Use of dietary supplements among pregnant women attending Birth Schools in the Silesian Voivodeship

Stosowanie suplementów diety wśród kobiet ciężarnych korzystających ze szkół rodzenia na terenie województwa śląskiego
INTRODUCTION

Level of knowledge on dietary supplementation of pregnant women benefiting from high schools give birth within Silesian Voivodeship Level of knowledge about dietary supplementation among pregnant women in antenatal classes in Silesia keywords: supplementation of the diet, pregnancy, prevention Key words: dietary supplementation, pregnancy, prevention Introduction the State of health of the fetus and newborn strongly correlates with the nutrition of mother during pregnancy, when it is observed an increase in the demand for nutrients, vitamins and minerals. The primary source for the pregnant woman should be a balanced diet quantitatively and qualitatively. Diet supplementation, in addition to the recommended in relation to the entire population, should be used only where there is a shortage of vitamins and minerals, which cannot be covered as part of the daily diet [3]. In view of the alarming trends of abuse of supplements focus broader dietary supplementation should be included in nutrition education of pregnant women. This education should be carried out by midwives, gynaecologists-obstetricians, nutritionists, as well as persons carrying out activities in the schools give birth [6].

Currently, in accordance with the recommendations made by the Panel of experts of the Polish society of Gynecological (PTG) among the recommended supplements for all pregnant women is folic acid, lactic acid, DHA, and iodine. In the event of the occurrence of the circumstances in which the diet you can not cover the iron deficiency, vitamin D3, calcium, vitamins A and E also recommended these nutrients supplementation [2].

Folic acid is a vitamin B deficiency, which during pregnancy correlates with an increased risk of neural tube defects in the fetus. We recommend supplementation of the total population, mainly due to a better absorption of the synthetic folic acid compared to its forms in food sources. It should also be pointed out that the recommended supplementation is not only pregnant women but all women in the concept. This stems first from a high percentage of pregnancies are unplanned, and secondly with the progress of the pregnancy at the time of its realization by a woman, which usually fluctuates ok. 6-8 weeks from fertilization, i. e. at the moment when the folic acid for a long time should be supplemented. Daily dose of folic acid is recommended for the general population to 4 g. DHA acid belongs to the family of omega-3, and its deficiency during pregnancy can entail health consequences to the fetus in the form of the development of the function of the nervous system, particularly cognitive function and mobility. Supplementation is recommended in relation to the entire population, mainly due to limited access to good quality fish and seafood, which are a major source of dietary acid. In accordance with the opinion of the PTG daily dose supplementation DHA acids assuming low consumption of fish is on the level of 500 mg. Iodine deficiency during pregnancy may be associated with birth defects, miscarriages.
Material and methods the research was conducted among the 184 pregnant women participating in sports schools give birth in Silesia (Bytom, Zabrze, Ruda Śląska, Gliwice) in the period from 03. 01. 2015-28. 02. 2015.

METHODS

In the framework of the research work was constructed architectural survey questionnaire, composed of metrics and 15 questions about dietary supplementation during pregnancy. For the preparation of a database and the development of the final result were used MS Excel 2010.

RESULTS

The results in the test group prevailed, women in the age group 25-34 years, representing 60,9%. 26. 1% is not under 25 years of age on the day of the survey, and 13% were aged 35 years or more. The structure of education of women was as follows: 51,1% respondentki with higher education, 39. 1% of secondary education, with 6. 5% and 3,3% of basic schooling. 89. 7% of those polled has a population of more than 100 thousand inhabitants. In the test group was 15. 8% (29 women) unemployed. The income structure of the population are using table I.
Using questionnaire survey respondents what should be the first source to cover the increased need for vitamins and minerals a pregnant woman. 103 women (56%) considered that it should be a balanced diet, and 81 (44%) of the indicated on the consumption of dietary supplements.

In the framework of the work of women's knowledge was tested on the recommended supplementation during pregnancy. The biggest part of pregnant women (98.4%) is indicated on the folic acid supplement as necessary in completing your diet during pregnancy. More than 77% found for the necessary preparations, refreshing 60.9% iron, and 48.4% of the fatty acids of DHA. Iodine necessary dietary supplement pregnant women found 14.7% of respondent. Detailed results are presented using prints 1.

**Figure 1. Supplements for use during pregnancy, in the opinion of the respondent (n = 184)**

Using the designed questionnaire, it was examined whether respondentki know what unions are dietary supplements recommended in relation to the total population of pregnant women. In the case of folic acid, vitamin B group correctly as it identified 94 women (51.1%) 74 (40.2%) of the examined as valid identifiers as DHA fatty acid an unsaturated acid. In the case of iodine the correct answers (lithium trace element) has granted the 36 surveyed (19.6 percent). The details of the shows using prints 2-4.
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Figure 2. The structure of the test answers the question, what is folic acid (n = 184)

Figure 3. The structure of the test answers the question, what is DHA acid (n = 184)
Thirty-one percent (31%) of respondents accurately indicated the daily dose recommended in the case of folic acid supplementation, i.e., 40 µg. 56.5% admitted that they do not know the answer to this question, and 12.5% incorrectly replied. In the case of the daily intake recommended in dietary supplementation with DHA acids with low intake of fish, the correct dose (500 mg) indicated 11.4% of respondents, mistaking 11.9%, and the answer "I don't know" 76.6%. Correctly answering the question concerning the recommended daily allowance of iodine supplementation during pregnancy (150 µg) responded 10.3% of women, mistaking 7%, while the remaining 82.6% admitted that they do not know the answer.

The project also examined respondent knowledge on the main dietary sources of folic acid, acids DHA and iodine. Vegetables, fruit, and legumes were the main source of folic acid in food indicated 35.9% of those polled. In the case of DHA and the correct response of iodine (fish and seafood) granted respectively 28.3% and 58.2% of women. Detailed results are presented in Table II.

<table>
<thead>
<tr>
<th>The main dietary sources</th>
<th>The folic acid</th>
<th>The DHA acids</th>
<th>The iodine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables, fruit, legumes</td>
<td>66</td>
<td>35.9%</td>
<td>18</td>
</tr>
<tr>
<td>Saltwater fish and seafood</td>
<td>5</td>
<td>2.7%</td>
<td>52</td>
</tr>
</tbody>
</table>
The main dietary sources | The folic acid | The DHA acids | The iodine
|--------------------------|--------------|--------------|--------------
|                          | n | %   | n | %   | n |
| Pork and beef            | 21 | 11.4% | 16 | 8.7% | 16 |
| Milk and milk products   | 24 | 13.0% | 21 | 11.4% | 5  |
| I don’t know             | 68 | 37.0% | 77 | 41.8% | 38 |
| The sum                  | 184 | 100% | 184 | 100% | 184 |

In the questionnaire survey referred to sources of knowledge of pregnant women on dietary supplementation. 85.9% has been suggested in this regard, the information found on the Internet and in the press 60.9%. 64.7% of respondent knowledge of supplementation has acquired from family, friends, or friends. Medical personnel as a source of information in question showed 44% of respondent. Figure 5 illustrates the results of detailed.

**Figure 5. Knowledge of women surveyed on dietary sources of folic acid, DHA-acid and iodine (n = 184)**

**DISCUSSION OF THE RESULTS**

Proper diet rich in vitamins and minerals, as highlighted at the outset, should form the basis of a balanced diet pregnant woman. Introduction to diet supplementation in most cases should take place in the event of inability to make up for a shortage of nutrients by changing the diet. To this should be assessed by your doctor or dietitian on the basis of an interview with a woman pregnant. In addition, the specialist should decide whether duration of supplementation and dosing formulations. Concern seems to be the fact that as many as 44% of the women surveyed found that the first source
to cover the increased need for vitamins and minerals during pregnancy should be the use of dietary supplements. The consequence of this state of knowledge in the target population most likely will be the use of dietary supplements without first consulting with your doctor or a nutritionist, as well as their abuse.

Analysis of the data showed that respondents examined do not have adequate knowledge about which dietary supplements are recommended for the general population of pregnant women. Considering the situation in the case of folic acid, where more than 98.4% of women is aware of the necessity of such supplementation. These results translate into the results of research on the use of folic acid supplementation in pregnant women, according to which such supplementation is usually used more than 90% of pregnant women [5, 6]. Less favourably is women's awareness concerning the need for DHA acids supplementation during pregnancy, as it applies to less than half of the respondents (48.4 percent). In accordance with the results of the percentage of women using fatty acids DHA during pregnancy in the form of jednoskładnikowego or entering into the composition of a preparation of vitamin-mineral hover around 30% [1]. The least optimistic situation occurs in the case of knowledge about the need for iodine preparations in pregnancy, which showed less than 15% of women. Lack of awareness in this field has no impact on taking iodine supplementation for pregnant, which shows, among other things. Szybińskiego tests et al., or Wierzejskiej et al. pointing to the fact that making supplementation by less than 30% of pregnant women, mainly in the form of adoption of compound preparations [4, 5]. Concern seems to be the fact, that more than 77% of the respondent considers preparations necessary for refreshing the application during pregnancy, while they are not unconditionally recommended in relation to the entire target population. Analysis of the literature indicates clearly to the high percentage of women using this type of preparations, oscillating around 80% [8]. A similar situation occurs in relation to the preparations, where over 60% of those polled believes that during pregnancy their supplementation is necessary. In this case, it is difficult to assess the percentage of women, which, according to the results of the use of iron preparations in pregnancy, because in most cases there is information about possibly occurring medical indications for use of this form of supplement deficiency of iron in the diet.

The work clearly shows the lack of knowledge of the respondent in terms of belonging to a group of nutrients of supplements, which in the opinion of the authors for not reading the leaflets attached to the packaging of supplements or reading them without understanding. There is here a similar percentage of patients with knowledge to the test subject, as in the case of the recommended supplementation. The most known dietary supplement turns out folic acid, but despite this the percentage of patients that are aware that this is a B-vitamin, dating back to the level of a little more than 50%. In the case of DHA for just over 40% of the properly recognized him with an insatiable fatty acid. The most detrimental is the level of knowledge in this area with regard to iodine, where less than 20% is aware that this is a lithium trace element. The observed level of knowledge is extremely disturbing, particularly from the point of view of the supply of nutrients from supplements described above as part of a balanced diet. Lack of awareness on the presence of fatty acids DHA or iodine in the daily consumption,
which seems to be a consequence of the lack of knowledge about their belonging to a particular class of nutrients can lead to exceeding the recommended daily intake of these nutrients.

Confirmation of thesis for not acquainting women with leaflets, attached to the packaging is also not satisfied with the level of knowledge about the recommended doses for individual supplements. Again, the largest percentage of women demonstrated knowledge regarding the daily intake of folic acid supplements, although it was a little over 30% of those polled. In the case of the correct dose of DHA acids showed only 11.4% of the respondent, while with regard to iodine 10.3%. Lack of knowledge about the recommended doses may lead to, particularly with regard to the DHA acids and iodine intake of preparations containing these substances in the composition, but in insufficient quantities to supplement the shortage.

The low level of knowledge of pregnant women about folic acid, and DHA acids content of iodine in food sources confirms a kind of rationale for the recommended supplementation of preparations containing those components in respect of the whole population. The need to supply these components within a balanced diet certainly proves impossible in the absence of nutritional awareness with regard to specific categories of products, rich in these components. Less than 36% of the women interviewed indicated respectively the main source of dietary folic acid, and DHA acids was more than 28%, respectively. In this respect, it presents the situation in the field of iodine, since more than 58% of women correctly identified saltwater fish and seafood as its main source of nutrition.

The shortcomings of knowledge concerning dietary supplementation during pregnancy can be partly explained by the low quality of sources of knowledge, from which the respondents use. The most common sources of knowledge among the media turned out to be the Internet, which showed more than 85% of those polled and press-more than 60%. As is well known, these sources should be regarded as reliable with a certain degree of common sense, because for the most number of cases found the information are not of the nature of scientific progress. Just over 60% of respondents indicated as a source of knowledge reviews family, friends and acquaintances, which also should be considered alarming. In most cases, these reviews are shaped on the basis of messages found in the first two knowledge sources listed, or on the basis of their own experience that as individual issues may not be translated into the general population. Very disturbing seems in fact that only 44% of women as a source of knowledge on the use of dietary supplements in pregnancy indicates medical personnel. This might indicate a poorly implemented by doctors or midwives and nutrition education.

CONCLUSIONS

1. Pregnant women are not aware that dietary supplements should, in most cases, the complement the balanced diet rather than its base.
2. Respondents have low knowledge of the recommended dietary supplementation during pregnancy, its dosing, as well as membership of supplements to relevant groups of nutrients.

3. Lack of knowledge on the main dietary sources of nutrients recommended dietary supplementation in pregnant women is one of the arguments proving the legitimacy of supplementation.

4. The main sources of knowledge of pregnant women on dietary supplementation are the Internet, newspapers and information obtained from family, friends and acquaintances.

REFERENCES


ABSTRACT

The diet should be the main source of nutrients, vitamins and minerals for pregnant. Dietary supplements should be used only in case of deficiency of vitamins and minerals that can not be covered as part of your daily diet. To assess the level of knowledge of pregnant women on dietary supplementation. The study was conducted among 184 women in antenatal classes in Silesia in the period from January 12th to February 28th 2015. Pregnant women are not aware that food supplements should in most cases be complementary to a balanced diet. The main sources of knowledge
about dietary supplementation of pregnant women are the Internet, newspapers, and information obtained from family, friends and acquaintances.

STRESZCZENIE


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