

streptomycin ascorbate, dihydrostreptomycin panthotenate, pasomycin, florimycin and kanamycin are prepared. Complex compounds of dihydrostreptomycin with ascorbic, panthotenic or p-aminosalicylic acid are less toxic than streptomycin sulfate or dihydrostreptomycin. All above dihydrostreptomycin derivatives may be used in cases with side effects of streptomycin sulfate. Pasomycin is preferable since it combines 2 main antituberculous preparations (dihydrostreptomycin and PAS). Florimycin and kanamycin are more toxic than streptomycin sulfate or dihydrostreptomycin and their derivatives. These antibiotics should be limited by patients with progressive processes and streptomycin resistance. Florimycin and kanamycin are ototoxic and should be used only in stationary conditions with constant examination of hearing. --Authors.

† 30951. TAYLOR, T. G., K. M. L. MORRIS, and JEAN KIRKLEY. (Agr. Res. Coun. Poultry Res. Cent., Edinburgh, Scot., UK.) Effect of dietary excesses of vitamins A and D on some constituents of the blood of chicks. *BRIT J NUTR* 22(4): 713-721. 1968. --Groups of chicks were given diets containing 4 levels of vitamins A and D, 1, 10, 100 and 1000 times the basal level, in all 16 combinations, with the object of investigating a possible antagonism between the 2 vitamins. Only diets containing 1000 times the basal level (approx. 1700 times the dietary requirements) of 1 or both vitamins depressed growth and induced changes in the blood. The packed cell volume was substantially reduced from 4 wk of age in the chicks given the highest level of vitamin A. This was probably due to an effect of the vitamin on the fragility of the red cells and thus on their life span. Chicks given the toxic level of vitamin D showed an increase in plasma Ca and a decrease in plasma inorganic P. The highest level of vitamin A depressed plasma Ca without influencing plasma inorganic P. Increasing amounts of vitamin A given in combination with the highest level of vitamin D caused a progressive increase in the plasma inorganic P. The highest level of dietary vitamin A significantly increased the activity in the plasma of 3 lysosomal enzymes: acid phosphatase, β -glucuronidase and arylsulphatase. Excess vitamin D given in conjunction with the basal level of vitamin A significantly depressed the plasma acid phosphatase and the activity of this enzyme increased with increasing amounts of vitamin A. Excess vitamin D had no influence on the other hydrolases studied. A marked antagonism between the effects of excessive amounts of the 2 vitamins occurred only in respect of their actions on the plasma levels of Ca, inorganic P and acid phosphatase, all of which are involved in bone metabolism. --Authors.

30952. TUMARKIN, R. I. (N. F. Gamaleya Inst. Epidemiol. Microbiol., Acad. Med. Sci. USSR, Moscow, USSR.) K voprosu o mekhanizme toksicheskogo deystviya antibiotikov tetratsiklinovoi gruppy na pechen'. [Mechanism of the toxic effect of the tetracycline group of antibiotics on the liver.] *ANTIBIOTIKI* 13(7): 647-652. 1968. [Engl. sum.] --Chlortetracycline in high doses in rats increased histidine deaminase and urokinase activity. Oxytetracycline had a slight effect on histidine deaminase activity and suppressed urokinase activity. Tetracycline effect was similar to that of oxytetracycline. Chlortetracycline has a higher toxicity. --Author.

30953. TYUL'MANKOV, V. N., and B. K. LUGOVSKI. Sosudistye oslozheniya pri lechenii psikhicheskikh bol'nykh aminazinom. [Vascular complications during aminazine (chlorpromazine) treatment of mental patients.] *ZH NEUROPATOL PSIKHIAT IM S S KORSAKOVA* 68(1): 111-115. 1968. [Engl. sum.] --The main syndromes were cerebral hemorrhages and thrombotic vascular affections of vitally important organs. Aminazine probably increases coagulability. A thorough control (including laboratorial and tests) of old patients and patients with hypertensive disease must be made in the process of aminazine treatment. --From auth. sum.

† 30954. WEISS, HARVEY J. (Mt. Sinai Hosp., New York, N. Y., USA.), LOUIS M. ALEDORT, and SHAUL KOCHWA. The effect of salicylates on the hemostatic properties of platelets in man. *J CLIN INVEST* 47(9): 2169-2180. 1968. --Ingestion of 1.5 g of aspirin, but not of sodium salicylate, produced a significant prolongation of the bleeding time in 6 normal male subjects when compared with the effects of a placebo. Similar differences in the effect of the 2 drugs on platelets was also observed. Aspirin ingestion resulted in impaired platelet aggregation by connective tissue and was associated with a decreased release of platelet ADP; sodium salicylate had no effect on these values. In vitro, incubation of platelet-rich plasma with an optimum aspirin concentration of 0.045 mg/ml inhibited both the adhesion of platelets to connective tissue and the release of ADP as well as the 2ndary wave of platelet aggregation produced with ADP or epinephrine. Sodium salicylate had no effect on these reactions, which were also normal in patients with von Willebrand's disease. Inhibitory effect produced by ingesting a single 1.8 g dose of aspirin was detectable for 4-7 days at which time salicylate was no longer detectable in the blood, which suggested an irreversible effect on the platelet. Aspirin also inhibited the release of platelet ATP, but had no effect on the platelet surface charge, available platelet ATP or ADP, or the destruction of ADP by plasma ADPase. These studies support the hypothesis that ingestion of aspirin, in contrast

to sodium salicylate, prolongs the bleeding time by inhibiting the release of platelet ADP, perhaps reflecting the findings in other cell systems that aspirin alters membrane permeability. --Auth. sum.

30955. ANONYMOUS. The kidney and oral calcium therapy. *ANN INTERN MED* 66(5): 1021-1022. 1967. --Though CaCO_3 is valuable as an antacid, severe and possibly irreversible injury to the kidney may occur from its prolonged use in conjunction with a high milk intake. Evidence of renal function disturbance may be shown by a rise in serum creatinine and renal N. During treatment with CaCO_3 a patient's serum Ca level should be watched for early signs of Ca nephropathy within the 1st 7 days of treatment.

INDUSTRIAL TOXICOLOGY

(See also "Pathology" under Respiratory System; "Environmental Health - Occupational Health," and "Radiation Health" under Public Health)

30956. GANDEVIA, BRYAN. (Div. Thorac. Med., Univ. N. S. W., Sydney, N. S. W., Aust.) Pulmonary function in asbestos workers: A three-year follow-up study. *AMER REV RESP DIS* 96(3): 420-427. 1967. [Span. and Fr. sum.] --Ventilatory capacity and ventilatory response to a standard exercise test were measured in a series of 41 male workers in a factory making asbestos products, and was repeated about 3 1/3 yr later. Twelve men left the industry during the interim. They had a significantly lower vital capacity after adjustment for age, and a significantly higher ventilatory requirement for exercise than those who remained in the industry. This pattern of functional abnormality contrasts with that found in subjects admitting to persistent cough and sputum, in whom a significant reduction was demonstrated in age-adjusted forced expiratory volume at 1 sec. In a control series, observed and predicted changes in pulmonary function over the observation period showed reasonable agreement. The asbestos workers showed a greater decrease in forced expiratory volume at 1 sec. than predicted, and possibly greater changes in vital capacity and ventilatory requirement for exercise. The trend toward functional abnormality is consistent with, although not indicative of, the development of asbestosis. Serial pulmonary function tests are likely to be more informative than serial roentgenograms. --From auth. sum.

30957. HARRIS, D. KENWIN, and W. G. F. ADAMS. Acro-osteolysis occurring in men engaged in the polymerization of vinyl chloride. *BRIT MED J* 5587: 712-714. 1967. --Two cases of acro-osteolysis occurring in men engaged in the polymerization of vinyl chloride are described. The bones affected were the terminal phalanges of the fingers and the sacroiliac joints, but in 1 case the patella and in the other the phalanges of the feet were involved. The condition was accompanied by Raynaud's phenomenon and skin lesions. This condition is probably a self-limiting disease. --Authors.

30958. SAMEDOV, I. G. O nespecificeskikh proyavleniyakh deystviya uglevodorodov v mal'kikh kontsentratsiyakh. [Nonspecific manifestations of low concentrations of hydrocarbons.] *AZERB MED ZH* 6: 58-61. 1967. From: REF ZH OTD VYP FARMAKOL KHMOTER SREDSTVA TOKSIKOL, 1968, No. 4, 54, 915. (Translation) --Workers were tested at a petroleum-processing plant where the concentration of hydrocarbon vapors did not exceed the maximum allowable (0.07-0.48 mg/l). Rabbits and guinea pigs were treated under various static regimes with the vapors of gasoline B-70 at 0.95-1.1 ml/l, 4 hr/day, 6 times/week for 4 mo. The workers and the animals showed a rise in the concentration of blood acetylcholine and epinephrine-like substances. Animals treated constantly and evenly with increasing hydrocarbon concentrations showed these tendencies, but they were less marked. Cholinesterase activity in the workers did not differ from that of controls, but it was reduced in treated animals, especially when the treatment was with fluctuating concentrations of hydrocarbons. Pseudocholinesterase activity did not change in either persons or animals. Daily urinary excretion of 17-ketosteroids by treated rabbits was of a phasic character: the elevated activity of the adrenocortical function was soon replaced by reduced activity. Only under the action of sharply fluctuating hydrocarbon concentrations was there a prolonged rise in 17-ketosteroid excretion. Maximum depression in the concentration of vitamins C and B₁ in the blood, urine, and organs was noted in animals treated with steadily and evenly increasing and also sharply fluctuating hydrocarbon concentrations. Changes in the electrolyte metabolism with low concentrations was insignificant. The principal changes with low hydrocarbon concentrations were in the functional condition of the autonomic and endocrine systems (changes in the metabolism of mediating substances and vitamins and in adrenocortical function). These changes are probably nonspecific and of a compensatory-adaptational nature. Over a certain period they may lead to persistent and even organic changes.

30959. SPAK, IVAR. (Dep. Surg., Långsakerstet, Hasselholm, Swed.) Finger injury caused by paint spray gun. *ACTA CHIR*