

# Infections cause by A group Streptococci

Streptococcal infections are among the *most common bacterial infections*. Streptococci are **obligately pathogenic, facultatively pathogenic and saprophytic microorganisms**. We classify them according to the degree of hemolysis -  **$\alpha$ -hemolytic** (incomplete, partial hemolysis on agar) and  **$\beta$ -hemolytic** (complete, complete hemolysis), according to serological differentiation of capsule antigen C into groups A and B.

The most common infections caused by group A streptococci include:

- sore throat
- Scarlet fever
- erysipelas
- contagious impetigo

## A group Streptococci

- Group A streptococci are the cause of 90% of streptococcal infections,
- *toxins*: erythrogenic toxin, streptolysin O and streptolysin S (hemolysis, toxic to myocardial fibers and hepatocytes), streptokinase (fibrinolysis), hyaluronidase (invasive factor of streptococci), etc.
- against some streptococci, Ig is formed useful in diagnosis - ASLO (antistreptolysin O) - they decline in the few weeks after infection.
- cause a variety of diseases: - **damage to the skin and mucous membranes, prolonged seropurulent rhinitis** in young children, **scarlet fever, impetigo, tonsillitis and pharyngitis**

## Complications of sore throat and scarlet fever

- Submandibular node covation, retrotonsillar or paratonsillar abscess, otitis, mastoiditis, sinusitis,
- more rarely - bacteremia, metastatic foci - purulent arthritis, endocarditis, meningitis, brain abscess, osteomyelitis and mediastinitis. Transmission of infection to the mediastinum is a rare but very dangerous complication with a high mortality rate.
- without therapy - risk of late complications - **rheumatic fever** or **glomerulonephritis**.

## Rheumatic fever

- Most often after group A streptococci, 1-4 weeks after infection (about 3% infected),
- the course of the original infection may be inapparent (without obvious symptoms),
- acute immunological multisystemic inflammation,
- often affects the heart - **chronic changes in the valves**,
- main manifestations: **migrating polyarthritis, pancarditis, subcutaneous nodules, erythema marginatum and Sydenham's chorea** - dance of St. Vita, chorea minor (neurological disorder - unconscious untargeted rapid movements),
- *side effects*: non-specific - **fever, joint pain, increased CRP...**,
- *diagnosis*: Jones criteria - history of streptococcal infection, presence of at least two manifest symptoms (major or minor)
- *pathogenesis*: hypersensitivity reactions, Ig against M protein of streptococci cross-react with glycoproteins of heart muscle, joints, etc.,
- relapses.

## Complications of skin infections with streptococcus

- Rare septic complications, possibly also glomerulonephritis,
- rheumatic fever is rare
- acute glomerulonephritis.

## Links

### Similar articles

- **Streptococci**: Streptococcus pyogenes • Streptococcus agalactiae • Streptococcus pneumoniae • Streptococcus mutans • Orální streptokoky

## References

### Literature

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## Source

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