PREGNANCY AND CHILDBIRTH IN DIABETES AND OBESITY

Zaripova Dilnoza Yashinovna
senior researcher, Ph.D. Department of Obstetrics and Gynecology No. 2 at the Bukhara State Medical Institute.

Kurbaniyazova Aziza Zafarjonovna
master's degree, 2nd year, Samarkand State Medical University, department of obstetrics and gynecology No. 1.

Abstract. One of the most serious complications of pregnancy in patients with diabetes is the death of the fetus in the mother's womb. The death of the fetus is often caused by hypoglycemia, ketoacidosis in the mother, as a result of changes in the blood vessels of the placenta due to the excess of insulin in the fetus, as a result of diabetes, the lack of placental hormones.

Another reason for the death of newborns born to mothers with diabetes is changes in breathing that occur as a result of delayed lung development during pregnancy. The risk of acute respiratory failure due to the underdevelopment of the lungs is greater in preterm births and in babies born as a result of forced labor before the 35th week of pregnancy.

Key words: respiratory failure caused by underdevelopment of lung alveoli is much more common in pregnant women with diabetes even when they give birth on time.

Diabetes during pregnancy

The health of patients with diabetes during pregnancy (gestational diabetes) is directly related to the level of control of the disease.

The health of a child born to a diabetic woman is directly related to the health of the mother. Therefore, careful control of diabetes is the guarantee of a healthy child.

For this, a woman should have diabetes well compensated 2-3 months before pregnancy and this condition should be maintained throughout pregnancy. The reason for this is that the child develops so quickly that the woman may not be aware of the pregnancy.

And this is very dangerous for the child, because high blood sugar levels in the first 8-10 weeks of pregnancy can be the main reason for the future baby to be born with birth defects.

During pregnancy, you may experience many changes, not only in the way you look, but also in the way you control your diabetes.

Your insulin dose and number of injections, diet, and exercise plans may also change. At the same time, it is necessary to determine the amount of sugar in the blood several times during the day. Insulin needs are different in each trimester; in the first trimester, the amount of insulin decreases, and in the 2-3 trimesters, it may increase, on the contrary.

As a result of timely implementation of these changes, the pregnancy can end as desired.

Learn more about the types, course, and causes of diabetes in this article: Diabetes - Symptoms, Types, Causes, and Treatments

Insulin and gestational diabetes

Diabetes is a disease caused by insulin deficiency. Insulin is a highly active chemical (hormone) that is produced in individual cells of the pancreas.

Man needs to be supplied with energy to live. Energy is obtained from the food products that a person eats. Food products mainly consist of three types of substances: protein, fat, carbohydrates.

Protein is a building material for the body, fat and carbohydrates are a source of energy. The main source of glucose is carbohydrates. Most of the carbohydrates are absorbed from the intestines into the blood in the form of glucose. In order for glucose to be efficiently processed and converted into energy, insulin must be present.

Glucose enters the cells with the help of insulin and supplies the body with energy. Due to lack of insulin, glucose cannot enter the cell and its amount in the blood increases.

In type 1 diabetes, insulin deficiency is supplemented by insulin injections. Insulin must be injected under the skin every day. It is done only by injection, because if it is taken in the form of a drug through the stomach, it breaks down and cannot show its effect.

Types of insulin and delivery system depend on certain characteristics of the female body.

In healthy people, blood glucose does not exceed 5.5 mmol/l (100 mg percent) at breakfast, and 7.8 mmol/l (140 mg percent) 2 hours after eating. Achieving these indications is the main goal of pregnancy treatment.

This can be achieved in cooperation with a doctor. It is important to remember that if you do not eat after the insulin given before breakfast, it will cause the blood sugar level to drop further than normal.

Insulin injected into the body does not "know" when and how much the patient eats. Therefore, the patient should take care of the effect of the insulin substance, its compliance with the diet.

Can a pregnant woman with diabetes exercise?

Regular exercise improves human health. Exercise is especially important when you have diabetes.

When physical exercise is carried out intensively, the sensitivity of insulin receptors increases, which reduces the amount of sugar in the blood, leading to a decrease in the dose of insulin.

Regular exercise improves protein metabolism, increases fat breakdown, reduces body weight, and improves blood fat content. In this case, the conditions for the development of vascular complications of diabetes mellitus are eliminated.

However, exercising during gestational diabetes can have dangerous consequences for health. Therefore, it is important for pregnant women to consult their doctor about the exercises that they like and are suitable for them.

The doctor carefully examines your eyes, blood pressure, heart activity and monitors all changes.

Exercise can affect a child's glucose levels. Therefore, it is necessary to measure blood glucose before and after exercise.

During pregnancy, exercise is not recommended if the blood sugar level of a diabetic patient is 13.3 mmol/l or higher.

With such an indicator, it is recommended to consult a doctor immediately. Remember, the effect is maintained for another 24 hours even after physical activity is stopped.

It is necessary to achieve a balance between insulin dose, meal schedule and exercise. You can achieve this with the help of a doctor.

If you feel sick during training, you can use some foods that raise the level of glucose quickly.

After your condition is much better, eat a sandwich with meat, a piece of cheese, 1 glass of milk. Do the exercises regularly at the same time every day. Be careful not to overdo it.

What exercises are recommended?

The question of how physical activity affects glucose levels in patients with gestational diabetes is of interest.

Previously, women did not exercise during pregnancy. Because of this, the bad effect of exercise on the fetus was made possible. Nowadays, patients who exercised before pregnancy can continue to do it. However, women who did not exercise before pregnancy are not recommended to start during this period.

A number of physical exercises are not recommended during pregnancy - volleyball, basketball, golf, jumping, bending, skiing.

The appetite for walking is especially high in diabetes after a meal. Walking after breakfast is especially beneficial because glucose levels are high in the morning.

Swimming is also very beneficial. Low activity aerobics can be done while sitting on a sturdy chair.

And postpartum, it is very important to do the exercises after 4 or 6 weeks. If there was a circumcision operation, physical exercises can be performed even later.

Control of diabetes during pregnancy (Gestational diabetes).

Control of diabetes is carried out by determining the amount of glucose in the blood and glucose, acetone in the urine. Carrying out such analyzes allows to carry the amount of glucose in the expected numbers.

Determination of blood glucose

In order to compensate for diabetes in pregnant women, it is necessary to measure the amount of glucose in the blood and urine more often.

The results are recorded in a special diary, based on which you can see how well your diabetes is being controlled and make the necessary changes. For this purpose, the means of determining the amount of sugar in the blood at home are used.

These are special test strips designed to determine the level of glucose and glucometers that determine the amount of sugar in a drop of blood dropped by the patient onto the test strips or into the well of the glucometer.

The results of the test sheets are evaluated by comparing their staining level with the control scale. The results of blood sugar determined by the glucometer are displayed on the electronic table.

Some glucometers are equipped with an electronic memory, which records previously obtained readings of sugar content in the blood, which is convenient for both the patient and the doctor.

Most patients with diabetes are advised to check their blood glucose level 4 times a day: first, second breakfast, lunch, and before bed.

During pregnancy, it is important to determine the level of glucose in the blood at night.

Determination of ketones (acetone) in urine

Control during gestational diabetes is not limited to determining the level of glucose in the blood. Determination of ketone bodies (acetone) in urine is also very important.

The formation of ketone bodies is very harmful to the health of mother and child. During pregnancy, there is a very high risk of developing ketone bodies due to diabetes, which can lead to ketoacidosis. Therefore, it is necessary to determine acetone in urine.

There is a very easy way to do this. Test strips are also available to determine the amount of acetone in urine.

If the presence of acetone is suspected, it is necessary to easily determine the amount of acetone in the urine with the help of these test strips. For this, special leaves are dipped in newly collected urine. The presence and amount of acetone can be determined by the color change.

It is necessary to control the insulin system every 5-10 days in order to prevent various problems and solve them in time. This control may require changes at work and at home. It is recommended to do this according to the doctor's advice.

Also read this article: What is endemic goiter

What complications can diabetes cause in pregnancy?

The course of diabetes in pregnant women has its own characteristics. Even in a healthy woman, pregnancy is accompanied by changes in the metabolism of carbohydrates and fats.

In healthy women, glucose and amino acids are transferred from the mother's blood to the fetal circulation. As the amount of glucose in the mother's blood decreases, so does the amount of insulin released from the beta cells, which

increases the breakdown of fats and the formation of ketone bodies (ketogenesis). As a result, this condition leads to fasting hypoglycemia and ketosis.

Insulin and glucagon do not pass from the mother's blood to the blood of the fetus, and ketone bodies pass easily. Therefore, hypoglycemia and hyperglycemia in the mother pose a threat to the life of the fetus.

If measures to prevent hypoglycemia, hyperglycemia, and ketoacidosis are not detected in time, they can lead to serious complications. Therefore, it is recommended to have information about them.

Hypoglycemia

Hypoglycemia is a condition in which the amount of sugar in the blood drops below the norm. This is caused by taking a large amount of insulin, eating less or not eating on time, excitement. In this situation, it is necessary to quickly determine the level of glucose in the blood and signs of hypoglycemia.

Symptoms of hypoglycemia:

tremors, dizziness;

sweat;

engaging in or attempting to engage in uncharacteristic behavior;

flatulence;

headache;

tears for no reason;

difficulty concentrating;

darkening of the eyes;

discoloration;

tingling sensation around the mouth;

sudden mood swings;

deterioration of vision.

As soon as the first signs of hypoglycemia appear, it is necessary to determine the amount of glucose in the blood.

The most dangerous thing is that hypoglycemia can occur unexpectedly. For example, if the insulin is given at 7.30 in the morning and you have eaten moderately, its effect will last for 3 hours. Therefore, it is necessary to determine the amount of glucose in the blood between 10 and 10.30. If the amount of glucose is 3.3 mmol, it is necessary to increase the amount of breakfast in the morning or reduce the dose of insulin in the morning.

It is important to have a glucagon injection or 40% glucose solution at home to prevent hypoglycemia.

Hyperglycemia

The second important problem is hyperglycemia. Hyperglycemia is a condition in which the amount of sugar in the blood exceeds the norm. This condition occurs due to insulin deficiency.

There are various reasons for this: not taking insulin medication regularly, allowing serious disturbances in the diet, mental and emotional stress (family

conflicts, problems at work), the addition of concomitant diseases (cold sores, flu, etc.).

Symptoms of hyperglycemia:

increase in the amount of glucose in the blood;

the amount of glucose in the urine also increases;

frequent and large amounts of urine;

dry mouth;

headache;

weight loss and fatigue.

The best way to prevent these is to check your blood glucose levels frequently and treat them before symptoms appear.

In pregnant women, the blood glucose level should not exceed 6.6 mmol, and it is not allowed to exceed it. If hyperglycemia is not eliminated in time, ketoacidosis occurs, and ketone bodies begin to accumulate in the body. This is a very dangerous situation that requires immediate treatment.

Treatment is usually carried out in three directions: increasing the dose of insulin, reducing the amount of food, and exercising.

Diabetic coma in pregnancy

Glucose, the main source of energy in diabetes, cannot enter cells due to insulin deficiency. As a result, fat breakdown accelerates, toxic waste products accumulate in the body, primarily ketone bodies, an intermediate product of fat metabolism.

Large amounts of ketone bodies are excreted in the urine. However, not all ketones can be excreted by the body in this way, and they begin to accumulate in the body's blood. Ketone bodies include β-oxyfat, acetoacetic acids, and acetone, which make the blood acidic, which is why this condition is called ketoacidosis.

Since acetone is a volatile substance, it begins to be released through the lungs, which is why the breath of patients exhales the smell of acetone.

Usually, it is not normal to detect ketones in the morning urine during pregnancy. Therefore, in this situation, it is necessary to consult a doctor, if the level of glucose in the blood is higher than 11.1 mmol/l, it is necessary to determine ketones in the urine.

When they increase, they lead to ketoacidosis. Ketoacidosis and its most acute manifestation, diabetic coma, is a life-threatening complication of diabetes that requires immediate medical attention. Ketoacidosis due to insulin deficiency develops slowly over several hours.

Diabetic coma is usually preceded by dry mouth, thirst, frequent urination, loss of appetite, nausea, vomiting, sometimes pain in the abdomen, weakness, excessive sleep, and the smell of acetone in the exhaled breath.

Due to the release of large amounts of fluid, symptoms of dehydration develop: dryness of the skin and mucous membranes. If the necessary treatment measures are not taken, the patient's condition worsens: breathing becomes faster,

weakness, frustration, depression intensify, fainting occurs. Coma is characterized by complete loss of consciousness.

In the case of coma, the patient's life is in danger, he should be provided with qualified medical assistance immediately. In most cases, the patient can be saved, but sometimes, despite the best efforts of doctors, the outcome can end tragically.

Gestational examinations

Childbirth is the culmination of all the hard work you put into your health and a healthy baby. For women, motherhood is the highest happiness, and nowadays, with modern control methods, it is easier than ever to achieve it.

Diabetes during pregnancy becomes a way of life and it is good to keep it under control. Nevertheless, it is advisable to undergo medical examinations for the health of your future child. There are several types of pregnancy tests. Such tests are included in the screening tests and are called perinatal (type I) tests in the first half of pregnancy. With the help of such tests, it is possible to identify genetic and structural disorders in the child's development.

The second category of examinations is usually carried out from the third trimester of pregnancy to the period of delivery. The purpose of such examinations is to monitor the growth of the child and the examination is called fetal monitoring. With their help, it is possible to determine the level of nutrition and oxygenation of the fetus.

When the fetus is 16 weeks old (the first half of the second trimester), a woman's blood alpha-fetoprotein (AFP) is tested to monitor its growth and development and to make sure that there are no birth defects.

If this test has a positive result, termination of early pregnancy is much safer for the mother's body. In such cases, additional tests are recommended. Ultrasound (UTT) and amniocentesis. It has been proven that women with positive results of these additional tests often give birth to healthy children.

With the help of sound waves in the mother's body, the child's body parts are visualized and photographed. The resulting image is called a sonogram. This method has been used for more than 20 years, and no adverse effects on the child have been identified.

The bladder is not emptied before the test, it can also be done through the vagina, in which case the bladder does not need to be full. This test is performed using screen computer monitoring. Completely painless.

While you lie down for a while, your abdomen is examined using a transducer. Usually, such a test is carried out in the second half of pregnancy, by which time the child is already large enough to determine the sex. At 8 weeks, various developmental defects can be detected. To monitor the child's growth, the UTT examination is carried out every month.

References

1. F. Shernazarov РОЛЬ С–РЕАКТИВНОГО БЕЛКА В ПАТОГЕНЕЗЕ СОСУДИСТЫХ ЗАБОЛЕВАНИЙ ОРГАНА ЗРЕНИЯ У БОЛЬНЫХ АРТЕРИАЛЬНОЙ ГИПЕРТЕНЗИЕЙ // SAI. 2022. №D8. URL:

https://cyberleninka.ru/article/n/rol-s-reaktivnogo-belka-v-patogeneze-sosudistyh-zabolevaniy-organa-zreniya-u-bolnyh-arterialnoy-gipertenziey (дата обращения: 27.01.2023).
2. F. Shernazarov СОЧЕТАННАЯ СТОМАТОЛОГИЧЕСКАЯ И ГЛАЗНАЯ ПАТОЛОГИЯ // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/sochetannaya-stomatologicheskaya-i-glaznaya-patologiya (дата обращения: 27.01.2023).
3. Farrukh Shernazarov, MICROCIRCULATION DISORDERS IN THE VASCULAR SYSTEM OF THE BULBAR CONJUNCTIVA IN THE INITIAL MANIFESTATIONS OF CEREBRAL BLOOD SUPPLY DEFICIENCY // SAI. 2022. №Special Issue 2. URL: https://cyberleninka.ru/article/n/microcirculation-disorders-in-the-vascular-system-of-the-bulbar-conjunctiva-in-the-initial-manifestations-of-cerebral-blood-supply (дата обращения: 27.01.2023).
4. F. Shernazarov, CAUSES, SYMPTOMS, APPEARANCE, TREATMENT OF VARICOSE VEINS // SAI. 2022. №D7. URL: https://cyberleninka.ru/article/n/causes-symptoms-appearance-treatment-of-varicose-veins (дата обращения: 27.01.2023).
5. F. Shernazarov, TYPES OF HEMORRHAGIC DISEASES, CHANGES IN NEWBOENS, THEIR EARLY DIAGNOSIS // SAI. 2022. №D5. URL: https://cyberleninka.ru/article/n/types-of-hemorrhagic-diseases-changes-in-newboens-their-early-diagnosis (дата обращения: 27.01.2023).
6. F. Shernazarov TINTING IN THE EAR CAUSES, DEVELOPMENT, TREATMENT AND PREVENTION OF NOISE IN THE EAR // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/tinting-in-the-ear-causes-development-treatment-and-prevention-of-noise-in-the-ear (дата обращения: 27.01.2023).
7. F. Shernazarov CAUSES, CONSEQUENCES, DIAGNOSIS AND TREATMENT OF LONG-SHORT LEGS // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/causes-consequences-diagnosis-and-treatment-of-long-short-legs (дата обращения: 27.01.2023).
8. F. Shernazarov NEUROSE CAUSES AND MECHANISMS OF DEVELOPMENT, SYMPTOMS, TREATMENT, PREVENTION // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/neurose-causes-and-mechanisms-of-development-symptoms-treatment-prevention (дата обращения: 27.01.2023).
9. F. Shernazarov INSOMNIA PROBLEM CAUSES OF SLEEP DISORDER, HELP MEASURES AT HOME // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/insomnia-problem-causes-of-sleep-disorder-help-measures-at-home (дата обращения: 27.01.2023).
10. F. Shernazarov ЗНАЧЕНИЕ ДИСФУНКЦИИ ЭНДОТЕЛИЯ В РАЗВИТИЕ РЕТИНОПАТИИ У БОЛЬНЫХ АГ И ПУТИ ЕГО КОРРЕКЦИИ // SAI. 2022. №D8. URL:

https://cyberleninka.ru/article/n/znachenie-disfunktsii-endoteliya-v-razvitie-retinopatii-u-bolnyh-ag-i-puti-ego-korrektsii (дата обращения: 27.01.2023).
11. F. Shernazarov TINTING IN THE EAR CAUSES, DEVELOPMENT, TREATMENT AND PREVENTION OF NOISE IN THE EAR // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/tinting-in-the-ear-causes-development-treatment-and-prevention-of-noise-in-the-ear (дата обращения: 27.01.2023).
12. F. Shernazarov CAUSES, CONSEQUENCES, DIAGNOSIS AND TREATMENT OF LONG-SHORT LEGS // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/causes-consequences-diagnosis-and-treatment-of-long-short-legs (дата обращения: 27.01.2023).
13. F. Shernazarov NEUROSE CAUSES AND MECHANISMS OF DEVELOPMENT, SYMPTOMS, TREATMENT, PREVENTION // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/neurose-causes-and-mechanisms-of-development-symptoms-treatment-prevention (дата обращения: 27.01.2023).
14. F. Shernazarov INSOMNIA PROBLEM CAUSES OF SLEEP DISORDER, HELP MEASURES AT HOME // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/insomnia-problem-causes-of-sleep-disorder-help-measures-at-home (дата обращения: 27.01.2023).
15. F. Shernazarov ЗНАЧЕНИЕ ДИСФУНКЦИИ ЭНДОТЕЛИЯ В РАЗВИТИЕ РЕТИНОПАТИИ У БОЛЬНЫХ АГ И ПУТИ ЕГО КОРРЕКЦИИ // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/znachenie-disfunktsii-endoteliya-v-razvitie-retinopatii-u-bolnyh-ag-i-puti-ego-korrektsii (дата обращения: 27.01.2023).
16. F. Shernazarov WHITE TONGUE OR FORMATION OF WHITE EYES CAUSES, METHODS OF TREATMENT // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/white-tongue-or-formation-of-white-eyes-causes-methods-of-treatment (дата обращения: 27.01.2023).
17. F. Shernazarov SORE THROAT IN ADULTS AND CHILDREN, SYMPTOMS, CAUSES, TREATMENT, TIPS // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/sore-throat-in-adults-and-children-symptoms-causes-treatment-tips (дата обращения: 27.01.2023).
18. 18 F. Shernazarov FLU SYMPTOMS, FORM, CAUSES, DIAGNOSIS, TREATMENT AND PREVENTION // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/flu-symptoms-form-causes-diagnosis-treatment-and-prevention (дата обращения: 27.01.2023).
19. F. Shernazarov ACUTE TONSILLITIS (ANGINA) CAUSES, COMPLICATIONS, DIAGNOSIS, TREATMENT, PREVENTION // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/acute-tonsillitis-angina-causes-complications-diagnosis-treatment-prevention (дата обращения: 27.01.2023).

20. F. Shernazarov BREAST CANCER DETECTION METHODS, SYMPTOMS, CAUSES, TREATMENT // SAI. 2022. №D8. URL: https://cyberleninka.ru/article/n/breast-cancer-detection-methods-symptoms-causes-treatment (дата обращения: 27.01.2023).
21. Shernazarov F. SIGNIFICANCE OF ENDOTHELIAL DYSFUNCTION IN THE DEVELOPMENT OF RETINOPATHY IN PATIENTS WITH AH AND WAYS OF ITS CORRECTION //Science and Innovation. – 2022. – T. 1. – №. 8. – C. 101-113.
22. Shernazarov F. THE ROLE OF C-REACTIVE PROTEIN IN THE PATHOGENESIS OF VISUAL VASCULAR DISEASES IN PATIENTS WITH ARTERIAL HYPERTENSION //Science and Innovation. – 2022. – T. 1. – №. 8. – C. 114-121.
23. Shernazarov, F. (2022). COMBINED DENTAL AND EYE PATHOLOGY. Science and Innovation, 1(8), 91-100.
24. WAYS TO ELIMINATE DIABETES MELLITUS
25. 06.07.2022 International Scientific Journal "Science and Innovation". Series D. Volume 1 Issue 3 F. Shernazarov
26. Farhod o'g'li S. F. GASTRIT—SABABLARI, ALOMATLARI, TASHXISLASH, DAVOLASH, DORILAR, ASORATLARI, OLDINI OLISH //Лучший инноватор в области науки. – 2022. – Т. 1. – №. 1. – С. 103-107.
27. F. Shernazarov HYMORITIS SYMPTOMS, TREATMENT, METHODS OF FOLK MEDICINE, PREVENTION // SAI. 2023. №D1. URL: https://cyberleninka.ru/article/n/hymoritis-symptoms-treatment-methods-of-folk-medicine-prevention (дата обращения: 27.01.2023).
28. I. Shernazarov, F. Shernazarov NATIONAL-CULTURAL FEATURES IN THE TRANSLATION PROCESS // SAI. 2023. №B1. URL: https://cyberleninka.ru/article/n/national-cultural-features-in-the-translation-process (дата обращения: 27.01.2023).
29. Shernazarov F. GENETIC MARKERS FOR THE DEVELOPMENT OF DIABETIC RETINOPATHY //Science and Innovation. – 2022. – T. 1. – №. 8. – C. 919-923.
30. Shernazarov I., Shernazarov F. PROBLEMS OF TRANSLATION OF FEATURES RELATED TO THE WAY OF LIFE OF PEOPLES //Science and innovation. – 2023. – T. 2. – №. B1. – C. 80-83.
31. F. Shernazarov. "CAUSES, SYMPTOMS, DIAGNOSIS AND TREATMENT OF KIDNEY STONES (UROLITHIASIS)." Science and Innovation 1.8 (2022): 760-765.
32. Farhod o'g'li, Shernazarov Farrux. "GASTRIT—SABABLARI, ALOMATLARI, TASHXISLASH, DAVOLASH, DORILAR, ASORATLARI, OLDINI OLISH. The Best Innovator in Science, 1 (1), 103-107." (2022).

33. Farrukh S. TREATMENT OF MYOCARDIAL INFARCTION AND FIRST AID." science and Innovation //International Scientific Journal. ISSN. – 2022. – С. 2181-3337.
34. Shernazarov F. et al. SYMPTOMS, APPEARANE, TREATMENT OF VARICOSE VEINS. – 2022.
35. Shernazarov F. F. CONGENITAL HEART DISEASE-CAUSES, CLASSIFICATION, DIAGNOSIS, TREATMENT, COMPLICATIONS, CONSEQUENCES //Eurasian Journal of Medical and Natural Sciences. – 2022. – Т. 2. – №. 3. – С. 84-89.
36. F. Shernazarov THE PROBLEM OF INSOMNIA CAUSES OF SLEEP DISORDER, REMEDIES AT HOME // SAI. 2023. №D1. URL: https://cyberleninka.ru/article/n/the-problem-of-insomnia-causes-of-sleep-disorder-remedies-at-home (дата обращения: 27.01.2023).
37. Shernazarov F. ATHEROSCLEROSIS: CAUSES, SYMPTOMS, DIAGNOSIS, TREATMENT AND PREVENTION //Science and innovation. – 2022. – Т. 1. – №. D5. – С. 7-12.
38. 35, Farrukh S. TREATMENT OF MYOCARDIAL INFARCTION AND FIRST AID //Science and innovation. – 2022. – Т. 1. – №. D3. – С. 317-320.
39. Shernazarov F. TYPES OF HEMORRHAGIC DISEASES, CHANGES IN NEWBOENS, THEIR EARLY DIAGNOSIS. – 2022.
40. Ш. и др. ПУТИ УСТРАНЕНИЯ САХАРНОГО ДИАБЕТА //Science and innovation. – 2022. – Т. 1. – №. D3. – С. 313-316.
41. Farrux S. The Structure of the Heart and its Physiology in Regular Athletes //Eurasian Scientific Herald. – 2022. – Т. 8. – С. 102-105.
42. Shernazarov F. ATHEROSCLEROSIS: CAUSES, SYMPTOMS, DIAGNOSIS, TREATMENT AND PREVENTION //Science and innovation. – 2022. – Т. 1. – №. D5. – С. 7-12.
43. ДИАБЕТА П. У. С. То^ ирова Жайрона Иззатилло^ изи //Шерназаров Фаррух «Science and innovation. – 2022. – С. 313-316.
44. Farrukh S. TREATMENT OF MYOCARDIAL INFARCTION AND FIRST AID." science and Innovation" International Scientific Journal. ISSN: 2181-3337, 1 (3), 317-320. – 2022.
45. Farkhod og'li, Shernazarov Farrukh. "CONGENITAL HEART DISEASE-CAUSES, CLASSIFICATION, DIAGNOSIS, TREATMENT, COMPLICATIONS, CONSEQUENCES. EURASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES, 2 (3), 84-89." (2022).
46. Farrux S. Eurasian Scientific Herald PENACCESS //PEERREVIEWEDJOURNAL https://geniusjournals. org/index. php/esh. – Т. 8.
47. Farhod o'g'li S. F. GASTRIT—SABABLARI, ALOMATLARI, TASHXISLASH, DAVOLASH, DORILAR, ASORATLARI, OLDINI OLISH. The Best Innovator in Science, 1 (1), 103-107. – 2022.

48. Shernazarov F. et al. SYMPTOMS, APPEARANCE, TREATMENT OF VARICOSE VEINS. – 2022.
49. Farrukh S. TREATMENT OF MYOCARDIAL INFARCTION AND FIRST AID." science and Innovation //International Scientific Journal. ISSN. – 2022. – С. 2181-3337.
50. og‘li Shernazarov F. F. CONGENITAL HEART DISEASE-CAUSES, CLASSIFICATION, DIAGNOSIS, TREATMENT, COMPLICATIONS, CONSEQUENCES //Eurasian Journal of Medical and Natural Sciences. – 2022. – Т. 2. – №. 3. – С. 84-89.
51. Shernazarov F. ATHEROSCLEROSIS: CAUSES, SYMPTOMS, DIAGNOSIS, TREATMENT AND PREVENTION //Science and innovation. – 2022. – Т. 1. – №. D5. – С. 7-12.
52. Farrukh S. TREATMENT OF MYOCARDIAL INFARCTION AND FIRST AID //Science and innovation. – 2022. – Т. 1. – №. D3. – С. 317-320.
53. Shernazarov F., TYPES OF HEMORRHAGIC DISEASES, CHANGES IN NEWBOENS, THEIR EARLY DIAGNOSIS. – 2022.
54. Ш. и др. ПУТИ УСТРАНЕНИЯ САХАРНОГО ДИАБЕТА //Science and innovation. – 2022. – Т. 1. – №. D3. – С. 313-316.
55. Farrux S. The Structure of the Heart and its Physiology in Regular Athletes //Eurasian Scientific Herald. – 2022. – Т. 8. – С. 102-105.
56. Shernazarov F. ATHEROSCLEROSIS: CAUSES, SYMPTOMS, DIAGNOSIS, TREATMENT AND PREVENTION //Science and innovation. – 2022. – Т. 1. – №. D5. – С. 7-12.
57. ДИАБЕТА П. У. С. То^ ирова Жайрона Иззатилло^ изи //Шерназаров Фаррух «Science and innovation. – 2022. – С. 313-316.
58. Farrukh S. TREATMENT OF MYOCARDIAL INFARCTION AND FIRST AID." science and Innovation" International Scientific Journal. ISSN: 2181-3337, 1 (3), 317-320. – 2022.
59. Farkhod og'li, Shernazarov Farrukh. "CONGENITAL HEART DISEASE-CAUSES, CLASSIFICATION, DIAGNOSIS, TREATMENT, COMPLICATIONS, CONSEQUENCES. EURASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES, 2 (3), 84-89." (2022).
60. Farrux S. Eurasian Scientific Herald PENACCESS //PEERREVIEWEDJOURNAL https://geniusjournals. org/index. php/esh. – Т. 8.
61. Farhod o'g'li S. F. GASTRIT—SABABLARI, ALOMATLARI, TASHXISLASH, DAVOLASH, DORILAR, ASORATLARI, OLDINI OLISH. The Best Innovator in Science, 1 (1), 103-107. – 2022.
62. Shernazarov F. et al. SYMPTOMS, APPEARANCE, TREATMENT OF VARICOSE VEINS. – 2022.
63. Farrukh S. TREATMENT OF MYOCARDIAL INFARCTION AND FIRST AID." science and Innovation //International Scientific Journal. ISSN. – 2022. – С. 2181-3337.

64. Shernazarov F. F. CONGENITAL HEART DISEASE-CAUSES, CLASSIFICATION, DIAGNOSIS, TREATMENT, COMPLICATIONS, CONSEQUENCES //Eurasian Journal of Medical and Natural Sciences. – 2022. – Т. 2. – №. 3. – С. 84-89
65. Мурадова Р. Р., Хайдаров М. М., Омонов Э. М. ОПТИМИЗАЦИЯ ТЕРАПИИ БОЛЬНЫХ С ОТКРЫТОУГОЛЬНОЙ ГЛАУКОМОЙ С УЧЕТОМ ПАРАМЕТРОВ СОСТОЯНИЯ МИКРОЦИРКУЛЯТОРНОГО РУСЛА ЦЕНТРАЛЬНОЙ ЗОНЫ СЕТЧАТКИ //Вопросы науки и образования. – 2021. – №. 10 (135). – С. 66-69.
66. Хайитов У., Ахмедов Ю., Бегнаева М. Клинико-рентгенологическая картина септической пневмонии у детей //Журнал гепато-гастроэнтерологических исследований. – 2021. – Т. 2. – №. 3.2. – С. 35-36.
67. Меликова Д. У., Бегнаева М. У. CLINICAL FEATURES OF CHRONIC PYELONEPHRITIS IN CHILDREN //ЖУРНАЛ РЕПРОДУКТИВНОГО ЗДОРОВЬЯ И УРО-НЕФРОЛОГИЧЕСКИХ ИССЛЕДОВАНИЙ. – 2022. – Т. 3. – №. 2.
68. Мурадова Р. Р., Хайдаров М. М., Бегнаева М. У. СОВРЕМЕННЫЕ КЛИНИКО-ФАРМАКОЛОГИЧЕСКИЕ АСПЕКТЫ ПРИМЕНЕНИЯ НЕФРОТОКСИЧНЫХ АНТИБИОТИКОВ //Достижения науки и образования. – 2021. – №. 3. – С. 98-100.
69. Нуралиева Р. М., Мурадова Р. Р. ЭФФЕКТИВНОСТЬ ПРЕПАРАТА ГАЛСТЕНА ДЛЯ ЛЕЧЕНИЯ ДЕТЕЙ С ЗАБОЛЕВАНИЯМИ ПЕЧЕНИ //Academic research in educational sciences. – 2021. – Т. 2. – №. 11. – С. 1435-1439.
70. Мурадова Р. Р., Хайдаров М. М. КЛИНИКО-ФАРМАКОЛОГИЧЕСКИЕ АСПЕКТЫ ПРИМЕНЕНИЯ ГОРМОНАЛЬНЫХ ПРЕПАРАТОВ В ОФТАЛЬМОЛОГИИ //Достижения науки и образования. – 2021. – №. 3 (75). – С. 100-102.
71. Kurbonalievich A. S. et al. Experience of the Combination of Tiflox and Immunomax in the Treatment of Trichomoniasis Combined with a Bacterial Process //Annals of the Romanian Society for Cell Biology. – 2021. – С. 2376-2380.
72. Abrayeva, S. E., Esanov, U. J., Saydullayeva, M. A., & Shirinkulova, S. M. (2022). Linguistic Features of Latin and Greek Synonymous Morphemes in the Lexical System of the French Language (Based on Medical Texts).
73. Esonovna, A. S. (2021). Application of latin and greek synonymic morphemes in medical terminology of the french language.
74. Esonovna, A. S. (2020). Linguistic features of Latin and Greek synonymous morphemes in the lexical system of the french language. International scientific review, (LXXII), 47-48.

75. Esonovna, A. S. (2020). Linguistic features of Latin and Greek synonymous morphemes in the lexical system of the french language. International scientific review, (LXXII), 47-48.
76. Gulfura, T., Bobojonova, S., Shakhnoza, A., Komila, S., & Doniyor, A. (2019). The role of task based learning in teaching english.
77. Kizi, S. B. Y. (2022). LINGUO-CULTURAL CHARACTERISTICS OF SPEECH ETIQUETTE OCCURRING IN DISCOURSE. CURRENT RESEARCH JOURNAL OF PHILOLOGICAL SCIENCES, 3(11), 59-63.
78. Bobojonova, S. (2022). THE ANALYSIS OF THE EDUCATIONAL DISCOURSE AND SPEECH OF THE PARTICIPANTS OF THE ACTIVITY.
79. Bobojonova, S. (2022). INTERPRETATION OF SPEECH ETIQUETTE IN EDUCATIONAL DISCOURSE.
80. Bobojonova, S. (2022). DISCOURSE, EDUCATIONAL DISCOURSE AND SPEECH COMPONENTS AND THEIR FEATURES.
81. Kizi, S. B. Y. (2022). LINGUO-CULTURAL CHARACTERISTICS OF SPEECH ETIQUETTE OCCURRING IN DISCOURSE. CURRENT RESEARCH JOURNAL OF PHILOLOGICAL SCIENCES, 3(11), 59-63.
82. Bobojonova, S. (2022). Linguacultural characteristics of oral speech in educational discourse.
83. Bobojonova, S. (2022). PRAGMATIC INTERPRETATION OF EDUCATIONAL DISCOURSE AND EXPRESSION OF DIALOGIC DISCOURSE IN THE COMMUNICATION PROCESS.
84. Ахмедов, О. С. (2020). SEMANTIC ANALYSIS OF MEDICAL LEXICON IN UNITED MEDICAL LANGUAGE SYSTEM. Вестник науки и образования, (15-2), 39-41.
85. Бобожонова, Ш. Ё. К., & Ахмедов, О. С. (2020). Семантический анализ медицинского лексикона в единой медицинской языковой системе. Вестник науки и образования, (15-2 (93)), 39-41.
86. Gulfura, T., Bobojonova, S., Shakhnoza, A., Komila, S., & Doniyor, A. (2019). The role of task based learning in teaching english.
87. Бобожонова, Ш. Ю. (2019). Роль нового поколения учебно-методической литературы в обеспечении качества знаний студентов по английскому языку. Наука и образование сегодня, (5 (40)), 67-68.
88. Yo, B. S. SEMANTIC ANALYSIS OF MEDICAL LEXICON IN UZBEK AND ENGLISH Bobojonova Sh. Yo. Email: Bobojonova691@ scientifictext. ru.
89. Холбоева, Д. (2022). ТИЛШУНОСЛИКДА ТЕРМИНОЛОГИЯ ВА ТЕРМИН ТУШУНЧАЛАРИГА ДИАХРОНИК ВА СИНХРОНИК ЁНДАШУВ. Zamonaviy dunyoda ijtimoiy fanlar: Nazariy va amaliy izlanishlar, 1(25), 45-47.

90. Холбоева, Д. (2022). ТЕРМИНЛАР ТИЗИМИ: ИФОДА ТУШУНЧАСИ, ЧЕГАРАСИ ВА ЎЛЧОВИ. Zamonaviy dunyoda ijtimoiy fanlar: Nazariy va amaliy izlanishlar, 1(25), 42-44.
91. Холбоева, Д. (2022, November). ИНГЛИЗ ВА ЎЗБЕК ТИЛЛАРИНИНГ ЛИНГВОКУЛЬТУРОЛОГИК ДЕРИВАЦИЯ АСПЕКТИДА ТУРИЗМ ТЕРМИНОЛОГИЯСИ. In Международная конференция академических наук (Vol. 1, No. 30, pp. 14-16).
92. Kholboyeva, D. (2022). Tourism And Its Linguocultural Features In English And Uzbek.
93. Холбоева, Д. (2021). INGLIZ VA OZBEK TILLARIDA BIZNES TURIZM LEKSIKASINIG SEMANTIK XUSUSIYATLARI.
94. Холбоева, Д. (2021). Инглиз ва ўзбек тилларида “туризм” атамасининг семантик ҳусусиятлари.
95. Холбоева, Д. (2021). Инглиз ва ўзбек тилларида туризм соҳаси ва унинг терминлар тизими шаклланиши ва ривожланиши.
96. Bharathi, K. N., & Pushpanathan, T. (2022). English for Medical Purposes and Its Status in India. Available at SSRN 4027451.
97. Ширинкулова, Ш. М. (2016). АСПЕКТЫ ГУМАНИТАРИЗАЦИИ ОБРАЗОВАНИЯ КАК ФАКТОР РАЗВИТИЯ ГАРМОНИЧНО РАЗВИТОЙ ЛИЧНОСТИ. In Сборники конференций НИЦ Социосфера (No. 6, pp. 94-96). Vedecko vydavatelske centrum Sociosfera-CZ sro.
98. Ширинкулова, Ш. М. (2016). БАХТ-ФЕНОМЕНАЛ ҲОДИСА. In Сборники конференций НИЦ Социосфера (No. 18, pp. 45-47). Vedecko vydavatelske centrum Sociosfera-CZ sro.
99. Ширинкулова, Ш. М., Кахарова, М. А., & Сайдуллаева, М. А. (2021). Инглиз ва ўзбек тилларида луғатшуносликнинг шаклланиши.
100. Ширинкулова, Ш. М. (2016). ОИЛА БОЛАНИНГ ИЖТИМОИЙЛАШУВИНИ ТАЪМИНЛАБ БЕРАДИГАН ЭНГ АСОСИЙ НЕГИЗДИР. In Сборники конференций НИЦ Социосфера (No. 49, pp. 41-43). Vedecko vydavatelske centrum Sociosfera-CZ sro.
101. Ширинкулова, Ш. М. (2018). РОЛЬ ЛЕКСИКИ В АНГЛИЙСКОМ ЯЗЫКЕ ДЛЯ КОНКРЕТНЫХ ЦЕЛЕЙ (ESP). Гуманитарный трактат, (35), 21-22.
102. Abrayeva, S. E., Esanov, U. J., Saydullayeva, M. A., & Shirinkulova, S. M. (2022). Linguistic Features of Latin and Greek Synonymous Morphemes in the Lexical System of the French Language (Based on Medical Texts).