

# Sulodeksyd w leczeniu retinopatii cukrzycowej

## Sulodexide Therapy for the Treatment of Diabetic Retinopathy

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### Summary:

Diabetes mellitus is causing dysfunction of the vascular endothelial cells, which results in various pathologies within the microvascular and macrovascular system including retinopathy, neuropathy, nephropathy, and angiopathy. Endothelial dysfunction is caused by hyperglycemia via different mechanisms, such as damage to the glycocalyx, activation of the inflammation, oxidative stress, stimulation of cellular senescence, induction of imbalance between coagulation and fibrinolysis. Many studies suggest that inhibition of retinal endothelial dysfunction may be an effective way of slowing the progress of diabetic retinopathy. Sulodexide (glycosaminoglycans composed from heparin-like and dermatan fractions) is associated with a protective and regenerating action on the glycocalyx, slows down senescence of human venous and arterial endothelial cells. Moreover its mechanism of action involves an anti-inflammatory, anti-proteolytic, and antioxidant effect, including interference with metabolic and non-metabolic stress. In present study sulodexide was chosen to evaluate its therapeutic properties for the treatment of diabetic retinopathy.

### Key words:

diabetic macular edema (DME), diabetes, diabetic retinopathy (DR), treatment, sulodexide.

### Słowa kluczowe:

cukrzycowy obrzęk plamki, cukrzyca, retinopatia cukrzycowa, leczenie, sulodeksyd.