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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии

საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНИТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНИТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

WEBSITE

www.geomednews.com

К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman** (**Кириллица**), для текста на грузинском языке следует использовать **AcadNusx.** Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - http://www.spinesurgery.ru/files/publish.pdf и http://www.nlm.nih.gov/bsd/uniform_requirements.html
В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректура авторам не высылается, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or compu-ter-printed on a single side of standard typing paper, with the left margin of **3** centimeters width, and **1.5** spacing between the lines, typeface - **Times New Roman** (**Cyrillic**), print size - **12** (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform_requirements.html
http://www.icmje.org/urm_full.pdf
In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

Articles that Fail to Meet the Aforementioned Requirements are not Assigned to be Reviewed.

ავტორთა საყურადღებოდ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დავიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე,დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx.** შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შეღებვის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფჩხილებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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NUTRITION AND PHYSICAL ACTIVITY OF PREGNANT WOMEN INCLUDING BARIATRIC SURGERY

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Abstract.

A healthy, balanced diet of a pregnant woman is an integral part for the full development of the fetus, mainly pregnant women receive the mentioned recommendations from gynecologists, because consulting a nutritionist is less mandatory at this stage still in our country. Since obesity is highly prevalent paralleling the globe, especially among the European population but nevertheless it's a preventable risk factor which is associated with negative outcomes for both mother and fetus. That's where bariatric surgery plays an important role, that has increased among women for an achievable pregnancy but being overweight prevents it. I have created a general medical booklet that would be useful to them as well, easy to understand and will bring positive results. This book shows the amount of calories to be consumed by pregnant mothers each trimester, kind of food to go for or should be avoided and type and duration of physical activity. That's where bariatric surgery plays an important role, that has increased among women for an achievable pregnancy, but being overweight prevents it. The crucial part to focus is how many months later the pregnancy occurred and how her nutrition was going. Being a pediatrician and nutritionist it's foremost important to observe mother and baby after the mentioned operation. Because monitoring the diet properly leads to better health in both mother and newborn since this topic is still lagging in research areas especially in European countries and data about obesity among pregnant women is lacking, so future studies would be beneficial among obese pregnant women for the betterment of their health.

Key words. Balanced diet, obesity, bariatric surgery, pregnancy, booklet.

Introduction.

Healthy nutrition is important for every person, especially when we talk about newborn, infant, mother's nutrition during lactation and nutrition of a woman who is planning pregnancy and during pregnancy. Correct, balanced nutrition of a pregnant woman determines the full development of the fetus. It is important that the daily menu is loaded with the right balance of food that is needed by the mother and the fetus. With the addition of folic acid. The nature of the mother's diet during pregnancy determines the baby's attitude to food products - acceptance during additional feeding. Eileithyia is the goddess of the birth of life in ancient Greek mythology. Daughter of Zeus and Hera. And the oldest known piece of art that shows pregnancy is the Venus of Willendorf, 11 cm., which has been dated between 28,000 and 25,000 BC and found in 1908. It is kept in the Museum of Natural Sciences in Vienna. Geologists and anthropologists have determined that Venus is made of northern Italian oolites. Pregnant women's nutrition has been a concern for centuries. In England in the 16th, 17th and 18th centuries, attention was paid to the relationship between pregnancy and food cravings, and much time was devoted to the analysis of this need, high weight gain in pregnancy, low weight gain, and its effect on fetal development and the health of the newborn [1]. According to the ACOG recommendation of the American College of Obstetricians and Gynecologists, pregnant women with one fetus should receive an additional 300-340 calories per day from the second trimester, and in the case of twins, approximately 600 additional calories, and in the case of triplets - 900 additional calories. Daily nutrition should provide all necessary vitamins and minerals. The Academy of Nutrition and Dietetics recommends the following key components of a healthy lifestyle during pregnancy: proper weight gain, balanced diet, regular sleep. Mostly, pregnant women gain between 10 and 12.5 kg gain weight, mainly after the 20th week of pregnancy. The most important thing is that increased calories per day do not mean "meal for 2". In the first trimester, many patients experience nausea and vomiting, loss of appetite, so feeding becomes difficult. This also makes it difficult to eat foods rich in protein and calories. At this time, it is recommended to take medication to prevent nausea and vomiting according to the doctor's prescription. It is also recommended to take small portions of food during the day, ginger tea or water with small doses of lemon juice, to reduce fatty foods. Considering this situation, it is important to eat with increased calories from the second trimester, especially if there was weight loss in the first trimester. Women have distinct nutritional requirements throughout their life – especially before and during pregnancy and while breastfeeding, when nutritional vulnerability is at its greatest. Ensuring women have nutritious diets and adequate services and care is fundamental for the survival and well-being of mothers and their children. Women who report "prudent" or "health-conscious" eating patterns before and/or during pregnancy may have fewer pregnancy complications and adverse child health outcomes. Comprehensive nutritional supplementation (multiple micronutrients plus balanced protein energy) among women with inadequate nutrition has been associated with improved birth outcomes, including decreased rates of low birth weight [2]. A diet that severely restricts any macronutrient class should be avoided, specifically the ketogenic diet that lacks carbohydrates, the Paleo diet because of dairy restriction, and any diet characterized by excess saturated fats.

Discussion.

Undernutrition in pregnancy can be defined as a maternal nutritional state in which nutrient stores and macronutrient/ micronutrient intake are less than that needed to achieve optimal maternal, fetal, and newborn outcomes. It is also a risk factor for development of adverse outcomes. It is also known that

during pregnancy, poor diets lacking in key nutrients – like iodine, iron, folate, calcium and zinc – can cause anemia, pre-eclampsia, hemorrhage and death in mothers. They can also lead to stillbirth, low birth weight, wasting and developmental delays for children. Recent evidence has shown that although excessive gestational weight gain predicts adverse perinatal outcomes among women with normal weight, the degree of pregnancy obesity predicts adverse perinatal outcomes to a greater degree than gestational weight gain among women with obesity. Furthermore, low body mass index and insufficient gestational weight gain are associated with poor perinatal outcomes. Observational data have shown that first-trimester gain is the strongest predictor of adverse outcomes. Interventions beginning in early pregnancy or preconception are needed to prevent downstream complications for mothers and their children. For neonates, human milk provides personalized nutrition and is associated with short- and long-term health benefits for infants and mothers. Eating a healthy diet is a way for lactating mothers to support optimal health for themselves and their infants. Poor maternal nutritional status is causally associated with abnormal fetal growth patterns, including low birthweight (LBW; <2500 g), small for gestational age (SGA) (<10% birthweight for gestational age) or fetal growth restriction (FGR), macrosomia (>4–4.5 kg), and large for gestational age (LGA) (>90% birthweight [3]. Nutritional intake after bariatric surgery depends on type of surgery, presence of symptoms, such as pain and nausea, and complications. There is also a risk of malnutrition after bariatric surgery. In particular, during pregnancy following bariatric surgery, there is a risk of protein and calorie malnutrition and micronutrient deficiencies due to increased maternal and fetal demand and possibly due to reduction of food intake (nausea, vomiting). As such, it is necessary to monitor and manage nutrition in pregnancy following bariatric surgery with a multidisciplinary team to avoid any deficiencies in each trimester and to ensure the well-being of the mother and fetus. Yes, as such, it is highly recommended that obese women lose weight before conception to improve maternal and fetal outcomes. Lifestyle and pharmacological interventions are the main cornerstones for weight loss; however, in the case of patients with class III obesity (BMI ≥ 40 kg/m^2) and patients with class II obesity (35–39 kg/m^2) with associated comorbidities, bariatric surgery (BS) has proven to be effective. After BS, it is necessary to manage pregnant women with a multidisciplinary team, especially to prevent micronutrient deficiencies for offspring [4].

During pregnancy, it is recommended to take:

Fruits and vegetables.

5 servings of fruits and vegetables every day - this can be fresh, frozen, canned, dried or in the form of natural juice.

2 cups of fruits and 2.5-3 cups of vegetables are recommended.

One serving of fruit: an average piece of whole fruit is 80g.

1 serving is an amount that can fit in the palm of your hand.

Fruit: A serving is 2 or more small fruits - for example, 2 plums, 2 kiwis, 3 apricots, 7 strawberries or 14 cherries.

(Fruit should be distributed over the course of the day - so that the body does not take a large amount of sugar in it at once.)

Dry fruits: Dried fruit about 30 g. This is about 1 full tablespoon of raisins.

To reduce the risk of caries, dried fruits are preferably eaten as part of a meal - for example, as a dessert, rather than as a separate snack. Also fruit juice or smoothie during meals.

Canned fruits are preferably in natural juice, not syrup. Sugar-free 100% fruit juice, vegetable juice and smoothies can be a maximum of 1 serving out of 5 a day. The total amount is 150 ml. Whole fruits cause less damage to teeth.

Vegetables: 3 servings (1 serving is about 75-80 g.) Vegetables: broccoli, spinach, cucumber, tomato, sweet potato, carrot, Bulgarian, pumpkin, cauliflower. Vegetables: A serving is 3 stalks of celery, or 1 cucumber, or 1 medium tomato, or 7 cherry tomatoes. For example, 3 full tablespoons of peas or sweetcorn count as 1 serving. Potato is not a vegetable, it is classified as starchy foods such as bread, rice or pasta.

Protein: Protein-rich foods are important to take every day: beans, fish, eggs, meat (avoid liver), poultry, nuts, seeds, dairy products. At least 60 grams of protein per day, which is about 20-25 percent of calories. 0.8 grams of protein per kg/weight, at least 40 grams of protein per day. Fish, meat, eggs, beans, legumes and nuts. 2 servings of fish 2 times a week, such as salmon, trout, sardines or mackerel, or 2 times a week tuna steak, about 140 grams of thermally processed or a medium-sized can of tuna 140 grams of fresh product. Low-fat, 1% fat or skim milk, yogurt and cheese. Alternatives to milk: For example, vitamin-enriched versions of soy drinks [5].

Cereal: Cereal's portion is 8½ servings per day. Mainly containing whole grains, fiber and vitamins. This food should make up only one third of the daily diet. Whole grain bread, rice, pasta, corn, millet, oats, and cornmeal. 1 slice of bread or flat pita bread (40 g), ½ cup cooked rice, pasta, barley, buckwheat, or quinoa, ½ cup cooked porridge, 2/3 cup whole wheat cereal, ¼ cup muesli, 3 crisp breads, 1 small English muffin.

Carbohydrates: Carbohydrates should make up about 45-65 percent of daily calories. Most pregnant and lactating women need about 175-210 grams of carbohydrates per day, which should make up only a third of their daily intake. For gestational diabetes, limit carbohydrate intake to 40 percent of daily calories. For breakfast - less cereal. Fats- about 25%-35% of daily calories. Monounsaturated fats are preferred over saturated fats. Less than 10 percent of daily calories should come from saturated fat.

Caffeine: The World Health Organization (WHO) and the American College of Obstetricians and Gynecologists recommend that pregnant women consume no more than 300 mg of caffeine.

100 mg of caffeine - 1 cup of instant coffee.

140 mg of caffeine - 1 cup of filter coffee.

75 mg of caffeine--1 cup of tea. (both black and green)

40 mg of caffeine in 1 can of cola.

50 gr. Caffeine--in a bar of dark chocolate.

10 mg of caffeine - 50 g. in milk chocolate.

Dark chocolate: 80 mg of caffeine in 100 grams of the product.

Black tea: 47 mg of caffeine per 240 ml product.

Decaffeinated coffee-97% caffeine removed.

A brewed cup of 240 ml of decaffeinated coffee contains about 2.4 mg of caffeine and a 60 ml of espresso contains about 0.6 mg of caffeine.

How safe is decaffeinated coffee during pregnancy? There are no official guidelines regarding decaffeinated coffee and pregnancy. Studies conducted in 1997 and 2018 found that women who drank 3 or more cups (710+ ml) of decaffeinated coffee during the first trimester of pregnancy had a 2.4 times higher risk of miscarriage. Some of the herbs used in herbal teas can also be potentially dangerous during pregnancy, especially the first trimester [6].

Sugar and sweetener: Sugar and sweetener should be taken no more than 7.5 teaspoons, also 30 grams of free sugar, which is about seven sugar cubes. For example, one can of cola contains 9 cubes, which is more than the daily dose. Sugary foods and drinks are often high in calories, which contribute to weight gain and damage to teeth.

Sweeteners: Although sweeteners are safe during pregnancy according to the NHS, they are best used sparingly in products. (FDA) has approved aspartame, acesulfame-K, and sucralose -E 955 for use during pregnancy.

Salt: 3000 milligrams per day. 1 1/2 teaspoons -one teaspoon of salt contains 2,000 milligrams (mg) of sodium. During the medically necessary indication, it can be reduced by the doctor's decision. Water is the best drink during pregnancy. Water 8 to 12 glasses (64-96 oz) each day during pregnancy.

Pregnancy and allergy-causing products.

As for foods that in certain cases cause allergies, i.e. contain certain allergens, such as kiwi, peanuts, quail protein, according to recent studies, there is no need for the mother to refuse to eat this type of food, on the contrary, a newborn who comes into contact with this type of food should be breastfed. During the feeding period or while still in the womb, it is less prone to developing allergies to them. But if the mother knows that she is already allergic to any product of this particular type, she should definitely refuse to take them.

Groundnuts-peanuts: It is not forbidden to take peanuts during pregnancy, except for allergic reactions.

Vitamins, minerals:

During pregnancy, it is important to absorb vitamins from food products, as well as taking them in the form of medicines, e.g. folic acid. Iron - 27 milligrams per day is needed during pregnancy. In case of anemia, up to 60 milligrams per day, according to the doctor's recommendation. Zinc 11 milligrams of zinc per day during pregnancy, 13 milligrams if pregnant under 18. Calcium - 18 years or younger, 1,300 milligrams per day. From 19 to 50 years old, 1000 milligrams of calcium per day is needed (1.5-2 g per day). Folate - at least 600 micrograms per day. Vitamin D – minimum 600 IU. DHA. Omega-3 fatty acids, 200 to 300 milligrams per day. 290 micrograms of iodine per day. Choline. 450 milligrams. It is necessary to control the food that is rich in fat, sugar, e.g. cream, chocolate, biscuits, cakes, ice cream, puddings, sweet, carbonated drinks. Especially in limited quantities during hunger - before meals [7].

The following foods are not recommended during pregnancy:

1. Not recommended - unpasteurized milk and food made with unpasteurized milk - Brie cheese, Danish blue cheese, (has more moisture. This can facilitate the growth of bacteria.)

2. Raw and partially thermally processed seafood, eggs and meat. Sushi made with raw fish. Smoked seafood. Fish: shark, swordfish. Raw shellfish (to avoid harmful bacteria, viruses or toxins). Raw or lightly cooked chicken eggs (controlled in Britain with a special seal, mark) to avoid salmonella.

3. Game meat: goose, pheasant. (risk of toxoplasmosis. May contain a toxic substance after a bullet shot.)

4. Pate (liver and liver products contain a large amount of vitamin A. This can be harmful to the fetus.) as well as supplements containing vitamin A (retinol). The licorice plant is safe, but the roots should be avoided.

5. Electric cigarettes are not approved by the FDA to help people quit smoking. Although e-cigarette aerosol usually contains less harmful substances than cigarette smoke, e-cigarettes and other products containing nicotine are not safe during pregnancy. Some flavorings used in cigarettes may be harmful to the fetus.

6. There is no known safe amount of alcohol to consume during pregnancy or when planning to become pregnant. There is also no safe day period for drinking during pregnancy. Fetal Alcohol Spectrum Disorder (FASD). A fetus does not have a fully developed liver and cannot process alcohol.

In terms of food hygiene, it is recommended to:

1. Raw food is stored separately from ready-made food.
2. Separate knife and cutting board for raw meat.
3. Heat treatment of meat and eggs.

Pregnancy and physical activity.

During pregnancy and postpartum-lactation, physical activity is recommended for 30 minutes a day, at least 150 minutes a week, such as: brisk walking, yoga, dancing or even shopping. From a non-active state before pregnancy to habitual physical activity during pregnancy. Safest for pregnant women: walking, swimming, yoga and water exercises. Strenuous activity--running, swimming, or aerobics classes by appointment with an instructor. It is not recommended because it is risky: Horse riding, downhill skiing, ice hockey, gymnastics and cycling, exercise at an altitude of 2500 m above sea level - risk of altitude sickness. Exercises lying on your back for a long time, especially after 16 weeks of pregnancy. Because the weight of the fetus pushes on the main blood vessel [8].

Pregnant vegetarian or vegan.

For pregnant vegetarian women it is recommended systematic control of vitamin D, iron and vitamin B12, as well as calcium and iodine. Recommended intake: dark green vegetables, avocado, whole grain cereals. Nuts, vitamin enriched products. Dried fruit. Good sources of vitamin B12 are milk, cheese and eggs. For vegans: Cereal enriched with vitamin B12. Sugar-free soy drinks with vitamin B12, vitamin D-prophylactic period and calcium control. For food: dark green leafy vegetables, sugar-free soy, pea and oat drinks, dark and white bread, sesame seeds, dried fruit.

Pregnancy and anemia.

Anemia is pregnant women is often associated with an increase in the mother's normal blood volume. It is recommended to increase iron-rich foods in the daily menu and supplemental therapeutic dose.

Pregnancy and constipation.

Constipation is common in late pregnancy. The first-line recommendations are a high-fiber diet and water. Fiber is found

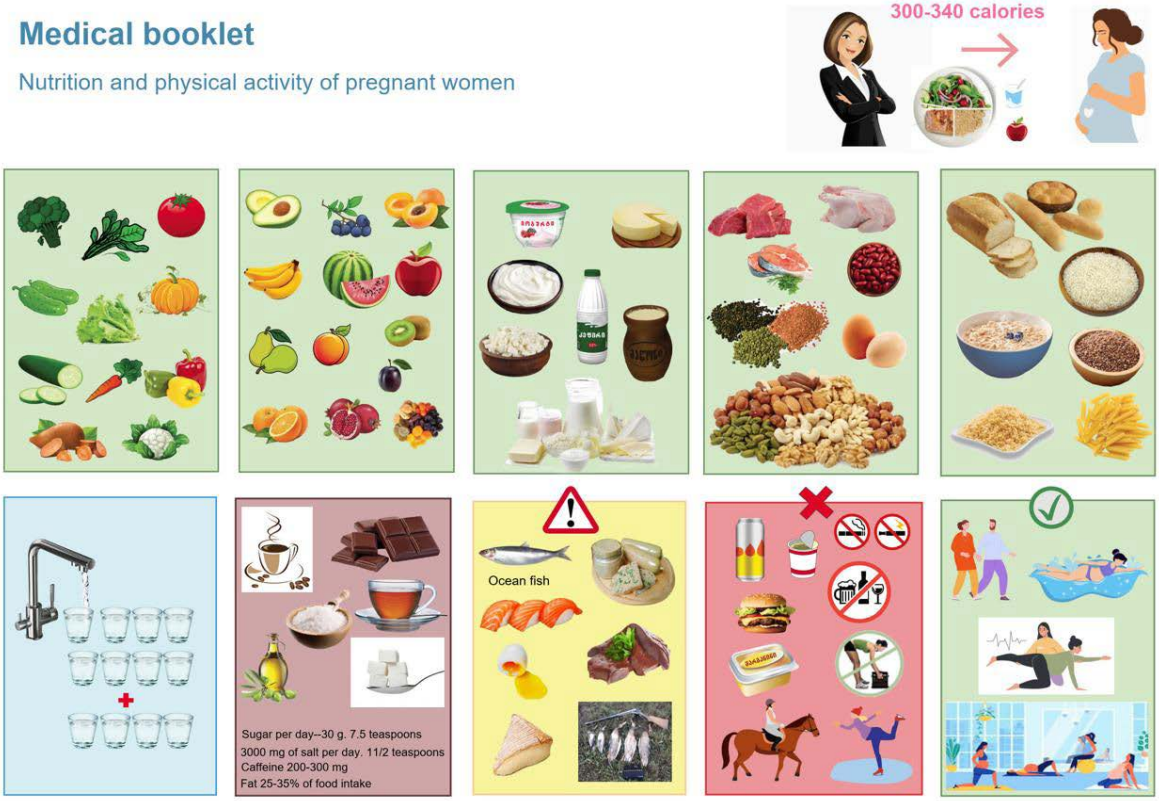

Figure 1. *Nutrition and Physical activity of Pregnant women.*

in fruits, vegetables, grains, beans, nuts, and seeds. Up to 35 grams of fiber is recommended daily [9].

Of course, the mentioned recommendations are determined by many clinical studies, but often for parents, if they do not systematically consult a doctor, especially in the first trimester of pregnancy, the relevant information is not available. Yes, there are many mothers who try to get the desired information about in nutrition and care of pregnant women before planning pregnancy, read articles, get more information during pregnancy, but for many mothers it is difficult. That's why we created a medical booklet that is easy to understand and helpful for pregnant women every day (Figure 1).

At the end of my article, I would like to share with you the issue of clinical research, which has become significantly relevant in Georgia in recent years. As you know, overweight and obesity are often an obstacle to getting pregnant, so the so-called bariatric surgeries have increased in the country. The main goal of bariatric surgery is to eat less food, eat fewer calories, and lose weight. As a result, pregnancy is achieved in a high percentage of women - it should also be considered that before the operation, they have conducted research under the guidance of a gynecologist and a reproductive specialist and have also undergone treatment, which also helps to achieve the result. However, it is important here how much time has passed since the bariatric surgery, what was their diet during pregnancy, whether they were taking folic acid before pregnancy, whether they were taking extra vitamins and how much this issue was controlled by the doctor, how soon after getting pregnant, the doctor was consulted.

However, I must mention that it is recommended to avoid pregnancy for at least 18 months after bariatric surgery, because during this period there is a rapid weight loss, due to a limited food ration and malnutrition, which can most likely lead to undevelopment of the fetus. Therefore, it is recommended to use contraception during the first 18 months after surgery. Oral contraception may not be sufficient protection after bariatric surgery, because there is a suspected low probability of absorption. This issue must be discussed with a gynecologist and reproductive specialist. Also, it is important to discuss the issue and consult systematically with the nutrition specialist.

There are no known contraindications to breastfeeding after bariatric surgery.

In recent years, the need for bariatric surgery, with the aim of pregnancy, has become significantly relevant in Georgia, so at the end of my article I would like to share with you the issue of the progress of clinical trials that I am conducting. It is planned to receive an information in terms of evaluation of up to 30 newborns, whose mothers' pregnancies ended after bariatric surgery with the following questionnaire:

1. How many months after bariatric surgery did the pregnancy occur? 2. What was the mother's diet during pregnancy? 3. Did they have systematic visits to the doctor? 4. What supplements were taken during pregnancy? 5. From the medical point of view, what were the complications during pregnancy? 6. Assessment of the newborn (timeliness, prematurity, Apgar scale assessment, whether additional medical intervention was necessary - resuscitation, anthropometric data) 7. Whether the mother chooses to breastfeed?

Conclusion.

Observation of newborns born from mothers, who underwent bariatric surgery will allow us to determine to a certain extent how well the pregnancy progressed in the mothers, how many months after the operation their pregnancy occurred, whether nutritional supplements were taken throughout the pregnancy and how much they were under the supervision of a doctor throughout the pregnancy. Despite the fact that the number of bariatric surgeries for the purpose of pregnancy has increased in Georgia, unfortunately, no such research has been conducted in Georgia. This is the subject of our research in 2024, the results of which we will share with you later.

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аннотация

Здоровое, сбалансированное питание беременной женщины является неотъемлемой частью полноценного развития плода, преимущественно, беременные женщины получают упомянутые рекомендации от гинекологов, так, как в нашей стране консультация диетолога на этом этапе, все еще менее обязательна. Ожирение широко распространено во всем мире, особенно среди населения Европы, тем не менее, это предотвратимый фактор риска, связанный с негативными последствиями как для матери, так и для плода. Именно здесь важную роль играет бариатрическая хирургия, которая стала популярной среди женщин для достижимой беременности, когда избыточный вес препятствует этому, я создала медицинский буклет общего характера, который будет полезным и для них, он прост для понимания и принесет положительные результаты. В этой книге показано количество калорий, которое должна потреблять беременная мать в каждом триместре, виды продуктов питания, которые следует употреблять или которых следует избегать, а также тип и продолжительность физической активности. Именно здесь важную роль играет бариатрическая хирургия, которая все чаще используется женщинами для достижения беременности, когда избыточный вес препятствует этому. Важнейшая часть, на которую следует обратить внимание, — это то, через сколько месяцев наступила беременность и как проходило ее питание. Для меня, как врача-педиатра и диетолога, крайне важно наблюдать за матерью и ребенком после указанной операции. Поскольку правильный контроль диеты приводит к улучшению здоровья как матери, так и новорожденного, поскольку эта тема все еще отстает в области исследований, особенно в европейских странах, а данные об ожирении среди беременных отсутствуют, поэтому, будет полезно провести исследования среди беременных женщин с ожирением для улучшения состояния здоровья.

Ключевые слова: Сбалансированное питание, ожирение, бариатрическая хирургия, беременность, Буклет.

აბსტრაქტი

ორსულის ჯანსაღი, დაბალანსებული კვება მნიშვნელოვანია ნაყოფის სრულფასოვანი განვითარებისთვის, ძირითადად ორსულები აღნიშნულ რეკომენდაციებს იღებენ გინეკოლოგებისგან, რადგან ნუტრიციოლოგის კონსულტაცია ამ ეტაპზე, ჯერ კიდევ ნაკლებად სავალდებულოა ჩვენს ქვეყანაში. სიმსუქნე ძალზე გავრცელებულია მთელს მსოფლიოში, განსაკუთრებით ევროპის მოსახლეობაში, თუმცა, შესაძლებელია თავიდან იქნას აცილებული ეს რისკ ფაქტორი, რომელიც დაკავშირებულია უარყოფით შედეგებთან, როგორც დედის, ასევე ნაყოფისთვისაც. აქ ბარიატრიული ქირურგია მნიშვნელოვან როლს ასრულებს, ბარიატრიული ქირურგიული ოპერაციები გაიზარდა იმ ქალებში, რომლებსაც სურთ დაორსულება და ჭარბი წონა ამის საშუალებას უზღუდავს, ორსულობაც ხშირად მიღწევადია, მაგრამ აქ მნიშვნელოვანია ორსულობა რამდენი თვის შემდეგ დადგა, როგორ მიმდინარეობდა მისი კვების საკითხი. ჩემს მიერ შექმნილი ზოგადი ხასიათის სამედიცინო ბუკლეტი, რომელიც მათთვისაც სასარგებლო იქნება, მარტივად ასაღქმელი და ვფიქრობ შედეგის მომტანია. მასში

მითითებულია კალორიების რაოდენობა, რომელიც უნდა მოიხმაროს ორსულმა, თითოეულ ტრიმესტრში, რა სახის საკვებს უნდა მიანიჭოს უპირატესობა და რას უნდა მოერიდოს, რა ტიპის და რა ხანგრძლივობის უნდა იყოს მისი ფიზიკური დატვირთვა. ჩემთვის როგორც პედიატრი, ნუტრიციოლოგისთვის მნიშვნელოვანია დაკვირვება იმ ახალშობილებზე, რომლებიც გააჩინა დედამ აღნიშნული ოპერაციის შემდეგ. რამდენადაც კვების რაციონის სათანადო მონიტორინგი განაპირობებს უკეთეს ჯანმრთელობას, როგორც დედის, ასევე ახალშობილისთვისაც. ეს საკითხი ჯერ კიდევ ითხოვს დამატებით კლინიკურ კვლევებს.

საკვანძო სიტყვები: დაბალანსებული კვება, სიმსუქნე, ორსული ქალის კვება, ბარიატრიული ქირურგია, ორსული ქალის კვება-სამედიცინო ბუკლეტი.