



Medical Ethics in Nutrology

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Abstract

Few medical specialties have aroused as much interest as Nutrology in these post-modern times of beauty and slimming at any cost. Medical Schools need to make an effort to raise the awareness of future physicians on this issue, which is so sensitive today: Ethics in Medicine.

Keywords: Medical ethics. Nutrology. Diet. Fasting. Body vanity.

Introduction

Humanity is living in the age of vanity, where self-exposure has become a norm and many times people do everything and anything goes to become visible, and famous. Digital platforms are instruments for this purpose, increasingly used by laypeople and health professionals. The term Youtube itself, an application that is so widely used in the dissemination of videos over the internet, was created with this in mind, that is, You—which means you in English and Tube refers to the cathode ray tube of old televisions. Inside the tube is the realization of an unthinkable dream for a lowly mortal a few years ago. It makes it possible for anyone, with a smartphone and an internet connection, to produce videos and share them, in real-time, around the world. These mobile phone applications are powerful educational tools for the population concerning healthy habits and disease prevention, but if misused, they can bring about problems such as selfmedication and the practice of harmful or unscientific treatments. Unfortunately, the use of this type of “medical consultation” by the population has been growing and the problems are piling up [1].

Nutritional Sciences are today one of the most studied areas of human knowledge, conveyed by the media and a field of interest for lay people in general. There are miraculous diets for this or that, supplements for the most varied clinical indications, cell phone applications for weight loss, “fasting” diets, etc. This concern reached Medical Schools so much so that a recent recommendation by the European Society for Parenteral, Enteral, and Metabolism Nutrition (ESPEN) guided the urgent need for the curriculum to address these challenges in teaching future doctors around the world. After all, “the training of health professionals in the area of Nutrition and, in particular, doctors, becomes crucial both for a correct approach to obesity x malnutrition and to combat the environment of confusion that prevails in this area of science” [1].

Code of Medical Ethics

The publication of Resolution nº 2,217/2018 by the Federal Council of Medicine updated the 2009 Code of Medical Ethics (CEM), after almost three years of discussions and analysis, which resulted in the incorporation of relevant approaches to changes in the contemporary world. The new CEM maintains the same number of chapters, which address the principles, rights, and duties of physicians. Of the approved set, some excerpts deserve to be highlighted, such as the article that establishes in the Code of Ethics the limits for the use of social networks by doctors in the exercise of their profession. The rule reinforces the category's ethical commitment to the well-being and health of patients, curbing for-profit interactions, incompatible with the principles of good medicine. We quote below some CEM

articles [2] that should be remembered in the context of the ethical practice of Nutrology:

Chapter III: It is forbidden to the doctor

Art. 14. Practicing or indicating medical acts that are unnecessary or prohibited by the legislation in force in the Country.

Chapter IV: It is forbidden for the doctor to

Art. 32. Failure to use all available means of health promotion and prevention, diagnosis and treatment of diseases, scientifically recognized and within reach, in favor of the patient.

Art. 35. Exaggerate the severity of the diagnosis or prognosis, complicate therapy, or exceed the number of visits, consultations, or any other medical procedures.

Chapter VIII: It is forbidden for the doctor to

Art. 68. Exercising the profession with interaction or dependence on a pharmacy, pharmaceutical industry, optics, or any organization intended for the manufacture, handling, promotion, or sale of medical prescription products, whatever their nature.

Chapter XIII: It is forbidden to the doctor

Art. 111. Allow your participation in the dissemination of medical matters, in any means of mass communication, to cease to be exclusively aimed at clarifying and educating society.

Art. 112. Disclose information on medical matters in a sensationalist, promotional, or untrue way.

Art. 113. Disclose, outside the scientific community, a treatment process or discovery whose value has not yet been expressly recognized scientifically by a competent body.

Art. 114. Announce scientific titles that he cannot prove and a specialty or area of expertise for which he is not qualified and registered with the Regional Council of Medicine.

Art. 115. Participating in advertisements for commercial companies, whatever their nature, using their profession.

Art. 116. Present as original any ideas, discoveries, or illustrations that in reality are not.

Art. 117. Failure to include, in professional advertisements of any order, your name, and your number in the Regional Council of Medicine, with the state of the Federation in which you were registered and the Specialist Qualification Register (SQR) when advertising the specialty.

hCG diet

In 2010, this author published [3], under the seal of the specialty Society of Nutrologists in Brazil, the

Associação Brasileira de Nutrologia/Brazilian Association of Nutrology (ABRAN) the "Protocol ABRAN I of Application of Diets with Very Low Caloric Value". This was an extensive bibliographic review of "medicinal fasts" around the world, especially in Europe, where this practice is centuries old. Our work does not discuss the Diet with Human Chorionic Gonadotropin (hCG) because it is not scientifically recognized there. Several Regional Councils of Medicine issued opinions contrary to its application, by doctors such as e.g. CRM/MS Opinion No. 04/13, in which the summary of the conclusion on the subject is summarized: "The use of HCG in the treatment of obesity is not recommended because it does not present scientific evidence that corroborates its effectiveness, as well as, treatment whether of therapy with harm".

In line with the understanding of the CFM and its regions, the Brazilian Society of Endocrinology and Metabolism (SBEM) took a clear and forceful position regarding "Hormonal Modulation" in general, and specifically regarding the use of hCG for the treatment of obesity, in this last case in conjunction with the Brazilian Association for the Study of Obesity and Metabolic Syndrome (ABESO), through notes of clarification to health professionals and the population: "Endocrinological diseases can evolve with excess or lack of hormones. Endocrinological diseases who have a lack hormone must be treated with hormone replacement in many cases. The use of hormones in people who do not have hormone deficiencies is contraindicated. The SBEM has already publicly manifested itself in the so-called "Hormonal Modulation". This treatment modality is not recognized by SBEM or by other international Medical Societies in the field" [4].

SBEM and ABESO are frontally against the use of hCG for weight loss, considering that such conduct does not have scientific evidence of efficacy and presents potential health risks [5]. Finally, ABRAN corroborated the understanding of the other entities about the use of hCG for weight loss purposes: "[...] ABRAN is against the use of hCG for weight loss treatment, mainly due to the lack of scientific evidence to date about the success of this type of treatment, emphasizing that its use, in this case, may entail health risks [6,7]". The prestigious German entity, the Deutsch Gessellschaft für Ernährung e.V. issued the following opinion [8]: "The injectable form of hCG is approved, as treatment of female infertility, cryptorchidism, hypogonadotropic hypogonadism and delayed puberty (in men and children) There is no evidence that hCG acts on lipid metabolism or the distribution of adipose tissues or that it influences appetite. Consequently, hCG has no

indications related to weight control (medication package leaflet). Weight loss is achieved by drastic caloric restriction of around 500 kcal/day. So far, there is no scientific evidence that the administration of the hormone hCG contributes to faster weight loss than through an energy-reduced diet alone. Other effects touted by supporters of the hCG diet, such as greater fat loss and less lean body mass, better mood or less hunger, have not yet been scientifically proven”.

Medicinal Fasting

Fasting has been practiced in Europe and Asia for decades, but its interest in America has literally “exploded” especially in recent years [9], notably after Japanese biologist Yoshinori Ohsumi was awarded the Nobel Prize in Medicine in 2016 [10]. Ohsumi proved that drastic caloric restriction, “fasting”, stimulates the process of autophagy, a mechanism by which cells self-degrade allowing their renewal and contributing to the longevity of the organism.

“Fasting” is part of the tradition of many religions and peoples and even today we find its followers and practitioners. In “Fasting Clinics”—or Intensive Dietetics—people are hospitalized for drastic caloric restriction (from 400 to 800 calories per day) [3]. Humanity's knowledge about a severe temporary diet and a “therapeutic fast”, capable of renewing body and soul, comes from a long time [11]. We can find it in the cultic prescriptions of innumerable peoples, in all times, and in all religions. The various fasting prescriptions, it was about both bodily purification and freedom from illness, as well as interior purification, spiritual renewal, and reconnection (religion) to the divine (transcendent). Already in the Vedic Scriptures (India), one of the oldest texts of humanity (about 10,000 years BC), we find corresponding reports. We know about the 40-day fast of Moses on Mount Horeb, the prophet Elijah and Christ in the desert, and the 50-day fast of Buddha (563-483 B.C.) and Muhammad (570-632 A.D.). For Mohammedans, the sanctification of the jejunal month of Ramadan and a strict dietary norm during pilgrimages to and from Mecca are still valid today. A saying in Islamic countries says, “What the doctor cannot cure will be cured in Ramadan”. In antiquity, the Germans kept one day of fasting a week; the Persians and Spartans watched over the fasting of warriors, and the Egyptians, according to Herodotus, purged the body by fasting. For Indians, severe diets were a natural custom and are still an integral part of Hinduism today. Mahatma Gandhi (1868-1948) practiced frequent and extremely long fasts, also using them as political pressure against British colonial power. He declared several times that the most important thing during fasting is a proper spiritual

attitude, because without this, only bodily purification is achieved, but not the most important, spiritual one.

Fasting is not risk-free and requires specialized medical supervision. Postural hypotension, “gout” crises, cholelithiasis, and cardiac arrhythmias (especially in “electrically unstable” hearts with prolonged QT interval [12]) are some of the complications associated with such nutritional interventions. Our ABRAN I Protocol: “Application of Diets with Very Low-Calorie Value” [3] aims to standardize, in the Ambulatory (offices) and slimming Clinics (“spas”), the technological apparatus and human resources that are indispensable for safe medical practice and with quality in this area.

Unorthodox Diets

The individual diet, as the Austrian doctor F. X. Mayr said, is the individual diet, based on customs, beliefs, culture, and individual tolerances, the latter explained, in part, by Nutrigenomics. The recommended diet follows Prof. Pedro Escudero [13] that is, it contains Quality, Quantity (moderation), Harmony, and Adequacy and is also known as Harmonic Diet. For healthy weight loss, moderate calorie restriction is the norm. The gold standard diet for managing obesity or overeating is 20% to 30% caloric restriction along with detailed lifestyle modification. Weight regain, however, is a real problem in coping with weight reduction in clinical practice [14].

This demand has led, in recent decades, to the emergence of alternative diets known as Heterodox Diets, many of which are vehemently rejected as having no scientific basis. Others, with some foundation that even helped to improve the nutritional approach to excess body fat: Dr. Atkins Diet, South Beach, Low-carb, Paleolithic, Alkaline, Blood Type, Points, Ketogenic, etc. Two healthy, nutritionally balanced diets that have strong clinical trials for cardiovascular, metabolic, and obesity benefits are the Mediterranean Diet and the DASH Diet [15]. The ideal diet to treat obesity remains a challenge, but, as a general principle, it should be safe, effective, nutritionally balanced, and should facilitate the maintenance of long-term weight loss [16]. Conventional hypocaloric diets, providing daily energy restriction, are considered the cornerstone of the dietary management of obesity. In the past, common versions of low-calorie diets were low-fat diets with a macronutrient composition of 30% fat, 50% carbohydrates, and 20% protein. It is important that these diets are individualized based on each subject's course of weight loss, and individual food preferences must be considered, as these diets are often followed for long periods.

Intermittent Fasting and the Ketogenic Diet

Of the fad diets, the ones that have become most famous in recent times are Intermittent Fasting and the Ketogenic Diet. Although both Intermittent Fasting and Ketogenic diets have emerged as promising strategies for weight reduction and improving cardiometabolic risk, it is unclear whether they outperform traditional calorie-restricted diets and can safely lead to sustained weight loss, and its overall health benefits, as well as effects on body composition (mainly preservation of lean body mass), maintenance of weight loss, diet quality, and cardiometabolic risk. Intermittent fasting produces weight loss comparable to the conventional eating approach but not superior. The weight loss effectiveness of intermittent fasting appears to peak at 12 weeks but declines thereafter. Ketogenic diets, on the other hand, can reduce body weight, but not more effectively than other long-term dietary approaches [17].

Ketogenic diets can also improve glycemic control in patients with type 2 diabetes mellitus, but their effectiveness decreases after the first 3-6 months. For both of the diets discussed above, current evidence is promising and evolving, but data on safety, efficacy, adherence, and long-term superiority over the traditional approach to daily energy restriction are suboptimal, highlighting the need for randomized controlled trials. Longterm testing of these diets, and, more importantly, directly comparing them to each other, across various population groups. It is understood that this type of long-term study is very difficult to perform in humans [17].

NEMS Project (Nutrition Education in Medical Schools)/UNIUBE

As soon as we took over the chair of Nutrology at the Medical School of the University of Uberaba (UNIUBE), we adapted its curriculum to the recently published ESPEN international recommendation for medical schools [1]. Eighteen months later, we carried out a retrospective, qualitative study, which sought to assess the perception of students who graduated from this discipline regarding the quality and importance of Nutrology teaching in their academic training. The results were very good and we published this study in ESPEN's journal, Clinical Nutrition [18]. The institution, realizing the growing interest of academics concerning this medical specialty, decided, as part of the curriculum reformulation, to further increase the hours/class spent on Nutrology, making it its discipline with a duration of 6 months and interspersed with topics from Sports Medicine. We hope that this effort will train physicians aware of their value and ethical responsibility.

Conclusion

Doing the right thing may seem old-fashioned and incapable of achieving success, but it is not because it is easier to grow dishonestly that we will give up ethical values. After all, "one day the house may fall", despite the conscience that weighs on each of us when we act apart from the principles of Medical Ethics: respect for autonomy, justice, non-slander, and beneficence.

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Conflict of interest

The authors declare no conflict of interest.

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