

Immunosuppressants

Immunosuppressants are substances that suppress the function of the immune system.

The main indications are

- Autoimmune diseases,
- organ or bone marrow transplantation,
- fetal erythroblastosis (in Rh neg. mothers).

Corticosteroids, antiproliferants (Cytostatics, but in lower concentrations than in tumors), immunophilin-binding substances (**cyclosporine**), and others are used.

Glucocorticoids

Prednisone and **methylprednisolone** – have lympholytic effects, inhibit prostaglandins and **leukotrienes**, suppress the production of IL-2 and others. They are used, for example, in asthma, lupus erythematosus, in case of rejection crisis after transplantation, etc.

 For more information see *Glucocorticoids* .

Cytostatics

Interference with DNA – **methotrexate**, **azathioprine** (antimetabolites), **cyclophosphamide** (alkylating agents).

 For more information see *Cytostatics*.

Calcineurin inhibitors

Cyclosporine – a polypeptide from the fungus *Tolypocladium inflatum*. It blocks the activation of RNA polymerase by calcineurin, ie *it blocks the production of IL-2*. The early phase of T-lymphocytes is inhibited. It does not suppress humoral immunity, so it has no side effects like other substances.

 For more information see *Cyclosporine A*.

Tacrolimus – a mechanism similar to cyclosporine. It can be combined with other immunosuppressants besides cyclosporine.

Links

Related articles

- Immunomodulants

Bibliography

- HYNIE, Sixtus. *Farmakologie v kostce*. 2. edition. Praha : Triton, 2001. 520 pp. ISBN 80-7254-181-1.