

# The analysis of heart attack phenomenon

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## ABSTRACT

Hypoxia appears following arteriolar occlusion as the concentration of oxygen decreases. The development of anoxic area is analyzed mathematically through time course in a region containing multiple non-homogeneous capillaries. The exact analytic solution is used to simulate heart attack phenomenon.

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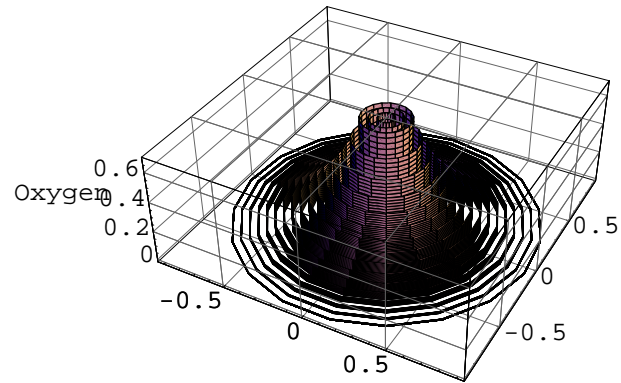


Fig 1. Concentration level curves of one capillary at  $t = t_1 = 0$  .

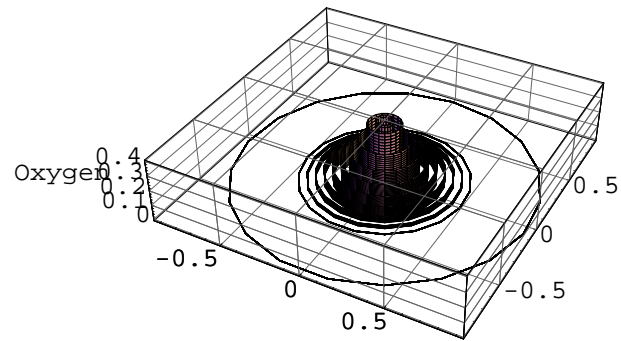


Fig 2. Concentration level curves of one capillary at  $t = t_1 = 0.6$  .

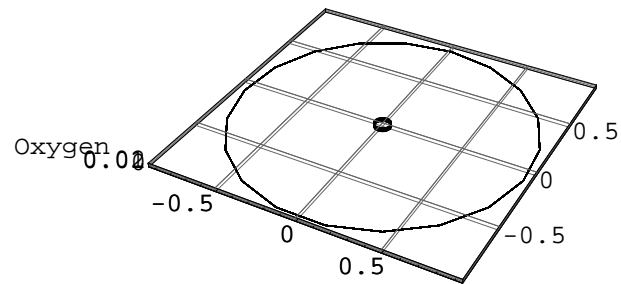


Fig 3. Concentration level curves of one capillary at  $t = t_1 = 1.7$  .