

Blood pressure was measured by the ear capsule method in 12 conscious rabbits. After a two-week control period, at operation under anaesthesia rapid-setting dental cement casts were placed bilaterally around the carotid sinuses in eight animals and around the internal carotid arteries immediately above the sinuses in a control group of four animals. The animals were allowed to recover and ear capsule pressure measurements were made for a further 50 days. Then again at operation the integrity of the sinus reflexes was tested in each animal. Reflexes were present in all the control animals and in five of the experimental group but were absent in three of the experimental animals. The control animals and the experimental animals without sinus reflexes showed little or no pressure rise, but the experimental animals with intact reflexes showed a substantial and sustained pressure rise averaging $37.6\% \pm 2.3$ (SEM). This shows that a primary interference with baroreceptor function can lead to a sustained rise in arterial pressure.