



### Hazardous Risk Factors Causing Chronic Pyelonephritis

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**Annotation.** Chronic pyelonephritis is a chronic infectious inflammatory kidney disease that occurs when pathogenic bacteria spread from the lower parts of the urinary system, lasting a long time. Let's analyze what are the risk factors for chronic pyelonephritis and their ways of stopping. Untimely prevention will lead to chronization of the process.

**Key words:** chronic pyelonephritis, pathogens, E. coli, prevention of pyelonephritis.

Rheumatism is a systemic inflammation of all tissues in the body, mainly localized in the pericardium. Especially the heart, joint and subcutaneous connective tissue in the body is prone to disease. Rheumatism can be caused by simple angina, which is common among people. Tonsillitis itself is acute, accompanied by fever, headache, and inflammation in rheumatic fever leads to chronic heart valve damage, which can lead to disability or death many years after the acute illness. can bring. Usually, rheumatism affects children between the ages of 5 and 15, but adults can also get sick. The first symptoms of rheumatism often begin to appear 1-5 weeks after angina. Rheumatic attacks usually last three months, rarely more than six months.

In most cases, the causative agent of pyelonephritis is E. Coli, which is sown in large quantities in the urine of patients. This is a very serious disease, accompanied by severe pain and significantly worsens the patient's well-being.

Every year in the world, pyelonephritis affects an average of 1 person for every 7 thousand inhabitants. Women suffer from pyelonephritis 4-5 times more often than men. In childhood, pyelonephritis develops in about 3% of girls and 1% of boys. 17% of them develop scarring of the kidney parenchyma, 10-20% — hypertension. Plain water can significantly improve the condition of a patient with pyelonephritis. Copious drinking maintains a normal fluid balance, as well as provides "dilution" of blood and helps to remove more bacteria and their toxins. This is due to frequent urination in response to increased fluid intake. Although with pyelonephritis, even a small movement can cause severe pain, it is very important to urinate as often as possible. Although the patient feels discomfort during urination, this is the only way to get rid of the causative agent of the disease – bacteria are excreted from the body only with urine. Uncontrolled growth of microorganisms will lead to deterioration of the condition, causing sepsis (blood poisoning) and may even cause the death of the patient.

Risk factors for the development of pyelonephritis include:

- Congenital abnormalities of the kidneys, bladder and urethra;
- AIDS;
- Diabetes mellitus;



- Age (the risk increases as you get older);
- Diseases of the prostate gland, accompanied by an increase in its size;
- Kidney stone disease;
- Spinal cord injury;
- Catheterization of the bladder;
- Surgical interventions on the organs of the urinary system;
- Prolapse of the uterus.

Causes of pyelonephritis:

- ✓ Uncomplicated pyelonephritis
  - *Escherichia coli* (75 – 95%);
  - *Staphylococcus saprophyticus* (5-10%);
  - Other Enterobacteriaceae (except *E. coli*);
  - *Proteus mirabilis*
  - *Klebsiella pneumoniae*
- ✓ Complicated pyelonephritis
  - all of the above;
  - *P. aeruginosa* (*Pseudomonas aeruginosa*);
  - *Serratia* spp. and *Providencia* spp.;
  - staphylococci;
  - Fungi.

Pyelonephritis is caused by bacteria. They enter the urinary system through the urethra, after which they spread to the bladder. Then the pathogen passes to higher structures, eventually penetrating into the kidneys. More than 90% of cases of pyelonephritis are caused by *E. coli*, a bacterium that multiplies in the intestine and penetrates into the urethra from the anus during defecation. This explains the increased incidence among women (due to the anatomical proximity of the anus, external genitalia and urethra). The ascending path of infection is the most common cause of acute pyelonephritis. This explains the high incidence among women. Due to the anatomically short urethra and the peculiarities of the structure of the external genitalia, the intestinal flora in women seizes the inguinal region and the vagina, further rapidly spreading upward into the bladder and above. In addition to *E. coli*, among the pathogens of pyelonephritis are: *Staphylococcus* (*Staphylococcus saprophyticus*, *Staphylococcus aureus*); *Klebsiella* (*Klebsiella pneumoniae*); *Proteus* (*Proteus mirabilis*); *Enterococcus*; *Pseudomonas aeruginosa*; *Enterobacter* (*Enterobacter* species); Pathogenic fungi. More rare ways of migration of infectious agents into the kidneys include hematogenic and lymphogenic. Microbes can also be introduced during instrumental manipulations, for example, with catheters. In the latter case, *Klebsiella*, *proteus* and *Pseudomonas aeruginosa* become the most likely pathogens of pyelonephritis.

Vesiculourethral reflux. It is characterized by a violation of the outflow of urine through the ureters to the bladder and partial throwing of it back into the renal pelvis. If the disease is not diagnosed in the early stages, stagnation of urine leads to the growth of pathogenic microorganisms that are thrown into the kidney and cause its inflammation. Frequent repeated attacks of acute pyelonephritis in children cause severe kidney damage, which can result in scarring. This is a rare complication that occurs mainly in children under 5 years of age. Nevertheless, cases of scarring after pyelonephritis in children at puberty have been described. In some cases, inflammation does not develop in an ascending way from the bladder, but directly when the pathogen enters the kidneys from other organs through blood vessels. The probability of infection increases with blockage of the ureters by a stone or obstruction of urine excretion by an enlarged prostate. The inability to remove urine leads to its stagnation and the proliferation of bacteria in it. Fever, chills, nausea, vomiting, general weakness, fatigue, dull aching pain in the side on the side of the lesion or lower back of a shingling



nature, frequent urination in women and frequent urination in men, small edema are signal signs of acute pyelonephritis. And untimely treatment leads to chronic pyelonephritis, which has an asymptomatic course. Avoiding dehydration of the body, the right lifestyle, preventive visits to the doctor help to avoid the occurrence of pyelonephritis.

**References.**

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