Title
HUMAN AUDITORY EVOKED-RESPONSES VARY AS A FUNCTION OF CARDIOVASCULAR EVENTS

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15b. Berka, C., & Sandman, C. A. (University of California, Irvine, and Fairview Hospital) Human auditory evoked responses vary as a function of cardiovascular events. Auditory evoked responses (AERs) to pure tones were elicited at either the systolic peak or the diastolic trough of pulse pressure waves measured over the carotid, cephalic, and digital arteries.

Ninety-three percent of the right hemisphere AERs during carotid presentation were correctly classified as systolic or diastolic by a stepwise discriminant function analysis. Similarly 100% of left hemisphere carotid were classified; 100% of right cephalic, 73% of left cephalic, but only 63% of the right digital and 80% of left digital. P1–N1 amplitude was greater for systolically evoked responses in the right hemisphere; this pattern was reversed in left hemisphere responses. N1–P2 amplitude was enhanced at systole for left hemisphere responses. No difference in this wave was detected for right hemisphere responses. N2–P3 amplitude was not lateralized; however, this wave was generally greater during diastole. These data suggest that this paradigm may be useful for assessing autonomic-CNS relationships.