70 The Effects of Explosive Decompression on the Gastrointestinal Tract: A Preliminary Report. F.T. Sargent and R.D. Williams. J. Trauma 4, 618-623 (Sept. 1964).

Rapid decompression from 40,000 ft. to ground level produces pressure differentials similar to those previously recorded with blunt abdominal trauma. The pressure difference between the peritoneal cavity and decompression chamber is greater than that between the intestine and chamber, which might explain the absence of intestinal rupture with intact animals. Both the exposure of intestinal loops and of the external abdominal support by taping increased the hemorrhagic injuries; but there were no intestinal ruptures unless the gut was previously distended and obstructed. These findings, coupled with previous reports on experimental blunt trauma, further suggest that pressure is of secondary importance in the etiology of intestinal injury. -- J. Am. Med. Assn. References & Reviews

71 The Effects of "Dry" Heat on the Circulation of Man: Coronary Hemodynamics. S.M. Sancetta, et al. Am. Heart J. 67, 593-598 (May, 1964).

Subjects with normal hearts, as well as patients with enlarged left ventricles, compensated or in left ventricular failure, were exposed for 2 hours to a dry, warm environment of 98°F.(36.7°C.) and 40% relative humidity. Brachial arterial pressure and left ventricular myocardial oxygen consumption decreased significantly. There was a positive correlation between these measurements. These changes are not harmful to the overburdened left ventricle and, within the design of the experiment, may actually be considered to be beneficial in the case of resting subjects. -- Aerospace Med. Absts.

72 Effect of Ultrasound on the Secretion of 5-Hydroxy-3 Indoleacetic Acid (5HIAA). J. Jankowiak, et al. Am. J. Phys. Med. 43, 46-47 (Apr. 1964).

Experiments on 34 rabbits have shown that radiation of the occiput of the skull with ultrasound produces an increase of one of the metabolic products of serotonine in the urine of those animals which before treatment showed no secretion of this product. In those animals in which the metabolite 5-hydroxy-3-indoleacetic acid was present in the urine prior to the ultrasonic radiation, no significant change was observed as the result of ultrasonic irradiation. These findings are related to clinical observations of disturbances of the autonomic nervous system, changes in the electroencephalogram, and complaints of fatigue, drowsiness, and dizziness after prolonged exposure to ultrasound. -- Aerospace Med. Absts.

73 Acoustic Trauma. G.B. Page. Med. Serv. J. (Can.) 20, 43-46 (Jan. 1964).

A short review is presented of the history of acoustic trauma due to exposure to high intensity noise in various occupations. Among military occupations various aspects of hearing loss due to aircraft noise and small arms fire are discussed in relation to means of protection and prevention. Examples are taken from surveys made by the Canadian Armed Forces. A program in the Royal Canadian Air Force for combating hearing loss by adequate methods of personnel training and protection is elucidated. The use of the new NRC liquid-seal ear muffs is discussed. -- Aerospace Med. Absts.

74 The Effect of Intensive Noise on Certain Functions of the Body. A.B. Strakhov. Gigiena i Sanit. 4, 29-37 (April, 1964). Russian.

Experimental long-term exposure to intensive high-frequency noise produced numerous shifts in the activities of the central nervous and cardiovascular systems. These shifts consisted of changes in conditioned reflex and electrical brain activity, considerable fluctuations of the arterial blood pressure level, and weakening of cardiac muscle contractions. As a rule, all these changes were of a temporary nature. On the basis of the data obtained, it may be concluded that all deviations from the normal occurring in the body due to noise action were connected with changes in the function of the reticular formation of the brain stem and gradually progressing alterations therein. -- Aerospace Med. Absts.