the obesity management process, Sleep Hygiene guidelines elaborated by the World Sleep Society may prevent poor quality nocturnal sleep, fragmentation of sleep, short duration of sleep, and even sleep deprivation in adults.

17.2 Ten lessons for a healthy sleep for adults, recommended by world sleep society (2021 world sleep day), will be simple and concrete lifestyle advice in obesity management

1. To fix the bedtime and constant awakening time [28]
2. Siesta's habit should not exceed 45 min/day
3. About 4 h before bedtime avoids alcohol ingestion and smoking
4. Avoid caffeine (tea, coffee, sodas, chocolate) for a period of 6 h before bedtime.
5. Before bedtime only a light snack may be accepted, but not heavy meals with spicy, sugary foods, 4 h before sleep.

6. Regular physical activity may not be prolonged before sleep time.

7. Try to use a comfortable bedroom

8. The bedroom should have a comfortable setting temperature for sleeping and good ventilation.

9. All distracting noise should be avoided in the bedroom and light as much as possible.

10. The bed must be used for sleep and sex. No eating, working, or sitting in bed.

17.3 Sleep deprivation risks

Short sleep duration is associated with hypercaloric food and an elevated intake of fats. Sleep may impact the time of meals, being related to intake behaviors. Specific evidence points out altered eating behavior, with frequent snacks, which are described as highly palatable and energy-dense throughout the whole day but also concentrated during the night for some short sleepers. These are important aspects, contributing to an unhealthy diet, predisposing people to noncommunicable diseases, and obesity. During anamnesis, a question about the duration and quality/depth of sleep is mandatory, as short sleep or sleep disorders are closely related to obesity [29].

18. Smoking

A healthy lifestyle means no smoking. Continuous efforts should be done by the medical community to stop smoking and decrease the number of people starting smoking.

18.1 Smoking cessation and weight gain

Smoking cessation is a real challenge and weight gain associated has to be carefully managed [30].

Particularly important for people with type 2 diabetes, due to their high cardiovascular risk augmented by insulin resistance and smoking. However, if smoking cessation is accompanied by weight gain—usually 4 kg/year of abstinence—this will dilute the health benefits of quitting. Nutritional counseling should be done in parallel with smoking cessation in order to maintain weight.

19. Alcohol

A healthy lifestyle may allow two glasses of wine for men/one glass of wine per day for women, or one can of beer. A level of 24 g of alcohol/day, for example, two glasses of wine is associated with 32% total CVD risk reduction in a meta-analysis with total CVD as the endpoint. How could be explained this risk reduction? Benefits exerted on lipid and glucose/insulin metabolism synergically with systemic subclinical anti-inflammatory and anticoagulation effects are the answer. Certainly, higher quantities are associated with a progressive increase of risk. Meanwhile, this meta-analysis shows a 20% lower risk of CVD for beer drinkers (one can per day) vs. abstainers, in concordance with previous studies. The dose–response analysis

suggests a J shape curve, after initial risk decreases, and an immediate growing positive trend is seen when doses are increasing. About 10 g per day of alcohol—a small intake, may be the dose correlated with the highest risk reduction. But, as Prof Riccardi emphasized, this dose should be considered maximal allowed intake and not daily recommended dose [18].

20. Mindfulness

The balance between mind, thoughts, body, and emotions is the concept that may be the base of creating the right, positive mindset for treating obesity. People should be able to build motivation and create positive energy, to have meaning in life. All of these will build the mindset of a winner, with the right approach in front of the disease named obesity. People should understand that obesity is a disease, and treatment is the right mindset, applied in daily life. Mindful eating principles, eating smart, but also intuitively, responsible, as an assumed decision for health are fundamental in the obesity management [31].

21. Healthy lifestyle, not dieting

Increasing populational awareness about lifestyle medicine for obesity prevention and treatment is mandatory in order to further control NCDs expansion. WHO defines obesity as a disease and emphasizes that the treatment is a whole life treatment. Lifestyle education is mandatory in the future. Intervention in obesity should be a lifelong intervention and the doctor should be a partner for the patient, guiding him/her in this process. "Food is medicine" is a concept released some years ago in order to motivate more people to connect each eating decision with health benefits. Intuitive eating is an eating type that could influence an individual's awareness of food choices. It is negatively related to weight cycling and disordered eating and positively associated with weight stability and body satisfaction [32]. There is a way of eating in response to hunger/satiety and to create a positive relationship with food. The key is to prioritize behavioral changes, targeting not only the weight but with a focus on overall well-being. Flexible restraint may reduce binge eating and increase weight loss. Eating for health must balance social, hedonic, and environmental reasons to eat. Intuitive eating could help people to reconnect with signals of hunger and satiety. Eating in the absence of hunger is very frequent, triggered by social, emotional, or advertising factors. Clinicians are in the position to help patients to recognize various factors influencing eating choices and they should support their patients to make healthy choices [31].

22. Doctor-patient partnership

The key to lifestyle changes is negotiation and cooperation. Physicians will be role models for their patients, adopting a "coach" approach, instead of the previous "expert" style. But they will not only educate patients and have to empower them, motivating and planning a healthy lifestyle with sustainable change [33].

23. Conclusion

Health is built every moment by right decisions or, on the contrary, is destroyed. The success of health promotion at the populational level requires a different

approach. Lifestyle starts from everyone's small daily decisions to community engagement and populational measures, all with a long-term impact.

By creating a doctor-patient partnership, it will be possible to create an optimal motivational approach that will change behaviors. Firstly, medical doctors should adopt healthy lifestyles and become role models for their patients and the whole community.

Conflict of interest

The authors declare no conflict of interest.

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