## عنوان مقاله:

Effect of Non-Newtonian Models on Blood Flow in Artery with Different Consecutive Stenosis

## محل انتشار:

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## خلاصه مقاله:

In this paper, the ADINA finite element software was used for numerical investigation of laminar and non-Newtonian flow through a blood artery with consecutive stenosis. For modeling the non-Newtonian behavior of blood, six models were used, namely, Carreau, Carreau-Yasuda, modified Casson, Power law, generalized power law, and Walburn-Schneck. The results show that for all non-Newtonian models as well as the Newtonian model, the velocity of blood flow in the second stenosis is greater than the first stenosis. Also, up to ۴D back of second stenosis, a reverse flow area is formed that causes the spread of disease and the formation of new plaque. As a general conclusion, it can be stated that due to the smaller values obtained from the power law and Walburn-Schneck models, as compared with the other models, for fluid velocity and wall shear stress, these two models must be applied with caution.

## کلمات کلیدی:

ADINA, Endothelial cell, Reverse flow, Throat