

Low-molecular-weight heparins

Low-molecular-weight or **fractionated heparin** (*LMWH*) acts in the early phase of blood coagulation mainly by *binding to factor Xa with antithrombin*, unlike high-molecular heparin, which also irreversibly blocks thrombin activity.

The main representatives include:

1. Nadroparin (Fraxiparine);
2. Enoxaparin (Clexane);
3. Dalteparin (Fragmin);
4. Parnaparin;
5. Sulodexide.

- **Administration** subcutaneously, most often in the abdomen, but it is also possible to administer intravenously in exceptional cases, such as in patients on hemodialysis or with unstable angina pectoris.^[1]

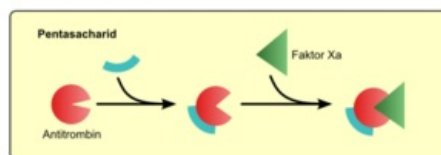
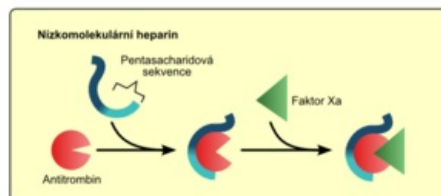
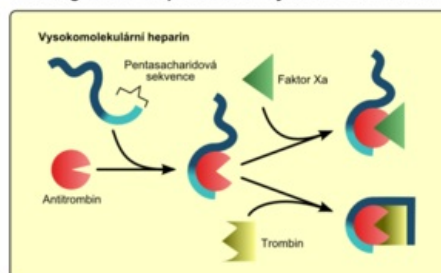
▪ **Indications:**

1. **Treatment** and **prophylaxis** of acute deep vein thrombosis and pulmonary embolism (VTE).
2. **Bridging** - bridging the necessary warfarin withdrawal before a planned surgery.^[2]

▪ **Comparison to high-molecular-weight heparins:**

Compared to high-molecular-weight heparins, they are **safer**, have a **longer-lasting effect** and show significantly **fewer adverse effects** (heparin-induced thrombocytopenia, bleeding).

Antikoagancia - Nepřímé inhibitory trombinu / faktoru Xa



low-molecular-weight anticoagulants

Gallery



nadroparin 0,3 ml pre-filled syringe



nadroparin 0,4 ml pre-filled syringe



nadroparin 0,6 ml pre-filled syringe



nadroparin 0,8 ml pre-filled syringe



nadroparin 1 ml pre-filled syringe



nadroparin 0,3 ml pre-filled syringe

Links

Related articles

- Hemocoagulation
- Hemocoagulation versus anticoagulation
- Anticoagulants
 - Warfarin
 - Heparin

References

- LINCOVÁ, Dagmar – FARGHALI, Hassan. *Základní a aplikovaná farmakologie*. 2. edition. Praha : Galén, 2007. ISBN 978-80-7262-373-0.
- 1. ZHU, Liqin – LI, Mengxue – LIU, Yihe. Intravenous Administration of Low-Molecular-Weight Heparin. *American Journal of Therapeutics*. 2019, vol. 26, p. e426-e428, ISSN 1075-2765. DOI: 10.1097/mjt.0000000000000841 (<http://dx.doi.org/10.1097%2Fmjt.0000000000000841>).

2. KESSLER, Petr. Nízkomolekulární hepariny v ambulantní praxi. *Interní medicína pro praxi* [online]. 2010, vol. 7, p. 361–365, Available from <<https://www.internimedicina.cz/pdfs/int/2010/07/05.pdf>>. ISSN 1803-5256.