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Nos. 2/3, 94-100(1942).—Eye injuries are discussed for mustard, lewisite, irritant smokes and tear gases. About 75% of eye injuries in the last war were mild cases, 15% were moderate and only 10% were severe. Ultimate blindness is very rare. Treatment consists of irrigation with weak $NaHCO_3$ or boric acid solns., normal saline or 0.5% dichloramine T in chlorinated paraffin. Eye patches or bandages should not be used. Details are given. A. L. Kibler

The diagnosis and treatment of pulmonary gas casualties. Linn J. Boyd. *Bull. N. Y. Med. Coll., Flower and Fifth Ave. Hosp.* 5, Nos. 2/3, 64-70(1942).—The clinical picture described is that of phosgene since this is the most important of the pulmonary irritants. The symptomatology is considered from two standpoints: cases with acute and violent onset and cases with acute but insidious onset. Treatment should involve absolute rest until recovery is complete. Oxygen is the best single agent available. Venesection is indicated for certain conditions of the "blue" type but should never be used in the "gray" type or in case of circulatory failure or low blood pressure or thready pulse. Pneumonia is a frequent complication. Recovery seldom leaves chronic effects. The gas mask offers complete protection against phosgene and similar gases. A. L. Kibler

Pathology of the vesicants and pulmonary irritants. Francis D. Speer. *Bull. N. Y. Med. Coll., Flower and Fifth Ave. Hosp.* 5, Nos. 2/3, 59-63(1942).—Changes caused by vesicant gases (mustard gas) are described under the headings of skin, eye and respiratory tract. Those due to suffocant gases (phosgene) are confined to the lungs with secondary effects on the heart and occasionally the brain. Details are given. A. L. Kibler

Pathologic physiology of the respiration and circulation in war-gas poisoning. David Scherf. *Bull. N. Y. Med. Coll., Flower and Fifth Ave. Hosp.* 5, Nos. 2/3, 52-8 (1942).—The changes caused by the inhalation of toxic war gases are described under the headings of disturbances of the circulation. Owing to the great increase in the oxygen needs of the tissues caused by even mild exercise, complete rest is one of the essential requirements in the treatment of gassed cases. A. L. Kibler

The symptoms, prevention and treatment of the effects of vesicants. Thomas H. McGavack. *Bull. N. Y. Med. Coll., Flower and Fifth Ave. Hosp.* 5, Nos. 2/3, 85-93(1942).—The war gases considered are mustard gas, lewisite and ethyldichloroarsine. Contrary to the statement in the text the last named was used by the Germans in the first World War. The ratio of the concn. of these gases necessary to cause casualty to that essential for the detection of the characteristic odor is emphasized but it should be stated that the concn. required to produce odor is affected by the purity of the gas, the tech. product being more easily detected than the pure material. The symptoms produced by each gas are described in detail. The discussion of the clinical pictures of the conditions caused by these vesicants include descriptions of the latent period, the period of acute reactions and the period of subacute or chronic reactions. Chronic pulmonary effects are the exception rather the rule in these cases. Of all the lesions caused by mustard gas those of the respiratory tract are the most serious but these can be protected against by the gas mask. Lewisite and ethyldichloroarsine produce systemic effects from arsenic poisoning. The treatment of all cases are discussed under the headings: preventive treatment, treatment after skin contact, and treatment after the lesion develops. Treatment after skin contact should be instituted within 5 to 15 min. to be effective. 9 references. A. L. Kibler

A new point of view regarding the toxicity and the possibility of use of mustard gas. D. H. Wester. *N. V. L. Stud.-Org. Luchtbeschermingsvaagstuk* 1, 326-9(1940); *Chem. Zentr.* 1940, II, 2055; cf. *C. A.* 34, 1769[7].—Attention is called to some recent work of Dautrebande (cf. *C. A.* 35, 8100[6]). In addn. to the blistering caused, mustard gas also has a general poisonous action, 0.07 cc. being a fatal dose for man. The gas can penetrate rubber gloves and cause poisoning without blistering. When breathed, the manner of dispersion in the air greatly influences the toxicity. E. g. the fatal dose of the gas vapor for rats is 120 mg./cu. m.; when the mustard gas is carried on a mist of a nonpoisonous aerosol the fatal dose is 20 mg./cu. m. and when carried on dense clouds of an aerosol it is 7–10 mg./cu. m. In this respect it resembles $COCl_2$ poisoning of the lungs. M. G. Moore

Miscellaneous gas hazards. Linn J. Boyd. *Bull. N. Y. Med. Coll., Flower and Fifth Ave. Hosp.* 5, Nos. 2/3, 114-19(1942).—Incidence, symptoms, protection and treatment are discussed briefly for CO, nitrous fumes and screening smokes (P, chlorosulfonic acid, oleum, $TiCl_4$ and $SnCl_4$). A. L. Kibler

Occupational diseases and the protection of those engaged in pest control. Erich Winkler. *Prakt. Desinfektor* 32, 123-5(1940); *Chem. Zentr.* 1941, I, 546.—CS_2, T gas, Tritox (trichloroacetonitrile), Illo (CCl_4 + an irritant), CCl_4, pyrethrin and rotenone are discussed. M. G. Moore

Safety in laboratories and factories for inorganic chemicals. III. Phosphorus hydrides. Francis Barillet. *Industrie chimique* 1940, 123-6; cf. *C. A.* 35, 2999[3].—Acute poisoning by phosphorus hydrides is possible only by absorption through the respiratory tract. The course of poisoning is similar to that caused by white P. The symptoms of chronic poisoning are anemia and nervous disorders. The proper gas-mask filling for phosphorus hydrides is $AgMnO_4$, $KMnO_4$ and activated C. Owing to its strongly endothermic nature, PH_3, like P_2H_4, may decompose explosively; P_2H_4, especially, is unstable in contact with various org. substances and under the influence of light. A 2% concn. by vol. of P_2H_4 makes H and other combustible gases spontaneously inflammable. HCl, H_2S, NH_3, alc., Et_2O and oil of turpentine in small quantities suppress this spontaneous ignition. *Phosphorus trichloride*, in tolerable concns., is but slightly irritating. Poisoning by PCl_3 causes dyspnea and, in severe cases, edema of the lungs. More dangerous are the effects on the skin because of burns; PCl_3 should be washed from the skin with Na_2CO_3. Efficient gas masks should contain soda lime and activated C. The statements made about PCl_3 apply in smaller degree for *phosphorus pentachloride*. *Tetraphosphorus trisulfide*, P_4S_3, is but slightly poisonous. In sensitive persons, contact with it may produce eczema. The temp. of ignition in air is 95–100°. Mixing it with most oxidizing agents produces explosive mixts. Transportation and storage precautions are the same as for white P. R. Petermann, Morris B. Jacobs

Safety in laboratories and factories for inorganic chemicals. XIII. Arsenic and its compounds. Francis Barillet. *Industrie chimique* 1940, 201-4; cf. *C. A.* 35, 2999[3]; and preceding abstr.—B. gives a long survey of symptoms and course of poisoning. Acute poisoning is caused chiefly through the stomach; however, it also occurs through the respiratory tract and the skin. In chronic poisoning it is absorbed principally through the respiratory system but also through the skin and stomach. Arsenic-bearing dust is the most dangerous of all. Protection can be obtained by the use of fabric filters and goggles. For solns., rubber is necessary for protection. R. Petermann, Morris B. Jacobs

Supermicroscopic investigations of asbestos dust and asbestos lungs. Joachim Kühn. *Arch. Gewerbepath. Gewerbehyg.* 10, 473-85(1941).—Examn. by means of the Siemens supermicroscope of particles of serpentine and hornblende asbestos and of material isolated from asbestos lungs indicates that the serpentine asbestos is decomposed in the lung and is the cause of fibrosis. The hornblende asbestos shows no signs of decompn. by the organism. W. Nowacki

Chlorinated hydrocarbons. Allan L. Coleman. *Connecticut Ind.* 20, No. 9, 11-12, 30-1(1942).—The properties, uses, health hazards, etc., are discussed for CH_3Cl, CH_2Cl_2, CCl_4, CH_2ClCH_2Cl, $CHCl_2CHCl_2$, $CHCl{:}CCl_2$, $CCl_2{:}CCl_2$, chloroprene and chlorinated naphthalenes and biphenyls. Leopold Scheflan

Notes on dust suppression and collection. J. Smellie.