This work presents the derivation and application of a method for fluid structure interaction description. It employs the methods of continuum mechanics with usage of the ALE (Arbitrary Lagrange Euler) coordinates. It demonstrates the whole approach to problem of artery fiow. The possibilities of this method are shown on the derivation of two models. The numerical method is f ormulated for the non stationary and nonlinear problem and some results are presented in three space dimensions, computed by a program, which was especially written for this purpose.