

Effect of heart rate on regional coronary blood flow

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AUTHORS' SYNOPSIS: The effect of tachycardia on the distribution of coronary blood flow was studied in the dog heart using the radioactive microsphere technique. Increasing heart rate from 1.7 to 3.0 Hz produced an increment of flow to the inner and outer layer of both ventricular walls. However, the flow ratio, inner layer to outer layer, increased in the right ventricular wall and decreased in the left wall. Measurements performed in ventricular regions with previous vasodilatation and during right ventricular hypertension revealed that the comparatively larger vasodilatation reserve of the right ventricular subendocardium is due to the lower pressure this ventricle develops normally.