



Health Reform Monitor

# A discussion of the unresolved 2016/17 plans for regulating the Polish dietary supplements market<sup>☆</sup>

Marta Makowska<sup>a,\*</sup>, Łukasz Jasiński<sup>b</sup><sup>a</sup> Warsaw University of Life Sciences, Poland<sup>b</sup> Maria Curie-Skłodowska University in Lublin, Poland

## ARTICLE INFO

## Article history:

Received 22 June 2018

Received in revised form 26 March 2019

Accepted 1 April 2019

## Keywords:

Dietary supplements

Legislation changes

Poland

## ABSTRACT

The Polish dietary supplement market is growing steadily. However, even though these products may have an impact on health they are not as strongly regulated as pharmaceuticals. In 2016/17 the introduction of new regulations covering the marketing of dietary supplements in Poland was proposed. This article briefly describes the Polish market for dietary supplements and assesses the benefits and risks associated with its development. A range of potential legislative changes, such as a total ban on dietary supplements, a ban on using the images and recommendations of authoritative entities, increased fines for breaking the law, and other measures are under consideration. We describe the advantages (e.g., better customer protection, and the limitation of inappropriate, misleading advertising) and disadvantages (e.g., a decrease in product innovation, deterioration in product offerings, and rises in product prices) of the proposed changes. As a European Union member, Poland adopts EU law, but EU directives have only harmonized some issues relating to dietary supplement marketing, other key aspects remaining within the competence of member states, but it is noted that some proposed changes in Polish law (e.g., an advertising ban) are so strict that they are unlikely to be acceptable to the EU.

© 2019 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## 1. Purpose of the policy idea

In 2017 the Polish Supreme Audit Office (Najwyższa Izba Kontroli: NIK) adopted the view that the Polish dietary supplement market requires urgent regulation. NIK inspections have indicated that some dietary supplement products do not have the characteristics indicated by their manufacturers, and that some are even harmful to health [1].

The circulation of dietary supplements in Poland is governed by the 2006 Act on Food Safety and Nutrition [2] and an October 2007 decree of the Minister of Health on the composition and labeling of dietary supplements [3] is also an important document. Directive 2002/46/EC of the European Parliament and Council (issued in 2002) on the approximation of the laws of the member states relating to food supplements [4] is also in force in Poland as well as other EU regulations concerning this subject.

Approval for the sale of dietary supplements as a foodstuff is granted on the basis of decisions made by the Chief Sanitary Inspec-

torate (Główny Inspektorat Sanitarny: GIS). The introduction of dietary supplements into the market is far simpler than for drugs: there are no clinical trials, interactions with other drugs are not tested, and quality control and side effects are not considered. A producer is only required to inform the GIS that they intend to market a product and indicate the name of the product, its manufacturer, its nature, labelling, and its qualitative and quantitative composition [5]. There are no Polish regulations which prevent producers introducing dietary supplements to the market which have been negatively evaluated by the U.S. Food and Drug Administration [6]. Thus, the rules governing the introduction of dietary supplements to the market cannot be regarded as strict.

NIK has identified the above situation as a problem: currently anyone can market a dietary supplement simply by declaring its composition to the sanitary authorities (this process is referred to as notification). There is a theoretical possibility that a product will be tested when it is marketed, but in practice the scale of the number of products marketed exceeds the current control capacity of the Sanitary Inspectorate. Also, Chief Sanitary Inspectorate inspections only cover part of the market, and any proceedings which are taken can take several years, as the NIK's data shows. So, in many cases, dietary supplements go untested, and the notion that consumer protection exists is often fictitious [1]. The results of inspections and a report of the Supreme Audit Office have led to the develop-

<sup>☆</sup> Open Access for this article is made possible by a collaboration between Health Policy and The European Observatory on Health Systems and Policies.

\* Corresponding author at: Warsaw University of Life Sciences, Faculty of Social Sciences, Ul. Nowoursynowska 166 02-787 Warsaw, Poland.

E-mail address: [marta.makowska@sggw.pl](mailto:marta.makowska@sggw.pl) (M. Makowska).

**Table 1**  
Benefits and risks associated with taking dietary supplements and their advertisement, about here.

Benefits	Risks
<p><b>Taking dietary supplements</b> Help to balance one's diet [7,8]. Support the treatment of certain diseases [9,10]. Prevent illness [11,12]. "The range of dietary supplements on offer is extensive and their intended effects cover virtually every body system and organ in humans." [13]. Potential improvements in mood and libido [14]. Improve sporting performance and perceived wellbeing [15].</p>	<p>Usually substances are poorly controlled and have few or no clinical guidelines [15]. Can contain substances not declared in the labels, even harmful [1,15]. Many adverse events associated with supplements remain unreported [16]. Many dietary supplements are contaminated with substances which have known short-term and long-term harmful side effects [15], but people are unaware of these [17].</p>
<p><b>Dietary supplement advertisements</b> Inform people of the availability of dietary supplements. People with minor problems can use the information provided to improve wellbeing without consulting a physician.</p>	<p>Incorrect use can lead to health problems [15]. Supplements can interact with a patient's medication; some supplements are inappropriate in the presence of certain diseases; overdosing is easy. Using supplements can also affect the results of diagnostic tests and lead to incorrect results [18].</p> <p>Encourage self-treatment, when consulting a doctor may be more desirable [19]. Disease mongering (e.g., restless leg syndrome) [20].</p> <p>Lead to pharmaceuticalisation [see: 21] of society, as they encourage "healthy" or "almost healthy" people to use supplements for enhancement purposes rather than for important medical reasons. Advertisements are often inappropriate, make unproven claims [22], and imply that products are similar to medicines [23].</p>

Source: Authors' own composition.

ment of plans considered since 2016 for introduction of new Polish regulations covering the marketing of dietary supplements.

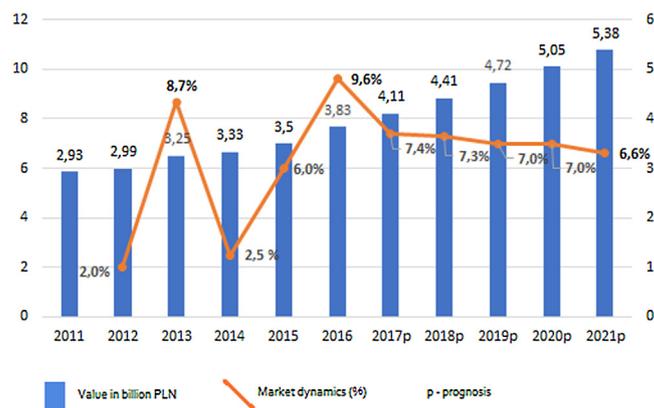
## 2. Dietary supplements and the customer protection

Research suggests that it is extremely important for people to adopt a well-informed approach to taking dietary supplements (see Table 1). Supplements can play an important role in supporting the proper functioning of a person's body when it is deficient in nutrients. However, incorrect use of dietary supplements can lead to a variety of problems.

Recently, safety and customer protection have received more attention as the potential problems caused by dietary supplements have been seen as increasingly important and, despite Poland's adoption of changes introduced in European Union member states, Polish regulations are still viewed as weak. Poland has adopted Regulation (EU) No 1169/2011, which states that "food information shall be accurate, clear and easy to understand for the consumer" (Article 7, Paragraph 1) [24], and "food information shall not attribute to any food the property of preventing, treating or curing a human disease, nor refer to such properties" (Article 7, Paragraph 3) [24]. Poland participates in the Rapid Alert System for Food and Feed (RASFF), which is intended to facilitate the exchange of information about food safety between the competent authorities of European Union member states. Dietary supplements reported to the RASFF are usually withdrawn from the market [6]. However, many supplements are sold via the Internet by non-EU manufacturers, and here rigorous security controls are not implemented [15]. In 2017 the European Commission launched the first EU-coordinated consumer protection program relating to food products offered on the Internet [25], and Poland is an active participant in this. Although all the above initiatives are important, Polish consumers are still not protected as well as they might be. Moreover, consumer research on dietary supplements shows that Polish people's knowledge of the differences between dietary supplements and medicines is lacking [13].

## 3. Political and economic background

As in the other European Union member states, dietary supplements are considered to be part of the food market and are therefore governed by laws applicable to the special food sector. This makes



**Fig. 1.** Values (in billions PLN) and dynamics (%) of the dietary supplements market in Poland, 2011–2020.

Source: Authors' own composition based on [27,28].

it easier to market products, develop new products, and results in fewer regulatory requirements than if dietary supplements were part of the pharmaceutical market. Also, international pharmaceutical companies constitute a large proportion of participants in the dietary supplement market [26].

In Poland the dietary supplement market is developing rapidly (see Fig. 1). The market forecast shows that it will grow around 7% per year between 2017 and 2020. In 2011 its value was PLN 2.93 billion, in 2016 this had increased to PLN 3.83 billion, and by 2020 the market is forecast to reach PLN 5.38 billion [27]. The market's development is influenced by increasing public health awareness, the fashion for a healthy lifestyle, increasing societal wealth, and the widespread emergence of the phenomenon of self-treatment [26].

The number of products entered by the GIS on to the list of authorized dietary supplements is increasing year-on-year. In 2011, 1969 products were listed, in 2014–4388, and in 2016 as many as 7398 were listed [1]. The Polish dietary supplements market is very diverse in terms of the products offered. The largest percentages of dietary supplements sold are magnesium products (7.6%), immunostimulants (6.6%), probiotics (6.1%), various body strengthening supplements (4.7%), vitamins and minerals (4.5%), and products intended to improve beauty (4.4%) [27]. According to

the PMR's predictions, the greatest potential for development of the Polish dietary supplements market lies in dietary supplements for athletes, supplements for weight loss, products for increasing libido, supplements for the prevention or treatment of influenza and colds, and vitamins and minerals [28].

Undoubtedly, the large growth in the market has been influenced by media advertising of preparations. According to the Polish Institute of Media Monitoring, in the first quarter of 2014, PLN 420.7 million was spent on advertising OTC drugs, and PLN 371.6 million on advertising dietary supplements. Also, National Radio and Television Council (Krajowa Rada Radiofonii i Telewizji: KRRiT) data show that advertising of supplements and OTC drugs increased 20-fold between 1997 and 2015, while advertising in general grew only three fold [1]. The KRRiT study showed that the most commonly advertised dietary supplements were vitamins and restorative supplements (64.3%), sedatives and antidepressants (9%), analgesics and antipyretics (6%), weight loss supplements (1.4%) [29].

Current inconsistencies between Polish and EU laws in relation to launching products have an adverse effect on the market [26]. Different EU countries have different rules, not only with respect to launching products, but also with respect to product classification: a product classified as a medicinal product in one country can be classified as a dietary supplement in another [30]. European Union directives have only harmonized some issues relating to the marketing of dietary supplements, with other key aspects remaining within the competence of member states. The states have different traditions, approaches and laws, so producers and exporters often find it difficult to adjust to each state's specific requirements. If proposals for new Polish laws, such as prohibiting the advertising of dietary supplements (and OTC drugs), came into force, they might threaten the development of the market [31].

#### 4. The content of newly proposed policies

In June 2016, the Polish Minister of Health set-up a group of experts responsible for regulating the advertising of medicines, dietary supplements and other foods, and medical devices. Some of the changes that were proposed with regard to dietary supplements are listed below [23]:

- 1 Prohibition of images of medical practitioners in dietary supplement advertising, and the creation of other restrictions similar to those already regulating the advertising of medicinal products.
- 2 Obligatory inclusion of information about the legal status of a product in advertisements.
- 3 Prohibition of the marketing of dietary supplements with names containing parts or elements of the names of medicinal products.
- 4 Increased fines for breaking advertising laws.
- 5 The transfer of competencies for evaluating advertising to the GIS.

Importantly, during the group's deliberations The Polish Chamber of Physicians and Dentists (Naczelnej Izby Lekarskiej: NIL) suggested that a total ban on the advertising of OTC drugs and dietary supplements should be introduced in Poland, because it was said that advertising promoted excessive use of these products [19]. The Gdańsk Institute for Market Economics has provided a critique of this idea, saying that such a ban will be incompatible with the Polish constitution (the principle of freedom of economic activity) and with applicable EU laws, the Institute stating that; "In its judgment, the Court of Justice has ruled that the national regulations of the member states on the advertising of medicinal products cannot be more restrictive than the provisions of Directive 2001/83 / EC." [31]. Undoubtedly, the media would also lose out from such legal regulation, because, as has been previously

noted [1], companies spend enormous amounts on advertising their dietary supplements. Ultimately, therefore, such a ban was not included in the recommendations of the Polish Minister of Health's group of experts, but it is still being considered in public debate.

In an attempt to curb changes, in September 2016 the body representing the industry presented a document suggesting self-regulation of advertising to the President of the Office of Competition and Consumer Protection (Urząd Ochrony Konkurencji i Konsumenta: UOKiK). According to the UOKiK, the suggestions in the document only slightly improved the existing situation and therefore the report did not gain the UOKiK's approval. Despite this, early in 2017, the 'Code of Good Practice in the Advertising of Dietary Supplements' was created. This resulted from the cooperation of four professional organizations: The Polish Council for Supplements and Nutritional Foods (Krajowa Rada Suplementów i Odżywek: KRSiO), the Polish Association of Self Medication Industry (Polski Związek Producentów Leków Bez Recepty: PASMI), the Union of Producers & Distributors of Dietary Supplements (Związek Producentów i Dystrybutorów Suplementów Diety) and the Polish Chamber of Pharmaceutical and Medical Device Industries (POL-FARMED: Polska Izba Przemysłu Farmaceutycznego i Wyrobów Medycznych). The majority of Polish manufacturers and distributors of dietary supplements are affiliated to these organizations.

In October 2016, the Polish Minister of Health set-up another expert group to further develop amendments to Polish pharmaceutical law. One of the group's tasks is to consider changes in the advertising and presentation of, and distribution channels for, dietary supplements. A meeting directly concerning dietary supplements took place in May 2017, but the final results of the group's work are still awaited [32].

Based on its own analysis, in 2017 the NIK proposed the following changes relating to the regulation of dietary supplements [1]:

- 1 Improved control of the introduction of dietary supplements to the market by: a) implementing a system of 'notification fees' for dietary supplements; b) creating a system that will warn the public about products which have been marketed without notification.
- 2 Improvement of the quality control system for marketed products by: a) providing a register (maintained by the GIS) of dietary supplements containing elements that undermine the quality or safety of a product; b) making changes to procedures for withdrawing dietary supplements from the market; c) creating a so-called zero level for selected dangerous ingredients of dietary supplements; d) increasing fines for entities placing dangerous or illegal dietary supplements on the market.
- 3 Introducing, with the Polish Health Ministry, new regulations for advertising dietary supplements: a) increasing the levels of fines imposed by the GIF for failure to comply with labeling requirements; b) supervision by the GIS and the President of the Office of Competition and Consumer Protection of the advertising of dietary supplements; c) prohibition of the labeling, presentation and advertising of dietary supplements as having preventive, therapeutic or healing properties; d) banning images of people in medical or pharmaceutical environments in the advertising of dietary supplements; e) regulating the practice of 'umbrella branding'<sup>1</sup> by companies; f) clarification of the existing obligation

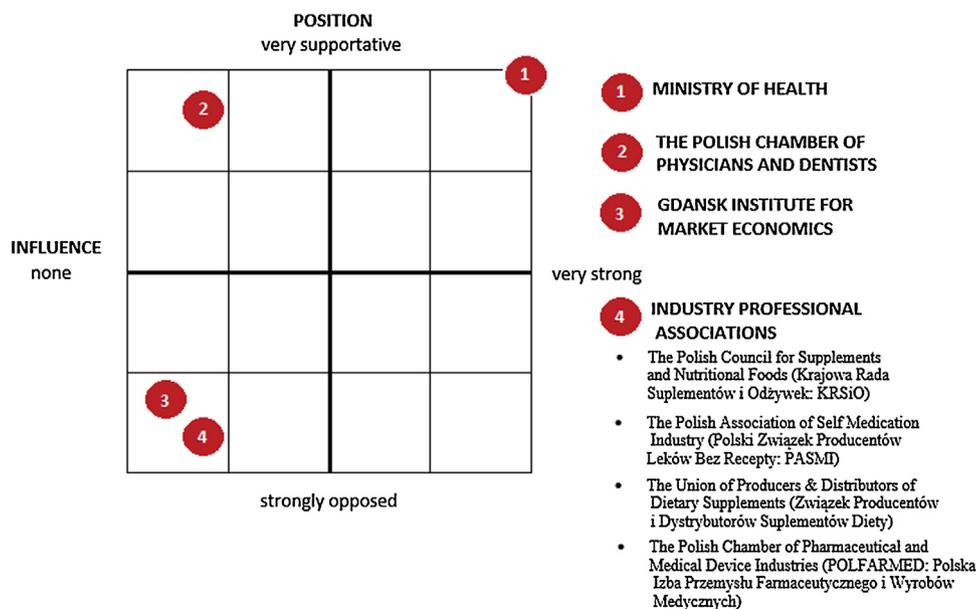
<sup>1</sup> Umbrella branding is a marketing practice where a producer uses a single brand name to sell two or more related products and is intended to help consumers identify products as belonging to one brand. This can be misleading for consumers if such products have differing legal status (e.g., if one is a medicament and the other is a dietary supplement). For example, in the Polish market both Magne B6 (a medicament) and Magne B6 Max (a dietary supplement) exist.

**Table 2**

Benefits and risks of introducing new regulations concerning the marketing of dietary supplements, about here.

Benefits	Risks
Better customer protection, by increasing the supervision of advertising [23,33], and improved control of the introduction and quality control of dietary supplements [1]. Limitation of inappropriate, misleading advertising [1,19,23,33].	Restriction of market competition, which could result in: a decrease in product innovation; deterioration in product offerings; a rise in the prices of products [31].
Better customer information [1,23,33].	A ban on advertising would be a barrier to the market entry of new players offering new products as it would significantly limit their ability to provide consumers with information about their products' [31].
Discouragement of entities responsible for advertising dietary supplements from engaging in inappropriate advertising by increasing the penalties for violation of the law [1,23,33].	A negative impact on the market entry of new investors, thus limiting the sector's growth potential and negatively impacting on the competitiveness of the country's economy [31]. Problems with EU authorities if the new laws were incompatible with EU law [31].

Source: Authors' own composition.

**Fig. 2.** Positions of stakeholders and their influence, about here.

Source: Authors' own composition.

for packaging to indicate that a product is a dietary supplement in a highly legible form.

In September 2017, a draft amendment to the provisions of the 2006 “Food Safety and Nutrition” Act regarding advertising and presentation of dietary supplements was sent out for public consultation. It proposed [33]:

- 1 An obligatory insertion into advertisements; “A food supplement is a foodstuff whose purpose is to supplement a normal diet”.
- 2 A ban on using the image and recommendations of authorities (e.g. physicians, pharmacists).
- 3 A ban on broadcasting, publishing or disseminating advertising if the majority of recipients will be under 16 years of age.
- 4 A significant increase in penalties for violating the provisions of the Act.

In September 2018, the Children's Ombudsman wrote a letter to the Minister of Health asking for information as to the steps the government was taking to protect children from adverts for dietary supplements and medical devices directly addressed to them. The Ombudsman pointed out that in the current legal situation children are poorly protected in comparison to other EU countries. For example, in Sweden there is a total ban on addressing advertising to

children under 12, and in France advertising is limited to between the hours of 14:00 to 17:00 [34].

## 5. Stakeholders' positions

The above proposed changes have major implications for dietary supplement manufacturers and their clients. At present it is difficult to determine the costs that the changes would impose on supplement manufacturers, and the impact that the changes would have on the prices of products and consumer behavior. We have already presented the position of The Polish Chamber of Physicians and Dentists to introduce an advertisement ban on OTC and dietary supplements.

Some parties have argued against the need for change, saying that the dietary supplement market is still developing and that new regulations are not justified from an economic perspective. The benefits and risk of introducing new regulations in Poland are shown in Table 2.

The positions of stakeholders and their influences are depicted in Fig. 2. The Polish Ministry of Health is an enthusiastic supporter of change [23], such as The Polish Chamber of Physicians and Dentists [19], but the Ministry has much more influence than the physician's organization. The proposed legislation changes are opposed by the supplement industry's professional associations, which have attempted to prevent legislative changes by introducing self-regulation [35]. The Gdansk Institute of Economics also

appears to oppose the changes [31]. Although the opposing bodies' objections appear to have had little influence, their lobbying efforts are clearly visible.

## 6. Conclusions

With people's increasing disposable incomes and their growing concern for their wellbeing, dietary supplements are selling well in the Polish market. Health is one of the most important issues for Poles [38]. It is astonishing to many people that products advertised as being healthy, providing support for vitality, and enhancing resistance to everyday ailments may not have such properties, and may even be harmful. NIK investigations have shown that some dietary supplements contain pathogenic bacteria and substances banned from the list of psychoactive substances because they are harmful to health [1].

It is unsurprising that there was great public concern and calls for regulation of the industry subsequent to the disclosure of the NIK audit's findings. Although some time has passed since the NIK's report, and many proposals have been forwarded, major legislative change has not occurred [36]. Interest in the subject also declined in mass media, this only resurfacing periodically when anything of note occurs, such as the media outcry in February 2019 when it became known that pharmacists were being forced by their employers to recommend dietary supplements to customers in preference to medicaments [37]. Even revelations such as this do not appear to influence the pace of legislation proceedings, which are moving very slowly: far more slowly than would be expected given the NIK report, governmental announcements, and the 2017 media furor.

The analysis we have presented casts light upon the reasons for the slow pace of change, caution in making such important changes being necessary, and the proposed changes overlapping with the interests of many parties. Too great a desire to regulate the market will undoubtedly lead to resistance from the industry and a desire to undermine the legitimacy of the proposed changes.

When planning new regulations, although they are difficult to assess, possible long-term effects need to be considered. For rapidly developing markets there are usually proposals for greater supervisory regulation. If such regulation is focused within the legal framework of solutions that have emerged from market processes, then it should not significantly interfere with market functioning. On the other hand, if changes are more radical, then some interference should be expected. At present, it is difficult to discern the exact form that Polish legislation will take, and the impact that this will have on the development of the market for dietary supplements. However, this paper has sought to examine many of the issues that should be taken into consideration. It is likely that the first legislative changes (amendments to the provisions of the 2006 Food Safety and Nutrition Act) will be introduced this year (2019) [36], but the final shape of these changes is yet to be made public.

## Conflict of interest statement

None.

## Acknowledgement

This work was supported by the Polish Ministry of Science and Higher Education, it was special dotation to Warsaw University of Life Sciences for young scientists, no. 505-10-120200-P00578-99.

## References

[1] Najwyższa Izba Kontroli [The Supreme Audit Office], Available at: Informacja o wynikach kontroli. Dopuszczenie do obrotu suplementów diety. [Informa-

- tion about the results of the inspection. Marketing authorization for dietary supplements]; 2017 <https://www.nik.gov.pl/plik/id,13031.vp,15443.pdf>.
- [2] Dziennik Ustaw 2006 nr 171 poz. 1225 [Polish Journal of Laws of 2006 No. of 171 pos.1225] Ustawa z dnia 25 sierpnia 2006 r. o bezpieczeństwie żywności i żywienia [25th August 2006 Food Safety and Nutrition Act].
- [3] Dziennik Ustaw 2007 nr 196 poz. 1425 [Polish Journal of Laws of 2007 No. of 196 pos.1425]. Rozporządzenie Ministra Zdrowia z dnia 9 października 2007 r. w sprawie składu oraz oznakowania suplementów diety [9th October 2007 Decree of the Minister of Health on the composition and labeling of dietary supplements].
- [4] Official Journal of the European Communities, L 183, 12.7.2002, Directive 2002/46/EC of the European Parliament and of the Council of 10 June 2002 on the approximation of the laws of the Member States relating to food supplements.
- [5] Główny Inspektorat Sanitarny [Chief Sanitary Inspectorate] Powiadomienie o wprowadzeniu po raz pierwszy do obrotu (suplementy diety, żywność wzbogacana, żywność dla określonych grup) [Notification of the first introduction to the market (dietary supplements, enriched food, food for specific groups)] Available at: <https://gis.gov.pl/zywnosc-i-woda/powiadomienie-o-wprowadzeniu-po-raz-pierwszy-do-obrotu-suplementow-diety-srodkow-spozywczych-wzbogaczonych-oraz-zywnosci-dla-okreslonych-grup,2018>.
- [6] Minister Zdrowia [Ministry of Health], Available at: Odpowiedź na interpelację nr 12783 [Reply to interpellation No. 12783]; 2017 <http://orka2.sejm.gov.pl/INT8.nsf/kucz/658C47EF/%24FILE/i12783-o1.pdf>.
- [7] Braegger C, Campoy C, Colomb V, Decsi T, Domellof M, Fewtrell M, et al. Vitamin D in the healthy European paediatric population. *Journal of Pediatric Gastroenterology and Nutrition* 2013;56(6):692–701.
- [8] O'Dea JA. Consumption of nutritional supplements among adolescents: usage and perceived benefits. *Health Education Research* 2003;18(1):98–107.
- [9] Marcinowska-Suchowierska E, Sawicka A. Wapń i witamina D w prewencji złamań osteoporotycznych [Calcium and Vitamin D in prevention of osteoporotic fractures]. *Postępy Nauk Medycznych* 2012;3:273–9.
- [10] Barton DL, Liu H, Dakhil SR, Linguist B, Sloan JA, Nichols CR, et al. Wisconsin Ginseng (*Panax quinquefolius*) to improve cancer-related fatigue: a randomized, double-blind trial N07C2. *Journal of National Cancer Institute* 2013;105(16):1230–8.
- [11] Kraft K. Complementary/Alternative Medicine in the context of prevention of disease and maintenance of health. *Preventive Medicine* 2009;49(2-3):88–92.
- [12] Williams RJ, Mohanakumar KP, Beart PM. Neuro-nutraceuticals: further insights into their promise for brain health. *Neurochemistry International* 2016;95:1–3.
- [13] Wierzejaska R, Jarosz M, Siuba M, Rambuszek M. Assessing patients' attitudes towards dietary supplements. *Roczniki Państwowego Zakładu Higieny* 2014;65(4):317–23.
- [14] Panjari M, Davis SR. DHEA therapy for women: effect on sexual function and wellbeing. *Human Reproduction Update* 2007;13(3):239–48.
- [15] Petroczi A, Taylor G, Naughton DP. Mission impossible? Regulatory and enforcement issues to ensure safety of dietary supplements. *Food and Chemical Toxicology* 2011;49(2):393–402.
- [16] Cohen PA. American roulette—contaminated dietary supplements. *New England Journal of Medicine* 2009;361(16):1523–5.
- [17] Perez-Downes J, Hritani A, Baldeo C, Antoun P. Amphetamine containing dietary supplements and acute myocardial infarction. *Case Reports in Cardiology* 2016, <http://dx.doi.org/10.1155/2016/6404856>.
- [18] Mieszkońska M, Michota-Katulska E. Suplementy diety - korzyści i działania niepożądane [Diet supplements – advantages and danger for health]. *Bezp Pr Nauk Prakt* 2006;6:28–30.
- [19] Naczelna Izba Lekarska [The Polish Chamber of Physicians and Dentists], Stanowisko i apele Prezydium NRL podjęte 16 września 2016 r. [Position and appeals of the Presidium of the NRL taken on September 16, 2016] Available at: <https://www.nil.org.pl/aktualnosci/apel-prezydium-nrl-podjete-16-wrzesnia-2016-r>.
- [20] Woloshin S, Schwartz LM. Giving legs to restless legs: a case study of how the media helps make people sick. *PLoS Medicine* 2006;3(4):e170.
- [21] Williams SJ, Martin P, Gabe J. The pharmaceuticalisation of society? A framework for analysis. *Sociology of Health & Illness* 2011;33(5):710–25.
- [22] Drazen JM. Inappropriate advertising of dietary supplements. *New England Journal of Medicine* 2003;348(9):777–8.
- [23] Ministerstwo Zdrowia [Ministry of Health], Report Raport zespołu ds. uregulowania reklamy leków, suplementów diety i innych środków spożywczych oraz wyrobów medycznych [Report of the government group of experts for regulating the advertising of medicines, dietary supplements, other foodstuffs, and medical devices]. Warszawa: Ministerstwo Zdrowia; 2016.
- [24] Official Journal of the European Union, L 304/18 22.11.2011, Regulation (EU) no 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers.
- [25] European Commission, Available at: Online offered food; 2017 [https://ec.europa.eu/food/safety/official\\_controls/food\\_fraud/online-offered-food-2017\\_en](https://ec.europa.eu/food/safety/official_controls/food_fraud/online-offered-food-2017_en).
- [26] MasterPharm, Available at: Opis branży [Description of the industry]; 2015 <http://ri.masterpharm.pl/o-spolce/opis-branzny>.
- [27] Instytut Ochrony Zdrowia [The Healthcare Institute], Available at: Suplementy diety. Pacjent. Rynek.Trendy. Regulacje. Country Report. Warszawa: Instytut Ochrony Zdrowia; 2017 <https://suplindex.com/wp-content/uploads/2017/10/RAPORT-Suplementy-diety-30.08.2017.pdf>.

- [28] PMR Publications. Rynek suplementów diety w Polsce 2015. Prognozy rozwoju na lata 2015–2020 [Dietary supplements market in Poland 2018 Development forecasts for 2015–2020] Report for industry. PMR Publications; 2015.
- [29] Krajowa Rada Radiofonii i Telewizji [National Radio and Television Council]. Emisja przekazów handlowych produktów zdrowotnych i leków w programach telewizyjnych [Emission of advertisements of health products and medicines in television]. Report. Warszawa: KRRiT; 2015.
- [30] Krasnowska G, Sikora T. Suplementy diety a bezpieczeństwo konsumenta [Dietary supplements vs customer safety]. *Żywność Nauka Technologia Jakość* 2014;77(4):5–23.
- [31] Instytut Badań nad Gospodarką [Gdańsk Institute for Market Economics]. Gospodarcze skutki wprowadzenia zakazu reklamy leków i suplementów diety OTC [Economic effects of prohibiting the advertising of medicines, OTC and dietary supplements]. Report. Warszawa: IBnG; 2016.
- [32] Sejm Rzeczypospolitej Polskiej [Sejm of the Republic of Poland], Parlamentarny Zespół ds. regulacji rynku farmaceutycznego [Parliamentary Group for the Regulation of the Pharmaceutical Market] Available at: <http://sejm.gov.pl/Sejm8.nsf/agent.xsp?symbol=POSIEDZENIAZESP&Zesp=441>, 2017.
- [33] Adamczyk J. Available at: Rewolucyjny projekt zmian w regulacji reklamy i prezentacji suplementów diety – co czeka branżę, jeśli stanie się obowiązującym prawem? [A revolutionary project of changes in the regulation of advertising and presentation of dietary supplements - what awaits the industry if it becomes a valid law?]; 2017 <http://traple.pl/blog/rewolucyjny-projekt-zmian-w-regulacji-reklamy-i-prezentacji-suplementow-diety/>.
- [34] Rzecznik Praw Dziecka [The Children's Ombudsman], List do Ministra Zdrowia [Letter to the Minister of Health] Available at: Rzecznik Praw Dziecka [The Children's Ombudsman], List do Ministra Zdrowia [Letter to the Minister of Health] Available at: [http://brpd.gov.pl/sites/default/files/2018\\_09\\_26\\_wyst\\_mz.pdf](http://brpd.gov.pl/sites/default/files/2018_09_26_wyst_mz.pdf), 2018. [http://brpd.gov.pl/sites/default/files/2018\\_09\\_26\\_wyst\\_mz.pdf](http://brpd.gov.pl/sites/default/files/2018_09_26_wyst_mz.pdf), 2018.
- [35] KRSiO, Polfarmed, Available at: PASMI, Suplementy Polska [abbreviations of supplement industry professional associations]. Nowe zasady reklam suplementów diety [New advertising rules for dietary supplements]; 2017 [https://www.krsio.org.pl/uploads/media/notatka\\_prasowa\\_10.01.2017.pdf](https://www.krsio.org.pl/uploads/media/notatka_prasowa_10.01.2017.pdf).
- [36] Pochrzęst-Motyczyńska A, Available at: Szykuje się rewolucja w suplementach diety [A revolution in dietary supplements is being prepared]; 2019 <https://www.prawo.pl/zdrowie/suplementy-diety-planowana-zmiana-przepisow,367120.html>.
- [37] Janczura M, Available at: Ujawniamy kulisy handlu niesprawdzonymi suplementami. Aptekarze: Jest odgórny przykaz, żeby to ludziom wciskać [Revelation of behind-the-scene trading in unproven supplements. Pharmacists: There is a top-down command to push them to people]; 2019 [http://www.tokfm.pl/Tokfm/7,103085,24472717,ujawniamy-kulisy-handlu-niesprawdzonymi-suplementami-aptekarze.html?utm\\_campaign=share\\_article&utm\\_medium=deeplink&utm\\_source=gazetaapp](http://www.tokfm.pl/Tokfm/7,103085,24472717,ujawniamy-kulisy-handlu-niesprawdzonymi-suplementami-aptekarze.html?utm_campaign=share_article&utm_medium=deeplink&utm_source=gazetaapp).
- [38] Centrum Badań Opinii Społecznej [Centre for Public Opinion Research]. Wartości i normy. [Values and norms]. Report. Warszawa: CBOS; 2013.