## IMPROVING THE EFFECTIVENESS OF TREATMENT OF PATIENTS WITH KNEE INJURIES

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## **Annotation:**

Knee injury is one of the most common injuries, due to the high load on this segment and its anatomical features. Most injuries are mild, occur in everyday life (for example, when falling on the street) and are subject to outpatient treatment in the emergency room. In addition, the knee joint often suffers during various sports, while the severity and nature of injuries can vary greatly.

In this article, we will look at some of these knee joint treatments and give tips on how to use them to help you quickly and effectively deal with pain in this area.

Key words: Knee injury, effectiveness, patient, doctor, modern treatment, emergency, illness, medical exercises, advice and recommendations.

The knee joint is one of the most restrictive and most stressed joints in our body. As you age or have an injury, they can become the site of certain problems, including illness, arthritis, and injury. The appearance of pain in the knee joint can be caused by many causes, such as gout, sprains, ligament damage, arthritis, arthrosis, chondromalicia or other diseases. Some measures need to be taken to treat this area quickly and effectively. There are a number of exercises and techniques that will help reduce pain and strengthen the muscles of the knee joint. These include stretching, strength exercises, balance exercises, and dynamic movement exercises. It is important to choose the appropriate exercise and perform it correctly in order to achieve maximum effectiveness. It may also be necessary to use various devices, such as rollers, hoops, etc. You should also consider changing your diet, since certain foods, such as fruits and vegetables, can have a positive effect on the condition of the joints. Antioxidants, vitamin C and D, as well as calcium and collagen can help improve the condition of the knee joint and the body as a whole.

Finally, in case of prolonged pain or injury to the knee joint, medical attention should be sought. Therapeutic procedures such as massage, physiotherapy and surgery may be necessary to achieve your goals.

Knee injury is damage to the soft tissues and bone structures that form the knee joint. It belongs to the category of common injuries. It can vary significantly in severity – from mild bruises to intra-articular fractured and multi-splintered fractures. It occurs more often when you fall or hit your knee. It is accompanied by swelling, pain and restriction of movement.

Injuries: One of the main causes of pain in the knee joint are injuries and injuries. Damage to the ligaments, meniscus, or soft tissues of the knee can lead to pain and discomfort in the joint. This is facilitated by unfavorable conditions for joints, such as sports, intense physical activity, falls and injuries.

Osteoarthritis: Osteoarthritis of the knee joint is a condition in which the cartilage inside the joint becomes less elastic and smooth. This leads to the fact that the bones lose their cushioning properties and begin to train with each other. This can lead to pain and immobility of the joint. Inflammation: Chronic inflammation can lead to pain in the knee joint. This may be due to rheumatoid arthritis or other diseases of the immune system. Inflammation can also be caused by injury, infection, or strain on the knee joint.

Hernias and tumors: Hernias and tumors can squeeze out nerves or vessels in the knee joint, causing pain and discomfort. This may be due to tumors of bones or soft tissues.

Genetic factors: Knee joint pain may have a genetic predisposition. For example, people whose close relatives suffered from osteoarthritis may be more likely to develop this disease in the future.

Aging: With age, the knee joint may become less elastic and begin to degrade. This can lead to pain and discomfort when moving. Elderly people and people who do not pay due attention to their health in adolescence are more likely to suffer from pain in the knee joint.

A knee joint injury is called a soft tissue injury, in which there are no signs of a violation of the integrity of any anatomical structures. However, at the microscopic level, bruises affect not only the skin and subcutaneous tissue, but also intra-articular elements, which causes the phenomena of reactive inflammation, the formation of hemarthrosis or synovitis. The signs of injury are non-specific and can be detected with other injuries, so the diagnosis is made after excluding the remaining injuries.

The victim complains of pain. The joint is slightly or moderately swollen, and bruising is often detected on the skin. The support is usually preserved, movement restriction and slight lameness are possible. When feeling, soreness in the bruise area is determined. Palpation of ligaments and bone elements is painless, there are no signs of pathological mobility. Fluid often accumulates in the joint (in the first days – blood, from 2-3 weeks – effusion).

Knee joint treatment is available in various forms. First of all, experts advise solving the problem through consultation with the attending physician. This can help you find out the cause of the pain and formulate a treatment plan. One of the difficult cases may be a knee injury or the need for surgery.

Approaches to knee joint treatment may include the use of medications, recommendations for physical rehabilitation, sports, but also the use of traditional remedies. For example, massage, physical therapy, the use of limited exercise, the use of supplements and a wide range of surgical methods.

Many experts say that a healthy lifestyle is key to restoring knee health. This implies proper nutrition, exercise, adequate rest and general body care. At the same time, there are sports

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disciplines that can harm the health of the knee joints, so it is important to choose workouts that are suitable for your level.

- getting a doctor's consultation;
- Use of medicines;
- recommendations for physical rehabilitation;
- Using traditional means;
- Massage and physiotherapy;
- the right way of life;
- choosing the right sports activities.

If the problem is traumatic, then surgery is often the only way out. Magic pills and treatments do not exist in such cases. A torn ligament or cartilage damage can cause our knee joint to become not so much a problem as a disease.

Another thing is for chronic joint diseases. Often, patients tend to choose surgery, even if it is not required. The formation of osteoarthritis and discomfort can be alleviated by conservative treatment: special exercises, massage, nutrition and seal kits — all this will help return our knee joint to normal condition if there is no special need to endure pain and give in to surgery. It is also worth considering the body's tendency to surgery in general. Some patients can easily tolerate complex interventions, while others have already experienced negative consequences. Each case is unique and requires individual consideration.

Ligament damage can be complete or partial. The medial ligament suffers when the shin is turned outward, the lateral ligament suffers when the shin is turned inward. Injuries to the anterior and posterior cruciate ligaments (ACL and ACL) are formed by direct impacts and complex multicomponent effects, for example, overextension or reversal of the hip with a fixed shin. Similar knee injuries are often detected in athletes (wrestlers, hockey players, track and field athletes). Other causes include accidents at home, road accidents and falls from heights. At the moment of injury, the victim feels intense pain. The rupture of the CC is often accompanied by a click, when the CC is broken, there is usually no click. The patient complains of joint instability, a feeling of displacement of the lower leg during movements. During the examination, swelling and hemarthrosis are detected. With a rupture of the ACL, hemarthrosis may be absent, since with such injuries, the back of the joint capsule sometimes ruptures simultaneously, blood pours into the popliteal fossa, and then spreads through the interfacial spaces.

The feeling is accompanied by sharp pain. With injuries to the medial and lateral ligaments, lateral pathological mobility of the lower leg is determined, with ruptures of the cruciate ligaments, symptoms of anterior and posterior drawer are revealed. In the acute period, studies are carried out after local anesthesia, with an old injury, preliminary anesthesia is not required. After the acute phenomena subside, signs of joint instability persist. To avoid constant

"dislocation", patients are forced to fix the leg with an elastic bandage. Over time, muscle atrophy develops, and signs of post-traumatic arthrosis appear.

X-rays of the knee joint reveal an uneven joint gap. An MRI scan of the knee joint determines a violation of the integrity of the ligament. The most informative diagnostic method is arthroscopic examination, which allows you to visually assess the condition of the ligament, and in some cases, to restore its integrity. The treatment of tears is usually conservative. A puncture of the joint is performed, a cast is applied for 3-4 weeks, if possible, deflecting the leg towards the injured ligament. Subsequently, physical therapy and massage are prescribed. In case of ruptures, surgical treatment is usually required – suturing or ligament plastic surgery. After restoring the integrity of the ligament, physiotherapy procedures are prescribed, rehabilitation measures are carried out.

The rupture of the tendon of the quadriceps muscle and its own patellar ligament occurs due to a blow or a sharp flexion of the shin with strained thigh muscles. There is intense pain and gait disturbance, the patient's leg bends when walking. The patient cannot lift the straightened leg. There is no hemarthrosis. Palpation of the injured area is painful, there are no signs of pathological mobility, feeling of bone structures is painless.

Knee injury is diagnosed based on clinical signs, and if necessary, the patient is referred for an MRI scan. In case of tears, immobilization is carried out for 3-4 weeks, then physiotherapy, massage, physical therapy and water treatments are prescribed. In case of ruptures, surgical intervention is indicated – suture of a tendon or ligament. After surgery, analgesics, antibiotics and physiotherapy are prescribed. Physical therapy is required to prevent the development of knee joint contracture, maintain muscle tone and strength.

As a result, in the treatment of any diseases of the knee joint, it is necessary to take into account the scale of the problem, the circumstances preceding the problem, as well as the characteristics of each organism. This will help you make the right choice between surgery or conservative treatment.

## **Knee Joint Treatment:**

- 1. Give up wearing heels. Heels have a negative effect on the knee joints, increasing the risk of injury and exacerbation of the disease.
- 2. Avoid prolonged sitting or standing. If you are working at a computer, do not forget to take breaks every hour. If your job requires standing for a long time, do not forget to change your posture and walk periodically.
- 3. Watch your weight. The extra weight puts additional stress on the joints, which leads to an exacerbation of the disease.
- 4. Listen to your body and don't strain your joints unnecessarily. If you feel tired in the knee joint, you need to give it a rest.

Alternative medicine can provide a wide range of knee joint treatments. It includes methods such as acupuncture, massage, yoga, Ayurveda, homeopathy and many others. They can help

the patient improve blood circulation, reduce pain and inflammation, strengthen muscles and ligaments, and increase joint mobility.

Moreover, many alternative medicine methods, such as yoga and Ayurveda, can not only help in the treatment of the knee joint, but also improve the overall condition of the body. In this way, the patient can receive a full restoration of health.

Although alternative medicine can be an effective way to treat a knee joint, it also has its risks. Some methods can be dangerous if they are not performed by qualified specialists.

For example, acupuncture can lead to infection or nerve damage if it is not performed by an experienced specialist. Homeopathy can be dangerous if the patient takes medications that do not match his specific diagnosis.

Therefore, before using alternative medicine methods for the treatment of the knee joint, it is necessary to consult a competent specialist. He will be able to assess the patient's condition and choose the best treatment method.

Knee joints play an important role in our movement, and choosing the right shoes will help prevent many of the problems associated with them.

The first rule of choosing shoes: shoes should be comfortable and fit your foot type. When you try on shoes, make sure that the front of the shoes is spacious so that the fingers can move freely, but the shoes should not be too wide.

The second rule: shoes should have good cushioning to reduce the load on the knee joints. Explore different shoe options that offer better cushioning and reduce stress on your legs and knees.

The third rule: shoes must be properly rubberized to ensure good grip and prevent slipping. This will help prevent fall-related injuries.

The fourth rule: choose shoes with a stable heel. Thus, we preserve the natural curvature of the foot, which is able to soften impacts, and prevent excessive stress on the knee joints.

Choosing the right shoes is an easy way to reduce the risk of injury and ensure the health of your knee joints.

Proper nutrition plays an important role in the treatment of the knee joint. There are a number of foods that need to be removed from the diet, as well as those that need to be increased in quantity. Let's look at some basic principles of the diet that should be followed in the treatment of the knee joint.

A large amount of fatty and fast carbohydrates can lead to obesity and an increase in the inflammatory process, which will negatively affect the health of the knee joint. Get rid of fatty meats, fast carbohydrates (sugar, sweets), white bread and rolls.

Vegetables and fruits are a source of vitamins, minerals and antioxidants that can reduce inflammatory processes in the body. Don't forget about vegetable salads, fresh fruits and yogurts.

Gelatin contains collagen, which is necessary for the normal functioning of joints. Protein foods are a source of amino acids necessary for the repair and regeneration of damaged tissues. Increase your intake of white meat, fish, eggs and gelatin. Painful sensations in the knee joint can lead to a decrease in the quality of life. However, there are drugs that help to quickly and effectively get rid of pain and improve the condition of the joint.

Nonsteroidal anti-inflammatory drugs are the main remedy for the treatment of painful sensations in the knee joint. They reduce inflammation, reduce pain and improve joint mobility. Each of these drugs has its advantages and disadvantages, so it is better to consult a doctor.

Chondroprotectors are drugs aimed at restoring cartilage tissue and improving joint mobility. They contain the components necessary for the synthesis of new cartilage tissue, as well as contribute to its protection and reduce inflammation.

Ointments and gels are one of the most effective and safe ways to treat knee pain. They contain analgesic components, help reduce swelling and inflammation. Each of these drugs has its advantages and disadvantages, just like any other. However, the right choice of medicine and its proper use will help to quickly and effectively get rid of painful sensations in the knee joint. Physiotherapy is an important component of the comprehensive treatment of the knee joint. It helps to relieve pain, improve blood circulation and restore joint mobility.

One of the methods of physiotherapy is electromyostimulation. It allows you to strengthen the muscles around the knee joint and increase their tone. This helps to improve the dynamics of the joint and prevent its further destruction.

Another method is laser therapy. It helps to improve blood circulation and accelerate the processes of tissue regeneration in the area of damage to the knee joint. Due to this, swelling and pain are reduced.

- Ultrasound therapy is another method. It helps to accelerate the processes of tissue regeneration and reduce pain in the knee joint.
- Magnetic therapy is also used in the treatment of the knee joint. This is a method that is based on the effect of a magnetic field on the body. This helps to improve blood circulation and enhance tissue regeneration processes.
- Biomagnetotherapy involves the use of magnetic fields of varying frequency and intensity. It increases the effectiveness of magnetic therapy and promotes rapid recovery of the knee joint.

Physiotherapy procedures are an important component of knee joint treatment. They help to reduce pain, improve blood circulation and give mobility to the joint.

Knee exercises help strengthen the thigh and shin muscles that support the knee joint. Regular exercises such as squats and stair walking also help maintain flexibility in the knee joint.

Weight control is key to preventing knee joint problems. The greater the weight, the greater the pressure on the knee joint, which can lead to wear and pain. A balanced diet and a healthy lifestyle can help maintain a healthy weight and prevent knee joint problems.

Avoid injuries and overstrain associated with the knee joint, especially when doing sports or applied activities. Wear knee protection whenever possible and follow the exercise technique to avoid overstrain and injury.

- If you notice the first symptoms of knee joint problems, consult a doctor. Early treatment can help prevent further deterioration of the joint and accelerate recovery.
- Monitor the pressure on the knee joint when performing exercises, especially when lifting weights. Avoid loading and overloading the knee joint, so as not to harm your health.

All of the above methods are key factors in preventing knee joint problems. Regular physical activity and a balanced diet can also have a positive effect on the condition of the knee joint and reduce the risk of problems.

If you have pain in the knee joint, you should not postpone a visit to the doctor. Consult a specialist if the pain persists for 2-3 days, increases with movement or is intense. You should also consult a doctor if there is swelling, redness or fever in the knee area, movement restriction and noise during movement.

The doctor will perform an examination of the knee and may prescribe an X-ray, MRI or other tests to determine the cause of the pain. In some cases, it may be necessary to consult another specialist, for example, an orthopedist or rheumatologist. Early access to a doctor, knowledge of the main causes of knee pain and their symptoms will help to avoid complications and choose the most effective treatment method.

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