962-92-1218 **Leon Glass*** (`glass@cnd.mcgill.ca`). *Dynamics of Reentrant Tachycardia.*

Reentrant tachycardias are abnormal cardiac arrhythmias in which the period is set by the time it takes for the excitation to travel in a circuitous path. I describe a very simple model of reentrant arrhythmias in which the path is modeled by a one-dimensional ring of cells. This model is used to investigate various aspects of cardiac arrhythmias including: the stability of the circulation as the path length of the reentrant circuit is decreased, the effects of single and multiple pulses delivered during the tachycardia, control of instabilities during the reentrant rhythm by adjusting the timing of stimuli delivered during the course of the tachycardia, paroxysmal rhythms in which the arrhythmia undergoes sudden onset and offset. In all cases, mathematical models can be developed suitable for comparison with experimental and clinical data. (Received October 02, 2000)