

tion of the cases there was a degenerative change in the internal ear implicating the auditory nerve the result of a toxic neurolabyrinthitis, while in still other cases the pathological changes in the labyrinth were the consequence of the arteriosclerotic changes in the bloodvessels, to which diabetics are especially prone.

**Experimental Investigations into the Traumatic Pressure Effect of Explosions.**—Recent experience in military operations shows that serious injury may be effected by windage or air compression incident to the immediate vicinity of shells in flight, even to the extent of fracture of the vertebrae in a man sitting in a bowed position, of which the scalping or denudation effect is a further example. F. RUSCA (*Deutsch. Ztschr. f. Chir.*, cxxxii, p. 315) endeavored to explain these effects in parallel by studying the influence exerted by gas and water compression upon rabbits and fishes, it being found that the influence exerted, through these media, in addition to the frequently recognizable rupture of the drum-head, resulted in serious injuries to the skull and to the brain, and to the latter when the cranium remained intact, as exhibited frequently during the present war in the form of hemorrhages at the base and at the convexity of the brain. The variety of injuries produced, including the ruptures of, and ecchymoses in, the membranous labyrinth is explained by the author by the radiated as well as by the direct pressure effect.

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## HYGIENE AND PUBLIC HEALTH

UNDER THE CHARGE OF

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**The Prevalence of Trachoma in Kentucky.**—In 1912 a survey made by the U. S. Public Health Service of seven counties in the mountain region of Kentucky, showed that 12.5 per cent. of the population of the counties examined were suffering from trachoma. This survey has been continued and the results of the later work have been published (*Public Health Reports*, March 5, 1915). It was found in the survey of twenty-three counties, 18,016 persons being examined, that 1280 cases or over 7 per cent. of those examined were suffering from trachoma. In some counties the percentage of persons found infected was as high as 26.4 per cent. while in others it fell to about 3 per cent. The majority of those examined were school children and the findings may be taken as representing fairly accurate conditions among adults. Almost all those examined were whites, as the negro population is very small in

the mountain section of Kentucky. Inasmuch as the bulk of the population in these counties comes from old American stock, foreign immigration cannot be blamed for the prevalence of the disease. The U. S. Public Health Service regards its estimate of 33,000 cases in thirty-five mountain counties as conservative, though approximate, and has established hospitals at various points for the treatment of the disease and the education of the general public as to the means of its prevention. Trachoma undoubtedly exists in many other places in this country. It is certainly widespread among the Indian tribes and the Public Health Service is endeavoring to eradicate the disease and prevent its spread.

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**The Experience of the New York City Health Department with Typhoid Immunization.**—HANNUS and OGAN (*Department of Health of the City of New York Reprint No. 22, January, 1915*) draw the following conclusions: (1) The accurate observations recorded in hundreds of thousands of cases leave no doubt as to the preventive powers of antityphoid vaccination in all but a relatively insignificant number; (2) In those subsequently affected it strikingly decreases severity of the disease and the mortality; (3) Severe reactions, if one makes observations from extensive studies (the only correct way) are rare; (4) To avoid severe reactions one must observe carefully several precautions, as follows: (a) Never administer it to any but the healthy; (b) To permit of slow absorption, avoid puncture of a vein, or intramuscular injection; (c) Clean syringe and sterilize the area for injection, using tincture of iodine for the latter purpose; (d) Children, especially, are to avoid exposure to the sun following treatment; (e) Avoid administering it during the menses or pregnancy; (f) Allow no hard work or indulgence in alcohol immediately after the injection; (g) Avoid reinjecting in indurated areas; (5) Severe reactions have never left permanent injury; (6) When the incubation period has begun, the time for antityphoid immunization has passed. The vaccine is a preventive of typhoid fever, and not a typhoid antitoxin; (7) Long exposure to overwhelming doses of typhoid bacilli as in those who are in close contact with cases and especially in epidemics, may nullify the immunization powers of antityphoid vaccine, and an attack may therefore incidentally follow one or more injection; (8) Chronic illness (tuberculosis, etc.), as well as debility from other causes, and fatigue and exhaustion also predispose to severe reactions; (9) Injection after intimate and long exposure hasten the onset; (10) For a period of at least two years, and possibly longer, immunization is as effective in protecting from an attack of typhoid fever as is a previous attack of the disease itself; (11) Infections may follow after a complete immunizing course of treatment, in exceptional instances in which debility and fatigue exhaust the resistant and defensive powers of the body, and when exposure to massive doses of typhoid bacilli exists.

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**A Survey of the Public Health Administration of the State of Washington.**—The United States Public Health Service, has, in the last twelve months, been making a survey of certain State health organizations with a view of standardizing the operations of the various sanitary studies in the United States. It is hoped that the accomplish-