Industrial Hygiene Digest
(Ind. Hygi[illegible]tion)

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JANUARY, 1945

INDUSTRIAL HYGIENE DIGEST

(Vol. 9, No. 1)

Literature Abstracts

- MEDICAL
- ENGINEERING
- LEGAL . . . decisions and trends

Industrial Health News



INDUSTRIAL HYGIENE FOUNDATION
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INDUSTRIAL HYGIENE FOUNDATION

FOUNDATION FACTS

Foundation Facts is a monthly news-letter issue to industrial concerns holding membership in Industrial Hygiene Foundation. The Foundation is a non-profit association of industries for the advancement of healthful working conditions

Vol. 7 January, 1945 No. 1

HWBB-0011359

UNRIG. ABRAMS NOV 6 1945 (1 of 2)

Veterans Panel No. 2 Published

The panel discussion, "Putting the Disabled Veteran Back to Work, II", a feature of the Foundation's Ninth Annual Meeting, has just been published and is now being mailed to Member Companies and Subscribers. This is a continuation of the panel discussion inaugurated at the Foundation's Eighth Annual Meeting in 1943 and which was issued a year ago, separate from the regular Proceedings. These companion publications are hailed by authorities on veteran rehabilitation as two of the most practical and valuable reports yet issued on the subject.

Other Publications in Press

Instead of printing the Proceedings of the 1944 Annual Meeting in one publication, as in the past, the material will be published in several separate reports to make for more efficient circulation. The veterans panel constitutes Part I. The next part will be the panel discussion on "Sickness Indemnification." This will be followed by the Legal Section of the program at the annual meeting and the Medical and Engineering Sections. The insurance and legal reports will be published shortly.

New Book on Industrial Environment

J.M. DallaValle, a member of the Foundation's Engineering Committee, has completed a book, "The Industrial Environment and Its Control," which is to be published this Spring. The book is divided in two parts, (a) The Worker's Environment, (b) Control of the Environment. For further information address the Foundation or Dr. DallaValle at 70 Pine St., New York City.

Reprints Available on Medical Service in Industry

The Council on Industrial Health of the American Medical Association has, at our request, provided the Foundation with a supply of reprints of its recently revised report on "Medical Service in Industry, Industrial Health Examinations." Members interested in equipment and procedures for physical examinations should have this report. Copies may be secured from the Foundation.

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The Council has cancelled its annual Congress on Industrial Health, which was scheduled for February 13-15 in Chicago, in compliance with the recent order of the Office of Defense Transportation respecting national meetings.

Membership Certificates

Membership Certificates for 1945 are now being lettered and Members will receive the certificates as rapidly as they can be completed. Many companies are requesting sufficient copies to post in their various plants or in different sections of a single plant. Members may secure as many certificates as required for their needs.

.....Maintain Manpower!.....

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IN THE ARCHIVES NOVEMBER 1993

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Industrial Hygiene Foundation
4400 Fifth Avenue
Pittsburgh 13, Pennsylvania

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INDUSTRIAL HYGIENE DIGEST
Literature and News

News Items

1 Occupational Diseases in Wisconsin in 1943.
The Industrial Commission of Wisconsin reports that "diseases of occupations or other non-accidental injuries" accounted for 1,647 cases, or 5.5% of the total of 30,185 compensable injury cases settled in that State in 1943. The 1,647 injury cases claimed 95,629 lost work days and $150,118 in indemnity paid. The cases occurred in the following industries:

Manufacturing industries..	78%	Construction industries..	3%
Government agencies.....	7%	Service industries.....	3%
Wholesale and Retail Trade	6%	All other industries.....	3%

Dermatitis and silicosis were the most costly. There were 775 dermatitis cases for which indemnity paid was $36,443. While there were only 4 silicosis cases for which indemnity was paid, this amounted to $28,279. -- Industrial Commission of Wisconsin, Stat. Release No. 3150 (November 20, 1944)

2 Women of U.S. Steel.
The January, 1945 issue of U.S. Steel News pays tribute to women workers in industry, pointing out that they are filling "jobs requiring brawn, skill and technical knowledge." The number of women who have gone into industry, the publication continues, "even into the so-called 'heavy industries' where women were virtually unknown save in office work, is one of the wonders of the war. In the United States Steel Corporation and its subsidiary companies, there are now more than 40,000 women employees---15,000 in office occupations and 25,000 directly engaged in production. One out of every eight employees of United States Steel is a member of the fair sex."

3 The Unfinished Story.
The task of the National Safety Council "is that of integrating safety into the daily lives of 130 million people. In its broadest sense, this means making safety as much a part of individual life as brushing the teeth, washing the hands, keeping well, eating three meals. It means making safety as much a part of community life as public health service, municipal playgrounds, police protection, sewage disposal, cleaning the streets..... It means making safety as much a part of national life as soil conservation, social security, flood control." "We know that we have proved methods of preventing accidents already available..... The real problem facing us is that of gaining nationwide acceptance of safety as a part of the design for living." -- N.H. Dearborn. Nat. Safety News, 17, 76,78 (November, 1944)

4 Injunction to Force Abatement of Atmospheric Pollution.
The mayor of a New Jersey city has asked that court action be taken to force a pigment plant in the city to end the nuisance caused by sulfur dioxide gas emanating from the plant. This action followed a conference between the city officials,

03118440

RWGB-0011361

NOVEMBER 1992 AIR LAWS

the plant superintendent, and members of the New Jersey Bureau of Industrial Hygiene which had made a survey of the problem at the request of the city officials. Ways and means of eliminating this atmospheric pollution were discussed. The mayor had initiated the survey because of the constant covering of the city with gases from the plant. The research director of the industry explained that increased production due to war needs had overtaxed the plant's equipment to carry away the objectionable gases. Since several months would be needed to obtain the necessary equipment unless urgent action was taken, the city officials decided to use legal measures to insure the city's protection at the earliest possible time. -- Industrial Hygiene News Letter, 4, 1 (December, 1944)

5 Proposed Industrial Health Service Act.
In response to several requests from State divisions of industrial hygiene for a statement of desirable provisions for State industrial hygiene laws, a "Proposed Industrial Health Service Act" has been prepared and sent to all the States. This proposed Act states the duties of a State agency in regard to the investigation of places of employment and the adoption of rules and regulations pertaining to the control of industrial health hazards. It specifies actions that should be considered violations, namely, denial of access of health department representatives to industry, and the use of harmful materials known to be dangerous to the health of the workers. Requirement of reporting of occupational diseases to the State division of industrial hygiene by physicians is also included in the proposed Act's provisions. -- Industrial Hygiene News Letter, 4, 4 (December, 1944)

6 Cleaning Castings in Grove City Foundry.
During the existence of the foundry industry the cleaning room, with its dust, dirt and noise has always been a necessary evil and, until recent years was accepted as such with little or no action taken to correct conditions. Our foundry was no exception. It was dirty, hazardous and the source of our greatest production bottleneck. All these objectionable features were well known, and frowned upon by management who decided to do something toward improving the situation. Early last year ground was broken for the installation of a complete Hydro-Blast System. The equipment was put into operation late in the summer and since then the cleaning room has been converted into a healthy place to work and no longer is classed as a dust hazard. Castings are now shaken-out and immediately placed in the Hydro-Blast Room where they are subjected to a combination of sand and water, fed through a special hose at a velocity of three miles per minute. Two operators, attired in rubber suits and helmets resembling deep sea divers, handle the cleaning within the room. This operation combines the function of prolonged arduous and dirty preliminary hand knock-out with the sand blasting operation which normally followed the knock-out. Another new improvement toward making the foundry hygienically safer is the recent installation of 25 large motor-driven ventilators whereby air is changed twice each minute throughout the entire foundry The Hydro-Blast, mentioned above, represents but one of many projects completed or contemplated at both our plants to facilitate and speed-up production and improve working conditions throughout the shops. -- The Cooper-Bessemer News, 3, No. 4 (1944)

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7 Research on Brucellosis in Latin America.
Two monographs recently published in Latin America, one by a Mexican author and the other by three physicians in Uruguay. These monographs supply information on the type of disease (brucellosis) found in each country. Treatment of the bacteriologic, immunologic and clinical angles of the disease, and data on the choice of the best laboratory methods and new personal technics are described. -- J.A.M.A., 126, 962 (December 9, 1944) (See also Abst. No. 28)

MWBB-0011362

UNITED STATES ARMY NOVEMBER 1992

Occupational Disease Statistics

8 Occupational Disease Statistics.

	Calif.[2] Oct. 1944	Ind.[2] Dec. 1944	Mich.[2] Dec. 1944	Ohio[1] Nov. 1944	Totals
Asthma				2	2
Benzol and Derivatives Poisoning				1	1
Carbon Monoxide Poisoning	1				1
Carbon Tetrachloride Poisoning	1			2	3
Chlorine Poisoning				1	1
Conjunctivitis	235				235
Dermatitis	415	33	56	424	928
Electric Opthalmia		4			4
Hernia			6		6
Inflammatory Conditions	123		2		125
Lead Absorption		4			4
Lead Poisoning	6	2		10	18
Metal Fume Fever	5				5
Miscellaneous			2		2
Pneumoconiosis (exclusive of silicosis)			12	209	209 12
Poisoning, N.O.C.	14			1	15
Pulmonary and Bronchial Affections	5				5
Silicosis			8	31	39
Silico Tuberculosis		1			1
Silico Tuberculosis (with torulosis)		1			1
Temperature and Pressure Extremes	5				5
Toluene and Derivatives Poisoning				1	1
Trichloroethylene Intoxication (acute)		2			2
Tuberculosis (due to contact)				1	1
Typhus Fever		1			1
Upper Respiratory Affections	1				1
Totals	811	48	86	683	1628

(1) Occupational Disease Claims filed with the Industrial Commission. The claims resulted in 52,880 man days lost, including 5 deaths from silicosis and one with cause not specified.

(2) Occupational Disease Cases filed with the Health Department.

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UNITED AIRLINES NOVEMBER 1992

Legal Developments

9 Policeman's Exposure to Cold as Aggravation of Buerger's Disease.
A part-time policeman who ordinarily walked his patrol of the streets or more frequently used his own automobile, borrowed and used a motorcycle to escort at the direction of the burgess, a funeral procession on a day when the temperature was 29 degrees. A cold numbness and whiteness which he noticed in his fingers while at the cemetery recurred frequently in cool weather and eventually led to amputation of two fingers, whereupon it was discovered that the policeman was a victim of Buerger's Disease, characterized by poor circulation of the extremities. Although aggravation of the Buerger's Disease, to such an extent, would be compensable if aggravated by accident, it was held that the temperature of 29 degrees and the wind velocity of 12 miles per hour did not constitute exposure to such extreme conditions as to constitute an accident, especially in view of medical testimony that exposure to slight cold was sufficient to aggravate the pre-existing disease. -- Rathmell v. Borough of Wesleyville. Pennsylvania Supreme Court, Western District. No. 137, March Term, 1944. November 27, 1944. (CCH)

10 Compensability of TNT Poisoning; Jury Question.
Although the insurer contended that the disability of an employee who suffered from the effects of TNT poisoning was not the result of accidental injury but of disease, occupational or otherwise, thereby not being compensable, the fact that there was evidence to show that during a period of about fifteen days the employee had been exposed to greater concentrations of TNT dust, fumes, gases, and chemicals than he usually was, along with some medical testimony as to the probable causal connection between the increased concentrations and the employee's ailments, was sufficient evidence to raise a jury question and it was error to direct a verdict against claimant. -- Lowrie v. American Surety Co. of New York. United States Circuit Court of Appeals, Fifth Circuit. No. 10,987. December 1, 1944. (CCH)

11 Causal Connection Between Heat Prostration and Employment.
An award of compensation to the dependents of a deceased employee was set aside and compensation denied where the award was based on a showing that the employee died as the result of a heart attack or from heat prostration, while engaged in working under and around the eaves of a building, nailing tar paper thereto, and where the sole evidence of heat, other than that produced by the natural rays of the sun, is that the reflected heat from the roof of the building may have affected the upper half of decedent's body. -- Williams v. State Compensation Commissioner. West Virginia Supreme Court. No. 9600. October 3, 1944. (CCH)

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12 Causal Relation Between Tuberculosis and Injury.
Although there was a previous finding of causal relation upon which a compensation award was made, such finding was not conclusive upon the Industrial Board as to a subsequent finding of lack of causal relation between an accident of December 8, 1939, and disability subsequent to January 17, 1941, due to tuberculosis where there was medical testimony to support the finding of lack of causal relation. The Industrial Board, under its continuing jurisdiction, could reverse or modify the previous finding. -- Abbate v. S. Ciliuffi and J. Bertollone. New York Supreme Court, Appellate Division, Third Judicial Department. No. 214-13. September 20, 1944. (CCH)

HWBB-0011364

UNITED STATES NOVEMBER 1992

Book Reviews and Notices

13 Industrial Toxicology, being the Croonian Lectures for 1942 of the Royal College of Physicians of London. D. Hunter. Oxford Eng., Clarendon Press. 80 pp. Price 10s (1944) Also published under the title "Industrial Toxicology" in Quart. J. Med., 12, 185-258 (Oct., 1943)
This book is a comprehensive account of the toxicology of a large number of industrial substances known to carry a health risk, including metals, aromatic hydrocarbons, chlorinated hydrocarbons and the glycol group.

14 State Enabling Legislation for Non-Profit Hospital and Medical Plans, 1944. O.W. Anderson. University of Michigan, School of Public Health, Public Health Economics, Research Series No. 1. 56 pp. (1944)
There are laws governing the organization and supervision of non-profit hospital service plans in 32 states and the District of Columbia, and laws dealing with non-profit medical service plans in 14 states. The laws are summarized and analyzed in this pamphlet, which first gives the elements of a representative act, then discusses control and supervision, benefits and services, and population and territory covered. Additional chapters deal briefly with subsequent amendments, legislation proposed and rejected, and developments and trends. Appendices comprise a model law and a summary of the status/existing legislation, classified by states.

15 Prepayment Medical Care Organizations. Margaret C. Klem. Federal Security Agency, Social Security Board, Bureau of Research and Statistics. Bureau Memorandum No. 55. 2nd Edition. 130 pp. (June, 1944)
This report presents a digest of prepayment medical service plans in 219 organizations in the United States and 11 in Canada. Almost half of the number are industrial plans. The remainder include plans of private group clinics, consumer-sponsored plans, medical society plans and governmental plans. Each plan description is headed by the name and address of the organization. The type of plan is indicated and the major characteristics of the plan are described. A statistical summary is included in this edition, which shows the number of persons eligible for care under these organizations in the United States, membership restrictions, the number of physicians and nurses associated with the organizations and the type of care for which members are eligible. There are two indices; in one the organizations are listed alphabetically; in the other by the type of sponsorship.

Dr Engel

16 The Art of Resuscitation. P.J. Flagg, Reinhold Publishing Corp., 330 W. 42nd St., New York. 453 pp. Price $5.00 (1944)
The author describes this book as an attempt, based upon more than 25 years of intimate experience with the unconscious patient, to tell the reader what to do when faced with an acutely asphyxiated patient about to die. "Nothing in the entire field of medicine calls for more understanding and intelligence, for greater calmness and speed combined with a restrained, precise, but strong technique." The book presents the subject in seven parts, comprising 31 chapters, three appendices, a bibliography and an index. Part one defines resuscitation and its background. Asphyxia is considered as a generic problem in part two. The remaining parts are: asphyxia as a specific problem; the field of asphyxia and resuscitation; the coordination of gas therapy; and miscellaneous. The author is Chairman of the Committee on Asphyxia, American Medical Association.

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and is associated with nine Greater New York Hospitals. Dr. Flagg is outspoken on the subject of transpharyngeal versus endotracheal insufflation. "If the principles pointed out by O'Dwyer and accepted by Meltzer are considered unworthy of attention or too difficult of application, then transpharyngeal insufflation leaves nothing to be desired. If on the other hand, those principles 'stand', transpharyngeal insufflation admittedly goes but part way. The dry, flaccid patient, so treated does not receive the full measure of modern medical service. In the author's opinion, the technique of blind, transpharyngeal insufflation, applied by a face mask, with pressures varying from 15 to 25 mm. of mercury, is both hazardous and unscientific. It is hazardous in lay hands. It is not efficient in the hands of the physician. It is to be pointed out, however, that the objections noted are professional rather than mechanical..... The general acceptance of endotracheal insufflation as the method of choice for resuscitation of the flaccid patient is inevitable." There are 176 illustrations throughout the text. The book is an outstanding contribution to medical literature.

Industrial Health Hazards and Their Effects

17 The Use of Vaccines for the Common Cold. Council on Pharmacy and Chemistry and Council on Industrial Health, Status Report., American Medical Association. J.A.M.A., 126, 895-897 (Dec. 2, 1944)
The Committee has made a critical review of the literature on administration of vaccines for prevention or amelioration of common colds, prepared from a variety of bacteria commonly found in the intestinal tract, and after pointing out that only carefully controlled studies have any value, concludes: "Decisive evidence of the value of any vaccine is not forthcoming, and the weight of careful studies clearly indicates that none of the vaccines now available when administered by the routes advised have proved value. Vaccines for colds cannot be recommended for routine administration to industrial groups or to individuals. At present any attempt to prevent colds by the use of vaccines must be recognized as purely experimental, and any proposal to administer such a vaccine, if given at all, should take this into consideration. As in all measures of a purely experimental nature, the uncontrolled use of any cold vaccine now available should be discouraged. Industrial physicians are under obligation to employ cold vaccines, if at all, only under the most rigidly controlled conditions and to report their results so that useless preparations can be promptly eliminated and further progress made."

18 Combating Health Hazards in the Chemical Industry. W.J. Burke. Chem. Inds., 55, 369-374 (Sept., 1944); 565-568 (Oct., 1944)
This paper is a brief treatise on the various health hazards in the chemical industry, accentuated as they are by wartime production, with especial reference to the author's observation in New York State. It includes: causes of present increase in hazards; classified costs of injury due to harmful substances; methods of entry of contaminants; types of atmospheric contaminants; evaluation of environmental contaminants, with a table of maximum allowable concentrations; and a list of unsafe practices. The second installment deals with preventive measures, including medical, engineering and safety control in their various phases.

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IN ITS AIR ARMS NOVEMBER 1992

19 Staphylococcus and Streptococcus Carriers: Sources of Food-Borne Outbreaks in War Industry. V.A. Getting, A.D. Rubenstein and G.E. Foley. Am. J. Pub. Health, 34, 833-840 (Aug., 1944)
Food-borne outbreaks in war plants may become an ever increasing cause of absenteeism among workers. Health officers, industrial physicians, and cafeteria managers working cooperatively may accomplish a great deal toward the prevention of food poisoning. It must be borne in mind that although staphylococci and streptococci are found everywhere in the environment, food handlers carrying such organisms in the nose and throat are almost invariably responsible for food-borne outbreaks. In thirteen out of eighteen outbreaks reviewed in this paper, apparently identical organisms were recovered from incriminated food and the nose and throat of food handlers. It is suggested that staphylococcal food-borne outbreaks are associated with a high enterotoxic-producing staphylococcus carrier rate among the incriminated food handlers. Three of the outbreaks were produced by alpha-streptococci, the responsible organism in each instance having been classified according to group precipitation tests (Lancefield). One outbreak had as its etiological agent beta-hemolytic streptococci (Group A--Griffith Type 2). -- Authors' summary.

20 Food Poisoning Caused by Hemolytic Staphylococcus in a Defense Plant. B.J. Slater and J.L. Norris. Am. J. Pub. Health, 34, 854-856 (Aug., 1944)
Eighty-one workers became ill, some violently so, after eating in the plant cafeteria. Great aid was rendered in dispatching the patients to various hospitals by the city Health Officer; also by the chief of the Emergency Medical Service of the Civilian Defense Organization. Preliminary treatment in the plant dispensary consisted in evacuation of the stomach as quickly as possible. The epidemic was attributed to contamination of corned beef by the infected finger of a food handler. Also, refrigeration was possibly not adequate. The authors advise daily inspection of food handlers, and organized Emergency Medical Services in sizeable communities. -- J.I.H.&T.

21 Accident Hazards and Accident Experience in the Refrigeration Industry. V. Appel, O.M. Nanfeldt and P. Reed. Trans. 32nd Nat. Safety Cong., 1, 582-584, 588-592 (1943)
This is a selection of three papers from a symposium on the subject. Appel refers to the low temperature to which employees are occasionally exposed down to -20°F, but states that there is little illness from cold exposure, because the men are aware of the danger. This situation has led to complacency, however, and now that new employees are more numerous, they are too often not fully instructed in the hazards of their occupation. Nanfeldt agrees on the last point, both as to cold and mechanical hazards, and advocates accident analysis, and proper selection and training of new men. Reed devotes more attention to refrigerants, although accidents due to refrigerant hazards are in the minority. Methyl chloride is usable in most installations, although more inflammable than Freon. Aluminum must not be used in a system where it will be in contact with methyl chloride, as the aluminum corrodes and a gas is produced which will ignite when the gas is exposed to oxygen in the air. Several accidents have been caused by this action.

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22 Morbidity and Mortality on Coal and Gold Mines for 1941. F.J. Allen. Proc. Transvaal Mine Med. Officers' Assoc., 23, 59-69 (Oct., 1943)
Both coal and gold mines are worked in South Africa by native labor recruited for short periods. Attention has been centered on health in gold mines, on account of the incidence of silicosis and tuberculosis. Now figures show that morbidity and mortality in total, and for individual diseases except tuberculosis, are higher in coal mines than in gold mines. The reasons are lack of hygiene, overtime and overcrowding in coal mines. Recommendations for improvement are offered. -- Condensed from Bull. Hyg.

RHB-0011367

UNRESTRICTED NOVEMBER 1992

23 March Fracture in Industry. J.H. Eddy, Jr. Ind. Med., 13, 1028-1030 (Dec., 1944)
The discovery of 3 cases of March fracture among women employees of a shell loading plant during a period of only 18 months brought this injury to the attention of industrial physicians. March fracture or fatigue fracture is a term applied to fracture of the metatarsals occurring without direct trauma. The fractures developed after work involving long hours of walking or standing on concrete floors. The treatment consisted of immobilization in a boot cast fitted with a walking iron. The cast was worn about 6 weeks during which time these employees were able to continue their work. All patients made complete recovery with no further disability.

24 A Case of Sulfuric Acid Burns. G.W. Cashell, H.B. Shay and D.Bodenham. Brit. J. Surg., 31, 373-377 (April, 1944)
Characteristic features of burns from concentrated sulfuric acid, with principles and methods of treatment are presented. The use of penicillin in lower strengths such as 200 units per cc. has been shown to be effective in controlling eye infection in burns of this type. The authors point out the advantage to the patient of the close cooperation of the Ophthalmic Department, the Dental Department and the Burns Unit. -- J.I.H.&T.

25 Epidemic Keratoconjunctivitis: A Report of a Case With Marked Systemic Manifestations. J.J. Curry and F.C. Lowell. New England J. Med., 231, 11-13 (July 6, 1944)
A case is presented that showed many of the signs and symptoms of epidemic keratoconjunctivitis. The outstanding feature was the presence of severe depression with only mild ocular disease. Serologic studies during convalescence showed the development of antibody against the virus of epidemic keratoconjunctivitis. -- Authors' summary.

26 Actinic Keratoconjunctivitis. R.G. Scoboe and E. Griffey. Am. J. Ophth., 27, 632-635 (June, 1944)
The authors review the symptomatology and pathology of keratoconjunctivitis produced by ultraviolet radiation, and recommend the use of a local anesthetic and adrenalin for treatment. No series of cases is reported with or without treatment to permit a proper evaluation of this form of therapy. -- J.I.H.&T.

27 Dermatophytosis in Industry. S.M. Peck, I. Botvinick and Louis Schwartz. Arch. Derm. Syphil., 50, 170 (Sept., 1944)
2,123 workers in 6 industrial plants were examined for dermatophytosis. On clinical grounds alone results were classified as 27.79 percent positive and 33.63 percent doubtful. Shower room flooring of concrete or pine wood is a possible but not likely source of fungous infections of the feet. Copper impregnated concrete flooring was found to be of no value in the prevention of the spread of such infections. Tricophytin tests were made on 776 workers. Of these 42.53 percent had positive reactions. The tricophytin test is more often positive in patients with clinically active dermatophytosis of the feet than in those showing no evidence of the disease. There is no indication that the presence of an allergy to fungi or their products bears any relationship to the acquisition of an allergic contact dermatitis. Dermatophytosis and its allergic manifestations are not important factors in lost time among industrial workers. -- Condensed from J.A.M.A.

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28 Brucellosis, an Unrecognized Menace. R.R. Staub. Northwest Med., 43, 274 (Oct., 1944)
Staub states that less than 10 percent of the patients with the chronic form of brucellosis have fever. Brucellosis is an important public health problem. Improved state and federal laws are necessary in the control, marketing and distribution of dairy products. Cooperation between the medical and veterinary

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NOVEMBER 1999
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professions is essential to the control of brucellosis and of other human infections contractible from animals. The medical profession must realize the unbelievable prevalence of brucellosis. The author thinks that 10 percent of the population have brucellosis but that only about 1 percent of infected persons are detected and treated. The sulfonamides are almost without value, although some believe that succinylsulfathiazole can benefit cases presenting early intestinal involvement. Penicillin shows only mild laboratory success. Fever therapy is more beneficial in acute than in chronic cases, especially in refractory cases not responding to vaccine therapy. Antiserum treatment is restricted to acute, severe attacks or exacerbations. Vaccine therapy seems most promising in the treatment of acute and chronic brucellosis. The author uses a vaccine made only from the abortus strain. He prefers deep muscular injections and avoids subcutaneous injections. Vitamin therapy is an important supportive measure, as is also iron and liver. Thiamine hydrochloride seems especially beneficial in stimulating the production of opsonins, as does likewise the intravenous injection of nicotinic acid. Pent-nucleotide and bone marrow are both used in cases of extreme leukopenia. -- J.A.M.A.

29 Work in Heat as Affected by Intake of Water, Salt and Glucose. G.C. Pitts, R.E. Johnson and F.C. Consolazio. Am. J. Physiol., 142, 253 (Sept., 1944)
Pitts and his collaborators investigated the effects of water, salt, glucose and water soluble vitamins on 6 healthy, fully acclimatized young men. The best performance of fully acclimatized young men on a good diet, performing intermittent hard work in the heat, was achieved by replacing hour by hour the water lost in sweat. Considerably less than this amount of water led in a few hours to a serious inefficiency and eventually to exhaustion. The replacement of salt hour by hour had no advantage. Replacement of salt loss meal by meal was adequate. Administration of glucose proved of little or no value when compared with the great benefit of large amounts of water. There was no advantage from administering 200 mg. of ascorbic acid, 20 mg. of thiamine hydrochloride, 20 mg. of riboflavin or large doses of brewers' yeast, either singly or together either during work or the day before. Water transport and supply are sometimes difficult, but when water is available it should not be forbidden on the traditional ground that during work it is bad for one. Men should be encouraged to drink to capacity. When a good daily diet is not available because of failure of supply or is not eaten because of ignorance or anorexia, which is so common in hot environments, it is desirable to ensure adequate intake at least of salt, by means of salted drinking water or tablets, and probably of vitamins by means of concentrates. -- J.A.M.A.

30 Experimental Study of Stimulants in the Prophylaxis of Heat Sickness. B. Schlegel and H. Boettner. Klin. Wochschr., 21, 533-538 (1942)
Of three stimulants studied, phosphate (recresol), cola and pervitin, the first was the only one that exerted a definite action in the prevention of heat injuries, especially heat exhaustion, as measured by the prolongation of the duration of the experiment, the milder rise in the pulse curve and the improvement in the subjective findings. The observed effect was too small for an effective prophylaxis and was, without doubt inferior to that of the adrenal cortical hormone studied earlier. -- C.A.

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31 Dietary Protein and Physical Fitness in Temperate and Hot Environments. G.C. Pitts, F.C. Consolazio and R.E. Johnson. J. Nutrition, 27, 497-508 (June 10, 1944)
Three healthy young men were studied during four successive periods of at least six weeks on different levels of protein intake under temperate and simulated tropical conditions. Observations were referred to the relationship between the diet and the nutritional state, physical fitness for work, and respiratory

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UNITED ARMIES NOVEMBER 1992

exchange. Urinary nitrogen excretion was highest during the high protein period. The plasma protein was highest during the high protein period, but the changes were slight. Weight changes were small, but the highest weights were attained during the high protein diet period. Physical fitness showed no changes attributable to dietary protein level. Metabolism data revealed no significant differences between the high and low protein periods. It is concluded that even though protein does have a high specific dynamic action, the theoretical objections raised against a high protein diet in hot environments are unjustified under the conditions of these observations. Protein intake may vary widely from 75 to 150 gm. daily without effect upon performance of intermittent work in the heat. -- J.I.H.&T.

32 Experimental Chronic Carbon Monoxide Poisoning of Dogs. F.H. Lewey and D.L. Drabkin. Am. J. Med. Sci., 208, 502 (Oct., 1944)
The U.S. Department of Labor sets the limit of safe concentration of carbon monoxide in air in industrial plants at 0.01 volume percent (100 p.p.m.) This figure leads theoretically in man to approximately 16 percent carbon monoxide hemoglobin. The relation is only approximate, for continued exposure to the same carbon monoxide concentration in air may, supposedly by adaptation, show a gradual decrease in the percentage of carbon monoxide hemoglobin. By agreement of the safety engineers of the U.S. Army the upper permissible limit is set at 20 percent carbon monoxide hemoglobin. Experiments with dogs show that chronic carbon monoxide intoxication may occur at concentrations which have been regarded as within the safety limits for man. Cardiac and cerebral changes are most severe in animals with inadequately functioning hearts. These experiments do not permit conclusions about potential human reactions to the same conditions.

33 Effect of Cardiazol and Veritol in Elimination of Carbon Monoxide. E.A. Mueller. Klin. Woch., 22, 572-573 (Sept. 4, 1943)
The author carried out an investigation in non-narcotized dogs to establish the effect of veritol, cardiazol and a combination of both (veriazol) in carbon monoxide poisoning. In a preliminary experiment on seven dogs the intratracheal intake of a known concentration of carbon monoxide in air in liters per minute, and the excretion of carbon monoxide in cc. per minute were measured over the periods of intoxication to the point of unconsciousness, and of recovery. Three dogs were then given intra-muscular injections of veritol (4 and 10 mgm.), cardiazol (50 and 100 mgm.) and veriazol (5 and 10 mgm. of veritol and 50 and 100 mgm. respectively of cardiazol), half a minute before the end point of the period of intoxication. With veritol only one dog showed a constant increase over the control value of carbon monoxide elimination. Cardiazol gave an increase of 9 percent with the 50 mgm. dosage and 20 percent with the 100 mgm. dosage in all three dogs during the first ten minutes of the recovery period. Combination with veritol did not improve the effect of cardiazol alone. Convulsions occurred only if 100 mgm. were given by intravenous injection or double this amount by the subcutaneous or intra-muscular route. Evidence for the superiority of cardiazol is considered inadequate, since only 3 dogs were used and in one, the percentage of carbon monoxide elimination was much higher with veritol than with cardiazol. -- Bull. Hyg.

03118448

34 Fluoride Domestic Waters and Systemic Effects. II. Fluorine Content of Urine in Relation to Fluorine in Drinking Water. F.J. McClure. Pub. Health Repts., 59, 1575-1591 (Dec. 8, 1944)
The fluorine content of urine specimens of a large number of men and boys has been studied in relation to fluorine in their domestic water supplies. Where domestic waters are free of fluorine, the fluorine present in urine averages 0.3 to 0.5 p.p.m. An increase of fluorine in urine was associated with the use of domestic waters containing as little as 0.5 p.p.m. fluorine. Fluorine in urine

AMB-0011370

UNDER AMES NOVEMBER 1999

specimens continues strikingly proportional to the fluorine content of the drinking water through the range of 0.5 to 5.1 p.p.m. fluorine in the domestic water. The results appear to furnish additional evidence of the importance of water-borne fluorine as a source of fluorine in human diets. The data agree with previous epidemiological studies which have demonstrated a striking relation between fluorine in communal water supplies and dental health, including reduced incidence of dental caries in 12- to 14-year-old children. The close correlation between fluorine in drinking water and fluorine content of urine suggests that the presumed hazard of cumulative toxic bone-fluorosis surrounding certain water-borne sources of fluorine in the United States is greatly reduced by this relationship. An efficient urinary elimination of fluorine appears to be characteristic of individuals residing in certain fluoride areas of the United States, where the drinking water contains 0.5 to 5.0 p.p.m. fluorine. The metabolism of fluorine under these conditions seems to be a normal function of the human body and seems characterized by a condition approaching metabolic equilibrium, at least in the adult organism. -- Author's summary.

35 The Modern Treatment of Cyanide Poisoning. K.K. Chen, C.L. Rose and G.H.A. Clowes. J. Indiana State Med. Assoc., 37, 344-350 (July, 1944)
Results obtained by several groups of investigators indicate that the combination of sodium nitrite and sodium thiosulfate is the best therapy against cyanide and hydrocyanic acid poisoning. As long as the heart is beating there is a fair chance of recovery. The technique is to inject intravenously the nitrite followed by the thiosulfate. There is not merely summation but an actual potentiation of the action when the two are used together. The writers give the procedure of treatment in detail. A total of fifteen cases have been treated by this procedure, and fourteen of these completely recovered. -- J.I.H.&T.

36 Hydrogen Sulfide Formation in Sewage Treatment of Plants. P.D. Halley and C.S. McKinley. Ind. Med., 13, 818 (Oct., 1944)
Hydrogen sulfide may be formed in appreciable amounts during the digestion of sewage sludge containing a large amount of combined sulfur. In planning the proper safety program for sewage plant operations hydrogen sulfide should be considered as a definite potential health hazard and not just as a nuisance as is so often the case. -- Authors' summary

37 Prophylaxis for Phosphorus Workers. R. Baron. Brit. Dental J., 76, 331-332 (June 16, 1944)
This article by the dental surgeon to a phosphorus works stresses the necessity of rejecting any prospective employee showing dental sepsis or inflammation. If any dental extractions have to be undertaken the patient should be kept away from phosphorus for a subsequent period of 4 to 6 weeks to allow complete closure of the socket. The pallid type of person seems to be more susceptible to jaw lesions than the robust, fresh complexion type, and cooperation between the dental surgeon and the works' medical officer is essential in order to ensure the exclusion for a time of workers whose health is for any reason temporarily impaired. Useful subsidiary measures are the free supply of toothbrushes and toothpaste; the provision of a hypochlorite mouth wash; the changing of working clothing, and ample provision for washing after work. Prophylactic gum treatment is recommended, and no patient who has ever had a jaw lesion caused by working with phosphorus should be allowed to return to that employment. -- Bull. Hyg.

03118449

38 Modern Phosphorus Caries and Necrosis. R. Kennon and J.W. Hallam. Brit. Dental J., 76, 321-330 (June 16, 1944)
The great part of the article consists of clinical histories of 8 workers who developed lesions in one of the jaws as a result of employment in a phosphorus

NWDB-08-1371

works. The earliest sign of the disease is caries, i.e., osteoporosis or decalcification and if necrosis and sequestration occur, the sequestra are quite small, whereas in bygone days they were much larger, the difference being due to better dental care. Radiographs of the jaws should be taken before a prospective employee commences work, and thereafter periodically, with careful comparison to determine slight bone changes. However, the diagnosis cannot be made with certainty, by x-rays even when the nature of the employment is known. The cases of caries without sequestration may be difficult to diagnose, but a dull red shot on the mucosa is rather characteristic. There is little pain, but one or more sinuses may develop unexpectedly. The disease may reveal itself even two years after the worker has left the phosphorus industry. Scraping is deprecated in cases of osteomyelitis of dental origin, but may be used in cases of phosphorus necrosis. -- Condensed from Bull. Hyg.

39 Beryllium Oxide from Beryl: Health Hazards Incident to Extraction. J. Shilen. A.E. Galloway and J.F. Mellor. Ind. Med., 13, 464-469 (June, 1944)
A study of the health hazards in a plant manufacturing alloys of beryllium was made. There was a total of 656 employees, of whom 529 were employed in production. Absenteeism was high and averaged about 6% while the labor turnover averaged close to 100% per annum. Fifty-one and two tenths percent, or 271, of the total number of employees engaged in production were exposed to fluorides; 6.6%, or 35, to oxides of nitrogen, and 2%, or 11, to pickling fumes. Thirty-seven atmospheric fluoride samples were collected and analyzed for fluorine, which, calculated as sodium fluoride, averaged 0.996 milligram per cubic meter of air. Four samples were taken for dust concentration determination. In the foundry the dust concentration averaged 4.52 million particles per cubic foot of air, and the general atmosphere during cleaning of the crucible furnaces averaged 3.18 million particles per cubic foot. The average dust particle size for six samples was very small, with all particles less than 1.17 microns and many less than 0.1 micron. Sixteen samples of nitrogen oxides were collected and analyzed, and, while the results were alarming at first, with improved ventilation the concentrations found came down well within the limit of 25 parts per million. Respiratory ailments and dermatitis are most frequently reported. -- Author's summary.

40 Lead Poisoning in 1943 and Earlier Years. F.L. Hoffman. Monthly Labor Rev., 59, 976-978 (Nov., 1944)
Cases of lead poisoning in the United States showed a steady decline from 1916 to 1942, in spite of the fact that the use of lead in lead-processing industries has increased considerably in recent years. True statistics are not available since official returns do not differentiate between occupational and nonoccupational fatalities from such poisoning. Statistics are given showing the number and rate of deaths from lead poisoning in registration states of the United States from 1901 to 1942. These show a decline from 132 in 1936 to 71 in 1942. Other tables indicate deaths in the last few years classified by states. In 1941 the largest number of such deaths was ten in Pennsylvania, in 1942, ten in New York. There is a surprisingly small number of deaths among workers in the lead-processing industries proving that in industrial hygiene as applied to lead-using industries, immense progress has been made, due to dust-prevention devices and to regular medical examination for workers.

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41 The Lead Content of the "Normal" Urine. L.A. Meston. Med. J. Australia, 1, 392-393 (April 29, 1944)
Many specimens of urine have been examined by the Government Chemical Laboratory, Queensland, and the lead content of the normal urine in Brisbane is less than 0.01 milligrams per liter. It should be remembered that whatever amount the lead excreted by the urine may be, much more is being stored in the tissue.

UNITED STATES NOVEMBER 1944

NWBS-0011372

UNDER AMES NOVEMBER 1999

Continuance of lead in the urine at a level of 0.05 milligrams per liter may mean the accumulation of an injurious amount in the tissues. Appreciable proportions of this poisonous metal in food products, and exposure to it in industry must be guarded against. -- J.I.H.&T.

Editor's Note: Mean urinary lead concentration for non-exposed North Americans is approximately 0.03 mg. per liter. Upper safe limit is considered to have a mean of 0.10 mg. per liter with occasional values as high as 0.15 to 0.20 mg. per liter.

42 The Radon/Carbon Dioxide Ratio as an Index to Excessive Radium Absorption. F.E. Hoecker. J. Ind. Hyg. & Tox., 26, 281-288 (Nov., 1944)
It has become accepted practice to base the evaluation of the quantity of radium in the body on measurements of the radon concentration of the expired breath. The paper is a preliminary report of some studies intended to clear a number of ambiguities in terminology, in methods and in interpretation of results. It is shown that the determination of the ratio of radon to carbon dioxide must be based upon breath samples taken over as long period of time as possible and with the least disturbance to respiration. The method recommended is the partial inflation of a 20 liter meteorological balloon by exhalation of occasional breaths during normal respiration.

43 Soldering Operations. Evaluation of Health Hazards in the Various Types of Soldering Operations, and Illustration of Practical Methods of Control. G.W. Daubenspeck, A. Trenson and A.M. Noyes. Illinois Department of Labor, Industrial Hygiene Unit, Technical Paper No. 5. Also published in Ind. Med., 13, 880-887 (Oct., 1944)
This material has been published in preliminary form in three papers in Illinois Labor Bulletin (See our Absts. No. 268 (Mar., 1944), No. 561 (May, 1944) and No. 841 (July, 1944)). In the final form, a number of illustrations add to the interest of the paper. The authors' summary is: "In all types of lead soldering, dangerous quantities of lead may be dispersed into the workroom air. The principal sources of air-borne lead are locations where powdery drosses are formed, and these require careful control. Of greatest significance are: gas muffle furnaces, surfaces and edges of solder pots and baths, flames playing on a solder surface, any location where solder may spill and be burned to a powdery oxide, and the irons themselves. High-lead solders multiply the hazard because of the more rapid oxidation of the lead at the higher working temperature. Good housekeeping is essential. Cleaning must be done only by vacuum methods. What would be considered good housekeeping at most operations may be poor or fair when applied to soldering operations." (See our Editor's Comment for Abst. No. 841 (July, 1944))

44 The Significance of Absorbed Radium as Indicated by the Coefficient of Elimination. F.E. Hoecker. J. Ind. Hyg. & Tox., 26, 289-295 (Nov., 1944)
It is pointed out that the term "fixed" as applied to radium in the body is somewhat ambiguous and the suggestion is made that it be defined in terms of the rate of elimination. Attention is called to the fact that the effects of internal radium depend on quantity and time. Since the quantity and period of retention, and therefore the actual danger depend upon the rate of elimination, it is suggested that the determination of the rate of elimination may furnish valuable data regarding the potential danger of internal radium. -- Author's summary.

45 Acute Nitroglycerine Poisoning. I.M. Rabinowitch. Quarterly Rev. Med., 1, 334-335 (May, 1944)
The symptoms of nitroglycerine poisoning are due to blood pressure reduction. These include, beginning with the most common, headache, throbbing, cardiac palpitation, visible carotid pulsations, nausea, vomiting, colicky abdominal pains

03118451

NWBB-001373

UNIV. MICH. ARCHIVES NOVEMBER 1992

and diarrhea. Death is from respiratory paralysis. It is of utmost importance that anyone with the slightest sign of nitroglycerine poisoning refrain from even the smallest amount of alcohol, which is capable of precipitating delirium or maniacal excitement. Cold packs may be used for severe headache. Bromides and coal tar derivatives should be avoided. Coffee is of aid and caffeine intravenously (two and one half grains) may be given. In prevention, it is important that a complete change of clothes be made at end of the day's work and the exposed parts thoroughly cleaned with soap and water. -- J.I.H.&T.

46 Carbon Tetrachloride Poisoning. G.P.B. Whitwell. Lancet, 246, 675 (1944)
A discussion of the symptoms of carbon tetrachloride poisoning observed in a factory where this material is used as a solvent and is breathed by the workers. The dangers of this and other solvents on the health and morale of the workers are stressed. -- Biol. Absts.

47 Carbon Tetrachloride Poisoning. Stewart and Witts. Brit. J. Ind. Med., 1, 11 (1944)
The authors studied a group of 78 factory workers who had been exposed for 2-1/2 years to sub-lethal concentrations of vapor in the air of the work rooms. Symptoms referable to the gastrointestinal tract and to the central nervous system were recurrent and particularly severe after exposure to heavy concentrations. Clinical and laboratory examinations were essentially negative. Chronic liver changes rarely follow carbon tetrachloride poisoning, for as shown by animal experiments large frequent exposures at short intervals are necessary. Carbon tetrachloride bears a chemical resemblance to chloroform, and ethyl chloride. It is possible that its effects upon the gastrointestinal tract and central nervous system are due to a narcotic action. -- J.I.H.&T.

48 Carbon Tetrachloride Poisoning. B.E. Konwaler and C.B. Noyes, Jr. Calif. and West. Med., 61, 16-20 (July, 1944)
Three cases, illustrating three grades of severity of intoxication, are presented. The necropsy findings of the fatal case are discussed. Evidence is presented for alcohol having a synergistic role in poisonings. The three cases here discussed are of men employed on the same job at the same time who for various reasons were exposed to the vapors for variable times. There is a close correlation between exposure time and severity in this study. Other factors thought to have a synergistic role are exertion, heat and a heavy meal. Alcohol is thought to have a profound effect on the susceptibility to exposure. The fatal case died in a uremic state and later was shown to have extensive damage in the kidney, liver, spleen and heart. -- J.I.H.&T.

49 Studies on the Toxicity of Commercial Benzene and of a Mixture of Benzene, Toluene and Xylene. V.H. Hough, F.D. Gunn and S. Freeman. J. Ind. Hyg. & Tox., 26, 296-305 (Nov., 1944)
The exposure of dogs to 1000 p.p.m. of commercial benzene vapors for 42 hours per week was found to produce a higher mortality and more marked leucopenia than a similar exposure to 1000 p.p.m. of a mixed solvent consisting of 60% commercial benzene, 30% toluene and 10% xylene. The effect and fate of benzene did not appear to be altered by admixture with toluene and xylene as judged by leucopenia, conjugated urine sulfates and blood phenols. The magnitude of the change from normal of these substances and cells is directly related to the benzene content of the solvent. Both the free and conjugated phenols in the blood and urine were significantly increased following an exposure to solvents containing benzene. -- Authors' summary.

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50 The Effect of Dietary Protein on the Susceptibility of Dogs to Benzene Poisoning. Tsan-Wen Li, V.H. Hough and S. Freeman. Fed. Proc., 3, 30 (March, 1944)
Fourteen dogs were exposed for 40 hours per week to the vapors of commercial benzene at a concentration of 600 p.p.m. by volume. Diets of known composition were fed in which the fat or protein content was varied. The criteria used to determine the susceptibility of the dogs were: survival time, degree of leucopenia percentage conjugation of urine sulphates, liver function, red blood cell and platelet counts. The results indicate that animals receiving the low protein diet are much more susceptible to benzene fumes than those on a high protein diet. No definite conclusion was drawn as to the effects of dietary fat on susceptibility to benzene. The changes observed in exposed animals on the low protein diet occurred with a rapidity and severity which control studies prove could not be attributed to the diet alone. Seven exposed animals on the low protein diet succumbed after an average exposure of 14 weeks. Two of the high protein animals died after exposures of 43 and 50 weeks; while two animals on this diet are still alive after exposures of 52 and 23 weeks. -- J.I.H.&T.

51 The Treatment of Trinitrotoluene Poisoning. K.R. Luthy. Ind. Med., 13, 601-603 (Aug., 1944)
The author advocates the icterus index as the most reliable test of TNT absorption, and reports on cases in which TNT poisoning was detected in early stages by its use. Only two patients had a rise in the icterus index after treatment was begun. It was not necessary to transfer any worker from his employment before, during, or after treatment, and all 44 patients returned to normal. In the majority of cases the liver metabolizes trinitrotoluene if heavily fortified with glycogen, and no glycosuria resulted from the heavy carbohydrate feeding. No employee with an increased icterus index should be allowed to work with TNT unless he is fortified with glycogen. Thorough bathing at the end of each shift with a TNT-indicating soap is recommended.

52 Toxicity of Trinitrotoluene. A. McCausland and R.F. Hawkins. Virginia Med. Monthly, 71, 242-248 (May, 1944)
In a well outlined article the following points about trinitrotoluene are given: (1) incidence of TNT poisoning in World War I, (2) the channels of absorption, the skin, the alimentary and respiratory tracts, (3) fate of TNT in the body, (4) pathology, (5) manifestations of anoxemia, (6) TNT facies, (7) gastrointestinal and skin manifestation, (8) TNT jaundice, (9) blood changes in TNT poisoning and (10) the treatment of TNT poisoning which is primarily protection of the liver by carbohydrate therapy and vitamin C. -- J.I.H.&T.

53 A Report of Four Cases of Aplastic Anemia Occurring Among Munition Workers. W.L. Hart, E.B. Ley, V.D. Scroggie, E.A. Johnson and J.H. Eddy. Ind. Med., 13, 896-899 (Nov., 1944)
Four cases of fatal aplastic anemia due to exposure to TNT are presented. The clinical courses of these cases are very similar. Each employee developing this condition was engaged in an operation where exposure was to TNT which had been remelted and was in the process of resolidifying. The most dependable laboratory finding indicative of toxic reaction, so far encountered, is the reduction in the hemoglobin and red blood count. -- Authors' summary.

54 Toxicity and Potential Dangers of Aerosols, Mists, and Dusting Powders Containing DDT. P.A. Neal, W.F. von Oettingen and others. Public Health Reports, Supplement No. 177. 32 pp. (1944) (Price 5 cents from Supt. of Documents, Washington 25, D.C.)
The work here reported was conducted as a separate phase of the investigation from that given in Our Absts. 1017-1019 (Sept., 1944). In spite of the inherent toxicity of DDT, its use in a 1 to 5% solution in 10% cyclohexanone, with 89 or 85% of Freon as aerosol, should offer no serious health hazards when used under

03118453

UNRESTRICTED NOVEMBER 1999

TWA-0011375

UNITED STATES ARMY November 1999

conditions such as those required for its use as an insecticide. It should be pointed out that the solution of DDT in fatty oils definitely increases its toxicity, and that the results obtained by using a solution of DDT in cyclohexanone are not necessarily comparable to the effects produced by a solution in oil. The use of DDT in concentrations up to 10% in inert powders, for dusting clothes, as in the extermination of lice, appears to offer no serious hazards because of the relative insolubility of DDT and the large particle size of the dust. Therefore it does not reach the alveolar spaces. A large proportion of the dust is retained in the uppermost sections of the respiratory tract. The remainder is swallowed. On account of its relative insolubility it is thought that only a small fraction is absorbed. Because the use of a 1% DDT-deobase mixture was found to be non-toxic to rabbits with heavy exposure for 48 minutes daily, over a period of 4 weeks, it is believed that its use as a fly spray, which involves only temporary and comparatively moderate exposure to much lower concentrations, should be safe. However, due to the fat-solvent properties of most petroleum distillates, irritation of the skin may occur following heavy exposure. Although this study deals only with the appraisal of the potential dangers of DDT when inhaled as aerosol, dust, and mist, it should be pointed out that ingestion of massive doses of DDT will cause a toxic reaction. It should therefore, be used only under conditions which exclude the heavy contamination of food. Since these experiments were concluded a thorough clinical and laboratory study has been made of three men who have each had several months' continuous occupational exposure to DDT used in various forms as an insecticidal agent. An evaluation of the results of these examinations fails to indicate any definite evidence of toxic effects from the exposure the 3 subjects have had to DDT. -- Authors' summary.

56 D.D.T. T.F. West and G.A. Campbell. Ind. Chemist, 20, 461-465 (Sept., 1944)
The article deals briefly with chemical properties, insecticidal properties, effect on farm animals (including bees) and vegetable products and toxicology to human beings. In the concentrations in regular use there is very little toxic action likely to be experienced by men. The powder and aqueous spray form are not absorbed by the skin and do not set up skin irritation, even when abrasions are present. Toxic symptoms may follow long exposure of large skin areas.

57 Exposure to Lucite. Queries and Minor Notes, J.A.M.A., 125, 320 (May 27, 1944)
Information was asked concerning the effect of lucite dust upon the general health and particularly upon the lungs of a worker exposed to large quantities of lucite dust in the air. Animal experiments have failed to show any injury to the lungs or definite pathologic effect. Clinical observations on workers manufacturing lucite have not revealed any harmful effects from this exposure. -- J.I.H.&T.

58 New Sanitary Standards for Industrial Enterprises. A. Metsatunyan. Hyg. and Sanit. (Moscow) 10, 23-26 (1943) Russian.
The new sanitary standards have been devised in accordance with the requirements of war conditions but are based on experience. In general the requirements for sanitation and permissible concentrations of gases have been made somewhat less rigid. The permissible concentrations for a few of the gases, given here for comparison with American Standards, are: carbon monoxide 0.04, formerly 0.02 mg. per l.; methyl alcohol 0.07, formerly 0.03 mg. per l.; ethyl alcohol 1.5, formerly 1.0 mg. per l.; amyl and other alcohols 0.5 instead of 1.0 mg. per l.

59 Occupational Illnesses in the Cotton Industries - Cotton Fever. W.L. Ritter and M.A. Nussbaum. Ind. Med., 13, 966-970 (Nov., 1944)
Cotton fever is an occupational disease common to almost every new employee working with untreated cotton in an enclosed space. The severity of the symptoms depends upon the quality of the cotton and the concentration of the dust from it. Immunity is usually developed by a worker for a given working environment.

03118454

WBB-0011376

IN THE ARMS November 1992

Subsequent attacks may occur (a) on protracted absence from a given job, or (b) on being shifted to dustier work, or (c) on being exposed to much lower grades of cotton. -- Authors' conclusions.

60 Wood Dusts. Queries and Minor Notes, J.A.M.A., 126, 800 (Nov. 18, 1944)
In reply to an inquiry as to the results of inhaling fine wood dusts, the writer expresses doubt that wood dust in significant quantities can be inhaled into the lungs because of the great size of the particles and because being easily wetted, they are retained in the nose and throat. However, some persons may become sensitized and their reaction to certain kinds of wood dust may be shown by irritation of the skin and upper respiratory tract.

61 Silicosis in Monmouthshire. G.R. Jones. Report of the County Pathologist, Monmouthshire, England. 20 pp. (Oct. 1, 1943)
The author has made 131 autopsies on miners suspected of having died of silicosis. He defines 4 degrees of silicosis, from the Minimal, in which silicosis is detected only on microscopical examination to the Advanced, in which more than 4 nodules, each the size of a shilling and one or more silicotic masses about 2 inches in all diameters are present, or the "lungs are entirely solid with silicosis." Tuberculosis, emphysema, bronchiectasis and pneumonia were the commonest complications. The incidence of cancer was not commoner than the general cancer death rate. As a general rule a man could continue work for about two years after the appearance of symptoms of silicosis. Death followed in 2-7 years depending upon complications that were superadded. A discussion of the medical and administrative aspects of treatment emphasizes the following points: (1) There is a wider issue than that of silicosis, which might be termed the treatment of industrial ill health; (2) Several government and other organizations which are named are concerned in this comprehensive outlook; (3) A combination of these agencies might evolve a plan to cope successfully with the whole problem; and (4) In addition to diagnostic clinics and hospital accommodation, domiciliary supervision and rehabilitation and reemployment schemes are needed. -- J.I.H.&T.

62 Minority Opinion on Silicosis. O.R. Troje. J. Alabama State Med. Assoc., 13, 313 (Apr., 1944)
According to the author, simple silicosis gives no symptoms, and diagnosis depends on the x-ray findings and occupational history. The x-ray evidence and clinical evidence are not in agreement. The author holds that contrary to established belief, the changes in the lungs of silicotics are not due to fibrous connective tissue. The so-called fibrosis is really due to scattered deposits of collagen which are laid down in various patterns. The collagen deposits are a defense mechanism and the late symptoms of dyspnea are due more to capillary occlusion and intervascular changes as the result of collagen encroachment, than to loss of alveolar air capacity. -- J.I.H.&T.

63 Foundry Work Does Not Affect Eyes. Queries and Minor Notes, J.A.M.A., 126, 800 (Nov. 18, 1944)
It has been determined that no pathologic effect on the eyes can be attributed to heat from "pouring hot iron or any hot metal in a foundry" even over a period of years. Exposure in foundry work is not continuous and the amounts of infra-red and ultra-violet light were found from actual measurements to be infinitesimal. Cases of glass blower's cataract have been reported in Europe, but they have implied constant exposure through long hours daily over a matter of 18 to 20 years. No comparable industrial operation is found in this country.

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64 Disagreement on Silicosis Due to Wheat Dust. R.C. McKay. J.A.M.A., 126, 853 (Nov. 25, 1944)
A case of silicosis attributed to wheat dust was the subject of a paper published April 1st in J.A.M.A. (See our Abst. No. 595, May, 1944). A claim for compensation has been presented to the Ohio Industrial Commission on behalf of the patient

HWB-001377

whose condition is described. Dr. McKay, a member of the Board of Silicosis Referees, severely criticizes the article mentioned on the following grounds: (1) the occupational history is incomplete and does not exclude the possibility of previous exposure to silica; (2) the roentgenological evidence is not sufficient to warrant a diagnosis of silicosis; (3) the authors give no dust counts and no statement of how much was below 10 microns; (4) they do not state whether the dust came from the atmosphere or from the floors; (5) percentage silica is given by chemical analysis, not free silica by petrographic or x-ray diffraction methods; (6) the authors report diminished vital capacity and increased emphysema on the second examination two years after the first, but give no vital capacity measurements and do not mention any of the clinical data on which their diagnosis of emphysema is based; and (7) the authors state that a comparison of the two x-ray films showed that "the heart shadow contour had changed as a result of the changed lung condition," but do not describe the nature of the change nor is one shown by the reproductions of the x-ray films. The only possible type of heart disease arising from advanced silicosis or emphysema is "cor pulmonale," which can be diagnosed only with the help of an electrocardiogram, which was not reported in this case. Dr. McKay concludes that the authors have submitted no proof that their patient either had silicosis or had been exposed to silicon dioxide present in wheat dust.

65 Several Physiological Functions During Rest and Exercise in Normal Subjects, Patients with Pulmonary Silicosis, and Patients with Pulmonary Siderosis. N. Enzer and E. Simonson. Fed. Proc., 3, 9 (March, 1944)

From 8 to 100 normal subjects were investigated for different functions. Fifteen patients with siderosis and 8 patients with silicosis were subjects in similar investigations. No statistically significant difference between the normal group and the siderosis group was found in any function, while the silicosis group showed significant depression of vital capacity, maximum pulmonary ventilation, relative pulmonary reserve, endurance in dynamic and static work. A far greater percentage of patients with silicosis than of patients with siderosis showed an individually significant depression of functions compared to the normal limits. -- Authors' summary.

66 Effects of South Wales Anthracite Coal and of Precipitated Amorphous Silica Upon the Lungs of Mice. J. Argyll Campbell. Brit. J. Exper. Path., 25, 46-55 (Apr., 1944)

(1) Anthracite coal dust does not increase the incidence of lung tumors in mice. The statistically significant increases observed in some of the present experiments were due to other substances present -- silica, aluminum and alumina. A heavy dusting of the lungs with bituminous dust produces some increase in lung tumor incidence, but only of border-line significance. A moderate amount of alcohol does not affect the incidence of lung tumors. (2) As in man, anthracite dust in itself produces an increase of the fibrous (reticular) tissue strands of the lung tissue of mice, and is more active in this respect than bituminous coal. Neither anthracite nor bituminous coal in heavy deposit increases the fibrous tissue of the mouse's tracheobronchial lymph-nodes. The nodular type of fibrosis seen often in the human lung with anthracite coal is not seen in mice. Perhaps the time -- duration of mouse's life -- is too short. (3) Silica does not increase the fibrous (reticular) tissue strands of the lung of mice to the same extent as anthracite coal, but it produces marked fibrotic nodules in the tracheobronchial lymph-nodes. Its effects differing from those of anthracite coal make it doubtful whether the increase of fibrous tissue in the mouse's lung produced by anthracite is due to its silica content. It might be due to silicate. Alumina and aluminum do not influence the effects of anthracite coal upon the fibrous tissue of the lung. (4) Neither alcohol in the drinking water in moderate amount nor inhalation of cigarette smoke have any effect upon the action of anthracite coal on the fibrous tissue of the mouse's lung. (5) Metallic aluminum and alumina

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UNITED ALBRAMS NOV 1992

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UNDER ABRAMS November 1992

do not inhibit the development of fibrotic nodules in the tracheobronchial lymph nodes of mice. The tissue of these nodes, therefore, reacts differently from the lung tissue of rabbits. -- Author's summary.

67 Contribution to the Diagnosis of Pulmonary Silicosis by the Investigation of Silica in the Blood and Sputum. H. Oyanguren and E. Bartholin. Rev. med. de Chile, 71, 464 (May, 1943)
The diagnosis of silicosis has been confirmed by demonstration of silica in the sputum and blood of 40 individuals. Silica which is conveyed to the lungs by inhalation is taken up in greater part by the lymphatics and the remainder is expectorated. Silica interferes with the lymphatic circulation, producing a fibrous proliferation which eventually results in the inclusion of the particles themselves. But before this occurs the silica which is inhaled passes through the blood and may be excreted in the urine. Silica may normally be found in the blood but if the quantity is less than 8 mg. percent as determined by the colorimetric method, it is believed to be of no clinical significance. Quantities from 12 to 20 mg. percent are expressed as 1 plus, from 20 to 50 mg. percent 2 plus, and above 50 mg. percent 3 plus. Positive chemical reactions for silica in the sputum may be obtained in all cases of silicosis. The positive reactions in the blood correspond to the amounts of silica contained in the sputum and positive chemical reactions are found only in those individuals who have been exposed to silica-bearing dust. The specific chemical reaction used is that described by Oberhauser and depends on the reaction obtained with nitromolybdenate of ammonia. This may be used equally on the blood and sputum and is a more certain test than the spectrographic methods. -- Am. Rev. Tuberc.

68 The Asbestos Corn. H.S. Alden and W.M. Howell. Arch. Dermat. and Syph., 49, 312 (May, 1944)
The author describes corns or warts peculiar to asbestos workers, first noticed by Derwitz in 1930. They have no relation to asbestos of the lungs. One characteristic is that they appear and feel as if a foreign body were present, none is ever found. It is probable, however, that one is present in the very early stages.

69 Asbestosis and Pulmonary Carcinoma. H.W. Wedler. Deut. med. Wochschr., 69, 575-576 (Aug. 6, 1943) German.
The author has collected the published autopsy records on asbestosis from various countries and finds that there have been 14 instances of malignant disease of the lungs and pleura in 92 post-mortem examinations (16 percent). This is in excess of the proportion of lung carcinomata in autopsies generally (2-6 percent). Carcinoma as a complication of asbestosis occurred most frequently in males between 35 and 41 and was generally in the part of the lung most affected with asbestosis. Development of the lesion was slow but corresponded with the length and intensity of the exposure (12-42 years). There was often a long interval between the cessation of exposure and the development of the cancer, which, in the author's view, must now be regarded as an occupational cancer. -- Bull. Hyg.

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Skin Diseases and Burns

70 A New Protective Cream. J.G. Downing, L.M. Ohmart and M.J. Stoklosa. Arch. Dermat. and Syph., 49, 436 (June, 1944)
In industries where workers are exposed, to dermatologic irritants, and where it is impracticable to wear gloves, protective creams help to minimize cutaneous irritations. Many protective creams are on the market under trade names, and should

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UNITED STATES ARMY NOVEMBER 1992

be used with caution, as they occasionally produce a dermatitis in a susceptible person; and many fail to meet the requirements of low cost, easy application and removal. The authors have prepared a formula which is given in the article, and which has been tested under actual conditions as producing a preparation which most nearly fulfills the requirement of a good protective cream. -- J.I.H.&T.

71 The Pre-Placement Skin Patch Test; Present Status in Industry. H. Keil. Ind. Med., 13, 860-868 (Oct., 1944)
The primary value of the patch test is in determining past or present sensitiveness to a chemical. The use of patch tests as a part of preplacement examination procedure is not regarded with favor by American dermatologists. The chief objections are: (1) the test may be positive and the patient may sue the physician for the blemish or the company if employment is refused; (2) the application of a patch test may sensitize the patient to the substance used; and (3) the patch test may be positive, yet the patient may be able to do his work involving the allergen. The author believes that neither of the first two objections is valid, provided that the tests are properly carried out. The objections have arisen from using too high concentrations and the use of scarifying procedures. The third objection is true within limits, and emphasizes the necessity of quantitative tests rather than reliance upon plus and minus tests. The special circumstances under which the preplacement patch test or its equivalent may be used to advantage in industry are: (1) to eliminate instances of latent hypersensitiveness; (2) to apply the principle of group reactions in determining which industry the worker should avoid; and (3) to determine whether a substitute should be used in place of the allergen which caused the contact dermatitis. The circumstances under which the preplacement patch test may not be valid are the following: (1) in industries where the worker is handling substances of high allergenic potency; (2) in determining degrees of primary irritation; (3) in determining the possibility of future hypersensitiveness to a substance; (4) when the material is complex, unless the observer has a good idea of the nature of the ingredients; (5) when industrial processes become fully mechanized, the value of the patch will probably diminish. Each of these points is fully discussed, with citation of cases. In any patch testing, the cardinal rule must be that those who perform these tests should be fully familiar with the proper concentrations to be applied. Many problems remain unsolved and await studies on quantitative aspects of patch testing, and meanwhile the pre-placement test should not be dismissed summarily as without value, unless all the surrounding circumstances are known. A discussion by dermatological experts follows the paper.

72 Textile Dermatitis. J.H.T. Davies and A.N. Barker. Brit. J. Dermat. and Syph., 56, 33 (Feb., 1944)
Of 670 admissions to the skin wards of a large military hospital, 110 concerned dermatoses proved by patch tests and the observed effects of resuming khaki clothing, to be wholly or partly due to intolerance by the skin of contact with woolen textiles. The cutaneous manifestations are varied and are all believed by the authors to be mainly referable to intolerance of the skin to wool. Treatment consists primarily in removal of the irritant. Simple remedies, such as calamine liniment or lotion are effective. Some cases of long standing must be regarded as incurable. Avoidance of heavy physical exertion is an aid to recovery, in some cases. -- J.A.M.A.

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73 Dermatitis from Lemon Grass Oil (Cymbopogon Citratus or Andropogon Citratus.) H.V. Mendelsohn. Arch. Dermat. and Syph., 50, 34-35 (July, 1944)
Eight men were treated for an acute dermatitis presumably due to lemon grass oil (Cymbopogon citratus or Andropogon citratus). The eruption resembled poison ivy dermatitis and appeared six to eighteen days after the men had worked on a boat which had arrived from India with a cargo of lemon grass oil. A piece of pine

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UNRESTRICTED NOVEMBER 1992

wood soiled with lemon grass oil elicited a strongly positive reaction in 4 patients tested. Lemon grass oil evidently has many uses, including its use in the manufacture of perfume, as an adulterant for lemon oil, in the manufacture of ionone and possibly others. -- Author's summary.

74 We're Learning More About Dermatitis. W.U. Rutledge. Nat. Safety News, 50, 23, 86-92 (Nov., 1944)
The subject of dermatitis is covered generally and rather briefly, especially the more important steps in prevention, including selection of proper personnel, education of individuals in care, cleanliness, diet, etc., selection of proper cleansing agents, avoiding indiscriminate use of volatile solvents and exhaust ventilation. Care and experience in patch testing is emphasized. A list of materials which in the author's experience have caused dermatitis is included.

75 Toxic Effects of Arsenical Compounds - As Administered in the United States Navy in 1943, with Special Reference to Arsenical Dermatitis. T.J. Carter, W.M. Chambers and Laura T. Anderson. U.S. Naval Med. Bull., 43, 787-799 (Oct., 1944)
In 1943, medical officers of the Navy administered a total of 245,331 doses of arsenicals and reported the occurrence of 48 untoward reactions. Of these toxic reactions there were 26 cases of arsenical dermatitis, a ratio of one to every 9,436 doses. Of interest in connection with a review of the causes of arsenical dermatitis are the instances in which premonitary signs are noted. They tend to indicate the necessity for careful examination and questioning of each patient before administering an arsenical. -- Authors' comment.

76 The Relation of Chemical Structure in Catechol Compounds and Derivatives to Poison Ivy Hypersensitiveness in Man as Shown by the Patch Test. H. Keil, D. Wasserman and C.R. Dawson. J. Exptl. Med., 80, 275-287 (Oct., 1944)
Additional evidence is presented in support of the view which postulates a close chemical and biologic relation between the active ingredients in poison ivy and Japan lac. Biologic evidence, based on the use of the patch test in man, is presented in support of the view that the active ingredient in poison ivy is a catechol derivative with a long, unsaturated side-chain in the 3-position. -- From author's summary. The paper also includes numerous experiments on the relation of chemical constitution of catechol derivatives to their effect on persons sensitive to poison ivy.

77 Prevention and Control of Cutting Oil Dermatitis. E. Collier. Brit. J. Ind. Med., 1, 110-113 (Apr., 1944)
This is a general paper on cutting oil dermatitis, with particular reference to experience at a certain engineering factory. At that factory (as at most others) the commonest dermatitis was oil acne caused by lard oil or a mixture of lard oil and paraffin oil. The chief cause is mechanical blocking of the sebaceous glands and hair follicles. The commonest sites are on the forearms anterior aspects of thighs and legs, and anterior elbow. Workers should be selected with skin that is thick, not too dry or too greasy; fair-haired and pale or red-skinned persons should be avoided. Formulas for a dermis wash and an alkaline wash are given. Clean clothing, special protective clothing and frequent analysis and change of the oil are recommended. -- Condensed from Bull. Hyg.

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78 Dermatitis Bullosum of Acne Area, Following Adhesive Tape Contact on Left Arm and Thorax, Possibly Due to Tricresyl Phosphate. L.E. Gaul and D. Henneger. Ind. Med., 13, 1014-1018 (Dec., 1944)
The patient had a fractured humerus which was corrected by an aerial splint, secured in position by adhesive tape applied to the left arm and thorax. After 2 weeks of contact the acne areas of the body developed a profuse seborrhea followed by vesicles which later became bullae. The patient showed loss of weight,

MWDB-0011381

great weariness, mental apathy and emanated a strong phenolic odor. Although the skin contacted by the adhesive tape showed no visible reaction, it was suggested that the cause of the dermatitis was the tricresyl phosphate used as a plasticizer on the tape. After recovery the patient was given patch tests of adhesive tape. From the evidence, while not conclusive, it was believed that the tricresyl phosphate or its decomposition product, cresol, was related etiologically to the dermatitis. Apparently it can penetrate a normal epidermis without causing any reaction and after absorption exert a specialized reaction in that portion of the cutaneum richly endowed with ectodermal glands. It was suggested that a drug having such properties might prove of great value in the field of seborrhea and acne vulgaris.

79 Medical Entomology in Industrial Medicine in the United States. S.F. Meek and C.P. McCord. Ind. Med., 13, 1003-1010 (Dec., 1944)
Sporadic cases of dermatitis among industrial workers may be traced to the bites, stings or other external action of various animal parasites, including lice, mites, fleas, bugs, gnats, mosquitoes, midges, flies, caterpillars, bees, schistosomes, etc. Ordinarily, such affections as to origin are unrelated to work. A few forms of employment directly provide exposure to some of these ectoparasites. Epidemics large and small, may arise on industrial premises that may be traced to ectozoa on a fortuitous basis. Four such epidemics are here reported. The responsible parasite was the grain mite in one episode, poultry mite in one episode, and the rat mite in two episodes. -- Authors' summary.

80 Prevention of Industrial Dermatitis. N.H. Mummery. Brit. Med. J., 1, 660 (1944)
Oil acne and paraffin dermatitis were drastically reduced by a "hand cleaner" and the use of metal guards around the machines. The hand cleaner was composed of neutral sulphonated castor oil with a wetting agent added. -- Biol. Absts.

81 Dermatitis from Smoke and Fumes. Queries and Minor Notes, J.A.M.A., 126, 1122 (Dec. 23, 1944)
A case of dermatitis was reported which was caused by contact with smoke, fumes or any product of combustion of kerosene, coal or wood. Information in treating the patient was desired. Search of literature failed to reveal any definite cases of this nature. Avoidance of fumes seems to be the only important method of treatment.

82 A Note on Occupational Dermatitis in the Jute Industry. M.N. Rao. Indian Med. Gazette, 78, 54-57 (Jan., 1943)
In Bengal, dermatitis has been observed to occur in various processes in the jute industry. Patch tests have shown that a mixture of mineral oil and soap which is used to soften the raw jute is the cause of the condition. It occurs less often in warmer seasons, which is probably due to the fact that the oil is more volatile in warm weather and does not adhere so much to the skin. The dermatitis appears on parts liable to be in contact with the treated juice. The condition is attributed to mechanical blocking of the orifices of the sebaceous glands by plugs of the unexfoliated stratum corneum. -- Condensed from Bull. Hyg.

83 Occupational Dermatitis - In the Food Industry. Louis Schwartz. Ind. Med., 13, 899-900 (Nov., 1944)
The discussion concerns workers, who develop contact dermatitis from handling food rather than persons who are allergic to eating certain food. Occupational dermatitis has been reported as occurring in almost every one of the food industries including meat, fish, pastry, candy, fruit and vegetables. Forms of dermatitis occurring in each of these industries and the causes of the disturbances are discussed. Methods for prevention include personal and environmental cleanliness, wearing of rubber gloves and impervious sleeves and aprons. Protective clothing should be furnished clean daily to all food handlers.

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IN RE: ABRAMS November 1992

RWBB-0011382

84 Dermatitis Cases Reported Among Employed Males and Females in Seven States. H.P. Brinton. Ind. Med., 13, 514-522 (June, 1944)
In a study of 32,512 cases of dermatitis reported to the United States Public Health Service, by seven states from July, 1938, through October, 1943, the percentage of cases which were among females was found to vary according to material hazard and industry. In general the female rate was found to be the same as the male rate except in certain types of industry, such as food products, iron and steel, transportation equipment and others, where the female rate was higher. Conclusions as to sex differences in susceptibility to dermatitis cannot be drawn unless working conditions are the same and the number of persons exposed to each hazard is accurately known. -- J.I.H.&T.

85 Value of Patch Test in Poison Ivy Dermatitis, with Consideration of Group Reactions Between Rhus Extract and Turpentine, Ragweed Oil and 3-Geranyl Catechol. H. Keil. J. Allergy, 15, 259-270 (July, 1944)
Study of a number of cases of poison ivy dermatitis and dermatitis venenata support the generally accepted opinions that a positive patch test with a potent rhus extract does not prove the presence of dermatitis due to poison ivy but simply indicates sensitization to the plant. A negative patch test eliminates past and present hypersensitization to Rhus toxicodendron; on this point rests the chief value of the test. The quantitative patch test is an important method of checking the value of treatment. No group relation was found between the active ingredient in poison ivy and those in pyrethrum and ragweed. Group reactions may be encountered with old turpentine. The work of other authors on guinea pigs is confirmed in man that 3-geranyl catechol is biologically related to the active principle in poison ivy.

86 Dermatitis of Wartime Industries in General Practice. H.R. Foerster. J. Michigan State Med. Soc., 43, 307-315 (April, 1944)
General causes of industrial dermatitis are discussed and procedure to be followed in making patch tests is given. Measures for the prevention and control of industrial dermatitis are presented. -- Condensed from J.I.H.&T.

87 Dermatitis Caused by Anthracene Oils. A. Feil. Presse Med., 51, 856 (Nov. 27, 1943)
Extracts of coal tar, used as substitutes for lubricating oils, contain anthracene, phenols and acridine, which are skin irritants. Anthracene dermatitis is really sunburn on areas sensitized by contact with the oils. These oils are also very irritating to the conjunctiva and respiratory mucous membrane but do not cause serious results. As preventive measures, factory owners should sterilize the oils and remove the irritants from them; they should clean the tanks and disinfect them weekly with cresyl. The workrooms should be well ventilated and washing facilities should be provided. The oils should not be used for work in the open with exposure to sunlight. The workers should wear rubber gloves and impermeable overalls and use protective ointments. Local treatment of the dermatitis is carried out on the usual lines with sedative preparations as for eczema. Periodic inspection of workers is required and work must be discontinued where the dermatitis recurs or is persistent. -- Bull. Hyg.

88 Outline of Recent Developments in the Recognition and Prevention of Allergic Contact Dermatitis in Industry. D. Harley. Brit. J. Physical Med. and Ind. Hyg., 6, 165-171 (Nov.-Dec., 1943)
Among the subjects discussed are: importance of a knowledge of sensitization dermatitis and of sensitizing or allergenic substances, importance of investigations to include a man's hobbies; patch testing and the prevention of dermatitis; education of the workers in measures for personal protection; skin cleansers and protective ointments. The final paragraph deals with contraindications in the selection of staff. -- J.I.H.&T.

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UNRESTRICTED ARMY NOVEMBER 1999

HWBR-0011383

89 Occupational Diseases of the Skin in Maine. Leon Babalian. Maine Med. Assn. J. 35, 41-46, 59 (March, 1944)
This article presents a comprehensive review of the subject of occupational dermatitis, with special reference to the cases and conditions observed in Maine since the industrial expanse of the war. The diagnosis of these lesions is established through the history, characteristics and patch tests; the history is the most important element. The characteristic lecions of certain occupations are given. The author includes a discussion of patch tests and the various measures to be observed in personal and collective protection from irritants. Special attention is called to the tendency toward over-treatment of the dermatitis; and plain talcum powder, calamine lotion and carron oil are recommended as the best therapeutic agents. -- J.I.H.&T.

90 Treatment of Phosphorus Burns. W. Straub. Muench. med. Wochschr., 90, 748-749 (1943) German.
Phosphorus burns are thoroughly washed and large particles of phosphorus removed in a dark room. The affected areas are then washed for 5 minutes with a 2% solution of copper sulfate. A soothing ointment may then be applied. The copper sulfate may be applied in a paste (2%) or in an oil and water emulsion. -- C.A.

91 Phosphorus Poisoning and Phosphorus Burns. W. Straub. Muench. med. Wochschr., 90, 507-510 (1943) German.
The use of 2% copper sulfate solution in treatment of phosphorus burns is described. Straub believes phosphorus particles to be covered with a layer of metallic copper, thus preventing phosphorus absorption.

Ibid. 629-630. Guinea pigs routinely succumb to the insertion of 0.2 g. yellow phosphorus under the skin. If the phosphorus is first dipped in 2% copper sulfate solution the phosphorus is covered with a film of copper-phosphorus or metallic copper, which is not permeable to elemental phosphorus, and the animals are not poisoned. After several weeks, however, the depot of phosphorus disappears even when covered by copper. The author believes this to be due to penetration of copper film by water, formation of phosphorus pentoxide, and later of phosphoric acid, with subsequent dilution and excretion of the latter. -- C.A.

92 Phosphorus Burns and Their Treatment. A. Wagner. Muench. med. Wochschr., 91, 46 (1944) German.
Author treated 100 cases of severe phosphorus burns with 2-5% copper sulfate and obtained immediate relief of pain and healing within 2 to 3 weeks. Other cases not so treated had not healed in 8 weeks. -- C.A.

93 Dermatitis Due to Vinyl Carbazole. I.R. Tabershaw and J.B. Skinner. J. Ind. Hyg. & Tox., 26, 313-315 (Nov., 1944)
Vinyl carbazole, a new dielectric, is a mixture of a monomer and a polymer. Neither is a primary skin irritant, but both are powerful sensitizers, and a number of cases have been reported previously. The author describes cases in two plants making the material. All cases doveloped after an interval of exposure, and practically all individuals who came in contact with the material suffered some degree of dermatitis. "Hardening" is apparently possible. Preventive recommendations include the usual precautions of cleanliness, education, supervision, enclosure and exhaust ventilation. An air velocity of 200 f.p.m. is recommended. Workers with slight sensitivity may be kept on the job so that they will "harden".

IN USE AIR ARMS November 1944

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HWBB-001138

INDUSTRIAL HYGIENE NOVEMBER 1992

Methods of Detection and Determination

94 A Welding Fume Sampler. L. Silverman and J.F. Ege, Jr. J. Ind. Hyg. & Tox., 26, 316-318 (Nov., 1944)
An efficient sampler for welding fumes, especially iron oxide fumes, is made from a foot-operated automobile tire pump, with slight and easily made modifications, and equipped with filter paper to collect the fumes. Standards may be easily made from actual welding fumes, by comparison with precipitator samples. Choice of filter paper, effect of pumping time and other details are discussed.

95 Methods for Determination of Toxic Gases Produced by Commercial Blasting Explosives. A.G. Suvorov. Gornyi Zhur., 117, 15-18 (1941) Russian.
Russian and American investigations of the toxic gases evolved from explosives are compared. Laboratory experiments by Suvorov with 4 kinds of explosives showed that explosions in freely suspended bombs or in concrete blocks gave results quite different from those obtained in practice. No nitric oxide resulted, although always present in actual blasting, and carbon monoxide was frequently low (possibly because of absorption by the concrete). The best results were obtained by blasting in dry quartz sand; however, laboratory tests are regarded as no more than orientation tests, to be checked continually by practical tests in the mine. -- C.A.

96 Apparatus for Determining Minimum Energies for Electric Spark Ignition of Flammable Gases and Vapors. P.G. Guest. Bur. of Mines, Rept. Invest. 3753 (May, 1944)
The writer describes the construction and use of a device for measuring the energies required to ignite a wide variety of explosive gases and vapors by the electric spark method. The method and apparatus may give more fundamental information on the hazards due to accidental ignition by static electricity. Some tests on Pittsburgh natural gas and with benzene are given. -- J.I.H.&T.

97 Methods for Determining Lead in Air and in Biological Materials. A Report Prepared by the Subcommittee on Chemical Methods of the Committee on Ventilation and Atmospheric Pollution of the Industrial Hygiene Section of the American Public Health Association. Published by American Public Health Assoc., New York. 41 pp. Price 75¢. (1944)
The recommended procedures include the dithizone methods, including the mixed color method in the absence of bismuth, the lead titration method, single color method, and limit test, and the electrolytic, spectrographic and polarographic procedures. The choice of method depends upon the equipment at hand and the precision desired. The variation of the dithizone method to be used depends upon the other metals and impurities present. Directions for collecting samples of urine, blood and air, and preparations of samples for analysis are given fully. The recommended procedures are then described in detail, and a bibliography is appended.

98 Mist and Dust Collections in Industry and Buildings. C.E. Lapple. Heat. Pip. & Air Cond., 16, 635-640 (Nov., 1944)
In this fourth installment, the author discusses microscopic and elutriation analyses of dust. In microscopic analysis, the principal problem is to convert particles size-number frequency distribution into size-weight frequency distribution. This process is simple in principle but involves discrimination and

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AWB-0011385

possible pitfalls. The question of the determination of effective diameter of irregular particles is considered; there are four methods in use, the mean accidental diameter, the projected area, the mean of 3 dimensions, and the minimum dimension. Their advantages and disadvantages of each are discussed. Elutriation apparatus falls into 2 general groups, single and series; they also include air and water types. The principal elutriators in use are described. The air and water methods are compared with each other and with sedimentation methods.

Control Methods

99 Explosives-Manufacturing Techniques Offer Safety Ideas for Chemical Plants. W.F. Suhr. Chem. Inds. (N.Y.) 55, 62-65 (1944)
Special precautions used in explosives plants could be applied advantageously in processing chemicals. The manufacturing of explosives is broken down into steps, each step being set up in separate buildings. No continuous conveyors are used between buildings. Frame construction and wood instead of metals and masonry minimize the chance of throwing heavy missiles. Equipment materials are selected with reference to the danger of ignition by impact or friction. Mechanical design of the units is sturdy. Screens are used in ducts to remove foreign matter. Remote control of operation is used extensively, the operator being protected by concrete walls or steel shields. All operations are arranged to avoid accidents when part of the equipment fails. Maximum number of operators and visitors is limited for each process unit in order to reduce confusion and loss of life should a serious accident occur. A well-rounded employee-training program is an important part of safety precautions. -- C.A.

100 A Study of Summer Air Conditioning With Water Sprays to Prevent Roof Falls at the Beech Bottom Coal Mine, West Virginia. E.L. Fish, L.A. Turnbull, A.L. Toenges and I. Hartmann. U.S. Bur. Mines, Rept. Invest. 3775 (Aug., 1944)
The shale rocks composing the immediate roof above the coal bed of the mine where the study was made are affected very adversely by interchange of moisture between the rocks and the mine air. Alternate wetting and drying of the rocks results in far greater damage than does the maintenance of more or less constant humidity, whether high or low. Daily changes of temperature have very little effect. Air conditioning was found materially to reduce roof falls. The air conditioning must be maintained in winter as well as in summer. Air conditioning by the use of water sprays requires an adequate supply of cold water. If the supply is insufficient, a recirculating system or some other co ling method must be employed. Roof falls were not completely suppressed, as the inherent weakness of the rock and the oxidation of pyrites contributed to the tendency to fall.

101 Preparation of Tank Vessels Prior to Alterations or Repairs. C.A. Neusbaum. Trans. 33nd Nat. Safety Cong., 1, 393-396 (1943)
Petroleum vapors present a toxic hazard as low as 0.3%, while the lower explosive limit is roughly 1%. Therefore the maximum permissible content of petroleum vapors in empty vessels is fixed by the health hazard. Air sampling is insufficient to insure safety; the interior must be examined for deposits of oil and sediment that may generate vapor. In the Butterworth method of cleaning, jets of heated water are directed to all interior parts of the vessel; by the manual method, live steam at 75 lbs. is introduced, and when the gas content is sufficiently low men enter with hand hose and wash down as they go. After final inspection a certificate is issued showing that the tanks are "Safe for Men and

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UNDER ARMS November 1944

NWDB-011386

Fire" or "Safe for Men - Not Safe for Fire". Hydrogen sulfide and oxygen deficiency are also considered as hazards.

102 Eye Injuries in Mines - First Aid Treatment. S.W. Fisher. Coll. Guard., 168, 284 (Mar. 3, 1944); Iron & Coal Trades Rev., 148, 337 (Mar. 3, 1944)
The author recommends a face screen of perforated zinc suspended from the hat for protection against flying particles. He also reports that in collieries where prompt first aid was given, including treatment with sulfonamide, that only 4% of 1,832 men with eye injuries suffered any loss of time.

103 Lighting for Sheet Metal Fabrication. E.R. D'Olive. Illum. Eng., 39, 183-193 (Mar., 1944)
General illumination by suspended lights and lighting of work benches and tables are considered. Special kinds such as incandescent diffusers and fluorescent fixtures are discussed in detail. Comparative costs of adequate and inadequate lighting are estimated. Advantages of proper illumination include increased production, lowered spoilage rates, working to closer tolerance, fewer rejections, greater safety and improved morale, and these improvements pay for the lighting equipment in a short time.

104 Lighting of Welding Shops. M.W. Hime. Light and Lighting, 37, 4-5 (Jan., 1944)
The lighting of welding shops is often ill-considered because it is assumed that the operation itself gives sufficient light. On the other hand, goggles reduce the apparent illumination of the work, and the goggles must be raised for inspection of the work, causing exposure to arcs produced by neighboring workers. The author suggests the need for investigation to answer the following: (1) What is the average brightness of the arc produced in the case of electrode welding, and is it a function of the type of electrode and type of material? (2) What is its spectral composition, and is its effect mainly due to brightness? (3) What is the order of the local illumination it produces? (4) What coloring of the surroundings will minimize the contrast occasioned by the flash? (5) What level of illumination is desirable in the vicinity of the work, and how can it best be obtained? The author suggests for suitable lighting, an illumination of about 15 foot-candles at the work level, and bright ceilings and walls achieved by painting in light colors and giving them sufficient illumination. These improvements should make it possible to use goggles which absorb less light and would not have to be removed when inspecting the weld. There would also be sufficient light for other workers, marking out plates, etc., in the same shop to do their work with greater comfort and efficiency. -- Condensed from Bull. Hyg.

105 Lighting for Milling Machines, Shapers and Planers. R.E. Lagerstrom. Illum. Eng., 39, 194-204 (Mar., 1944)
With machines of this group, the problem of seeing is intensified because the cutting edge is usually in motion at such high speeds that its condition cannot be determined by direct vision. Light must be furnished to any one surface or all surfaces of the material being machined, according to conditions. A number of typical and special cases are discussed, and good and poor practices are demonstrated. Both local and general illumination are necessary.

106 Lighting for Welding. R.R. Lusk. Illum. Eng., 39, 205-217 (Mar., 1944)
It is impracticable to produce enough illumination to permit the welder to see distinctly through the glass in his hood, which would require 12,000 foot candles. However, relighting to raise the illumination from 5 to 30 footcandles and higher has produced considerable improvement in welding work, because the welder can see better when his hood is thrown back and can distinguish flaws and irregularity in the work. Higher illumination also shortens dark adaptation. Also discussed are the effects of paints, choice of lamp bulbs, and proper maintenance of lighting systems.

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107 Lighting for Horizontal Spindle Machines. A.W. Larson. Illum. Eng., 39, 151-170 (Mar., 1944)
Proper illumination of engine lathes as typical of horizontal spindle machines is discussed in detail. There are in general seven seeing tasks and points. The most common faults in illumination of these machines are too much dependence upon local lighting, low average intensity and reduction of illumination by splashing of oil. Local lights will rarely be needed if proper attention is given to general lighting design, and local lights when used should be portable. Fluorescent fixtures are best for general lighting, and the general illumination should range from 50 to 100 footcandles.

108 Air Duct Friction Chart. A. Shapiro. Heat. Pip. and Air. Cond., 16, 696-697 (Dec., 1944)
A chart is presented that provides a means for solving for the actual velocity and velocity head of standard air in a rectangular duct, as well as for the sides of an equivalent duct, in addition to the usual unknowns. It may be used to solve problems in duct design as well as for checking an existing system. The text, and the examples on the chart itself, explain its use fully. -- Author's summary.

109 The Use of Antiseptic Sprays for Air Sterilization. A Summary of a Report to the Medical Research Council. R.J. Pulbertaft. J. Hyg., 43, 352-356 (April, 1944)
Constant quantities of B Hemolytic streptococci of Lancofields group C were sprayed into a volume of 850 cubic foot capacity. Various antiseptics were evaluated after 5 cc. were sprayed into this room, by observing the effect the spray had upon the organisms in the atmosphere. Criteria thus established for a good antiseptic for use, call for 90 percent reduction of bacteria, compared with the control when not more than 5 cc. of the antiseptic solution, at a strength of not greater than 1 percent is nebulized into a room of 1000 cubic foot capacity. Large volumes of weak but nebulized antiseptic were more effective than small volumes of a correspondingly stronger solution. The use of antiseptics may be of considerable value during periods of epidemic respiratory disease. Uniform distribution of the mist is highly desirable. The mist emission should be more or less continuous. Sodium hypochlorite seems the best suited for present conditions. Glycol solutions of phenolic compounds are more effective, but more expensive. For other purposes, e.g., horticulture and industry, other antiseptics, such as eugenol carbinol, hexylresorcinol, and catechol may be useful. The toxicity of these should be considered but not overrated. -- J.I.H.&T.

110 The Introduction of Glycols for Air Sterilization by a New Vaporization Method. E. Bigg and B.J. Jennings. J. Ind. Hyg. & Tox., 26, 307-312 (Nov., 1944)
It has been shown that introduction of predetermined quantities of water and glycol vapor may be obtained by boiling water-glycol solutions at constant concentrations. This method eliminates fire hazards, regulates desired humidities, may be built at a nominal cost, and is flexible in its application and simple in operation. Glycol vapor introduced in this manner is equal in bactericidal activity to that produced by other methods. -- Authors' summary.

111 Maintenance Timetables Highlight Danger Spots. R. Morin. Factory Man. and Main., 102, 142-144 (Sept., 1944)
A regular inspection and maintenance schedule has been in operation for some time at the Boston Gear Works. The records are so devised that any neglected inspection is immediately evident on a chart. A monthly inspection of all dust collecting systems is included, with a maximum of two months between cleanings. Many clean-out points had to be made in order to accomplish thorough inspection and cleaning.

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NOVEMBER 1992 AIR FORCE MUSEUM

112 "Iron Lungs" Inhale the Dust. Anon. Nat. Safety News, 50, 92 (Oct., 1944)
A battery of 24 "iron lung" ventilators, each with a capacity of 30,000 to 45,000 cu. ft. of air per minute, is used at the Eclipse-Pioneer foundries of Bendix Aviation Corporation, to discharge the smoke and fumes from the scene of metal-pouring operations. The impure air is discharged so high above the roof that it cannot reenter the building. The high velocity prevents the entrance of rain or snow.

113 Protecting Plant Manpower Through the Control of Air Contaminants. U.S. Dept. of Labor, Div. of Labor Standards, Special Bulletin No. 14. 28 pp. (1944) For sale by Supt. of Documents, Washington 25, D.C., price 10¢.
This Bulletin is a reissue of Special Bulletin No. 3 published in 1941 It includes the following papers: Finding and Appraising the Hazards. Philip Drinker. pp. 1-2. This comprises a table of safe limits of the more common vapors and gases and suggestions on dust concentrations. Keeping the Air Harmless. T. Hatch. pp. 3-11. After expressing the general control methods, most of the paper deals with local exhaust ventilation, with general specifications for the hood, piping, fan, and point of discharge, concluding with a brief discussion of control by general ventilation. Protecting Workers Against Temporary and Emergency Exposures. W.P. Yant. pp. 12-28. In this paper are described the general types of dust respirators, gas masks, cartridge respirators, and supplied-air respirators. The criteria of selection, care and maintenance, approval by the Bureau of Mines, and acceptance and use of respirators by workmen are discussed.

Putting the Disabled Veteran Back to Work

114 Fifteen Years' Experience with Handicapped Employees. E.O'Connor. Exec. Serv. Bull, pp. 5-6 (Oct., 1944)
The author supports his statement that a handicapped man or woman stays on the job, is a careful worker, and his absent and tardy record is better than the average, by giving a number of case histories from the experience of the J.C. Penny Co.

115 Re-employment of War Veterans. J.J. Wittmer. Ind. Med., 13, 970-974 (Nov., 1944)
The writer believes that business executives should take the initiative in matters of veteran reemployment and should think of it not as something that is going to happen but as a present and continuing proposition. He feels that the problem can be solved if it is "approached with enthusiasm and whole-hearted good will" and if some "honest to God" thinking and effort is exerted while there is still time. All degrees of supervisors are considered important factors in veteran adjustment. Job classifications, with their basic physical requirements should be set up and key jobs should be tentatively pegged for each man in the service. This entails keeping up to date as to each man's experience in service, his future plans and his desires. A working committee, composed of plant executives should "become thoroughly acquainted with problems that will be presented, have the means set up to take care of these problems, and then see that they are made to work".

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NOVEMBER 1992
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116 Rehabilitation of the Disabled Serviceman. Felicia Fuss. Bulletin of the Russell Sage Foundation Library, No. 162. 14 pp. (Nov., 1944) 20¢ from Russell Sage Foundation, 130 E. 22nd St., New York 10, N.Y.
This revised bibliography lists books, pamphlets, and articles on physical and mental disabilities resulting from war service. Some standard books on the rehabilitation of World War I veterans and on civilian rehabilitation are included.

117 Veteran Placement. H.B. Dye. Ind. Med., 13, 989-990 (Dec., 1944)
A placement program by which veterans of this war with physical handicaps may be intelligently moved into industry has been developed at the Northrop Aircraft, Inc. At the Birmingham General Hospital at Van Nuys, California, the Northrop Company has established a training program in which convalescent patients, at regular wages, are trained in actual production of aircraft parts. Upon recovery the discharged veteran is adjusted to and rapidly fits into a special type of work. It is suggested that there should be camps for the care of the mentally disabled veterans where they could work under the direction of the Armed Service, doing soil conservation, reforestation, farming, dairying or other outdoor work, thus giving time for a gradual adjustment to civilian life. On the staff should be qualified psychiatrists and physicians who could determine when the veteran should be given his final discharge. Agencies should be established in connection with these camps to help place the discharged veterans.

118 Medical Aspects of the Governor's Committee on Rehabilitation and Employment. H.H. Cole. Illinois Med. J., 85, 167-169 (April, 1944)
Recommendations have been made for a medical program designed to aid in the rehabilitation of veterans between the time that the patient is discharged and the time when federal responsibility is assumed. It is planned to decentralize medical service so that the patient can be taken care of in his home town, except in cases where needed specialized services are not available. Free choice of his physician is to be maintained for the patient. A general scale of fees has been tentatively agreed upon, and efforts are under way to establish a similar scale for hospitalization. A central office in Springfield will be maintained to review and authorize the work to be done and the fee to be paid. -- J.I.H.&T.

119 Role of Industrial Medicine in the Rehabilitation of Veterans. J.F. Johnson and H.V. Hoffman. J.A.M.A., 126, 1073-1077 (Dec. 23, 1944)
The manufacturing industry will probably employ one out of every seven returning veterans and an agency is needed to evaluate physically and mentally the proper placement of those veterans. 85% of those recently returned are satisfactory employees but some need advice in reconstructing their lives. There is need for informing industrial plants as to what to do with a veteran already employed who has an emergency illness or who needs medical or welfare help, also need for appraising the relative value of "seniority" and "being a veteran". -- Condensed from Authors' conclusions.

120 The Disabled War Veteran's Place in Industry. W.S. Paine. The Aetnaizer. 2 pp. (Aug., 1944) Reprints available from Aetna Life Affiliated Companies, Hartford, Conn.
The following declaration is quoted to correct any possible erroneous impressions: "It is, of course, the policy and practice of the member companies of the Association of Casualty and Surety Executives not to advise employers against the employment of disabled persons." A number of agencies believe that their responsibility extends to actual participation in the rehabilitation program and have begun the development of medical and psychiatric techniques. The writer believes that the call to aid in the employment of disabled War Veterans is an opportunity for insurance consultants and the service departments of the insurance carriers.

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121 They Don't Call Them Handicapped. A.W. Herdman. Nat. Safety News, 50, 8-9, 2 (Dec., 1944)
Two deaf mutes, a blind man and a one-armed woman stepped forward one day last summer to receive the Army-Navy E award on behalf of G. Barr and Co., Chicago. Some years ago, Mr. Barr, unable to obtain a position on account of having lost a leg, founded the business of production of medical supplies. At present 135 of the 150 employees are "handicapped", but much of the work is done faster and better than by normal persons. Suitable recreation is a feature of employee relations. Regarding the problem of the returning veteran, Mr. Barr stresses the point that what is needed is not so much physical rehabilitation of the employee as mental rehabilitation of the owner.

122 The Curative Workshop. Bell Greve. Virginia Med. Monthly, 71, 100-182 (April, 1944)
This is an article advocating a Community Curative Work Shop as a nucleus for rehabilitation or the problems of the handicapped, wherein public and private agencies on State and local level, special agencies for special disabilities and representatives of special services in rehabilitation could plan together. Such a committee could be responsible for analyzing the existing facilities; for interpreting such facilities to the public at large, and for preparing a program for a meeting of lacks and gaps.

123 Rehabilitation; With Special Reference to Occupational Therapy. A. Sheperd. Brit. J. Phys. Med., 7, 44 (March-April, 1944)
The writer regrets that patients who have been competently treated for actual injuries need, nevertheless, to be re-hardened after their recovery. The limbs, system and other parts of the patient that are uninjured should not be allowed to become softened by neglect or disuse. Occupational therapy should not be "just something to occupy the mind." Occupational therapy has taken over the exploration of new fields, has utilized new methods and is established. -- Condensed from Arch. Phys. Therapy.

124 Deaf but Not Down. Helen Keller. Rotarian, pp. 14-16 (Nov., 1944)
The author tells what the U.S. Army is doing to aid its deafened men, especially in Deshon Hospital. Each patient has his individual teacher, and many of the teachers are hard of hearing. The first step is to teach lip-reading, correct speech defects and thereby develop self-confidence, and in general personality development is emphasized. The mechanical hearing aid devices are chosen from a number of varietions of audiometers and thermionic or vacuum valves, to meet the individual patient's needs.

Absenteeism, Hours of Labor, etc.

125 The Recording of Sickness Absence in Industry (A Preliminary Report.) Great Britain, Medical Research Council, Industrial Health Board, Report No. 85. H.M. Stationery Office, London. 17 pp. Price 4d. (1944)
(1) The keeping of sickness records in industry is essential if absence due to sickness is to be properly estimated and controlled. (2) The method used to obtain the initial information on absence depends on the size, distribution and organization of the industry concerned. (3) The value of sickness records depends on their accuracy, and on the use of standardized measures of sickness absence. Suitable measures and methods of calculation are given. (4) Certified

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NOVEMBER 1992 INDUSTRIAL HYGIENE ABSTRACTS

sickness absence should be grouped as far as possible into those classes of disease which may have some relation to the working environment. A classification of sickness is given which can serve this purpose. -- Authors' summary

126 Some Aspects of Sick Absence in Industry. H.H. Bashford. Brit. J. Ind. Med., 1, 7-10 (Jan., 1944)
The accurate sick records which are kept of British postal employees form a valuable basis for studying the effects of many disabilities on working capacities. Men over 40, as a group, incur 55 percent more sickness than those under 40. Younger people incur more sicknesses, but, as a rule, of shorter duration. Women incur from 10 to 17 percent more sickness than men. Catarrh and respiratory troubles claim from 20 to 30 percent of sickness, and digestive disorders about 10 percent. The sick rates of the outdoor staff tend to be above those of the indoor staff, because certain respiratory and rheumatic affections which might not disable an indoor worker might prevent a telephone linesman or postman from carrying on. A peace-time figure for sick absences in males under 25 was about five days a year, and six days for females of that age. The figures for a general mixed staff were eight or nine days per male and nine to eleven days per female. Except in adverse conditions resulting from bombing, war-time has not increased the sick absence. -- Bull. Hyg.

Industrial Medical Practice

127 Health Program for Employees in the Meat Packing Industry. H. Earnheart. Trans. 32nd Nat. Safety Cong., 1, 409-412 (1943)
The principles and practices of a health program in this industry are the same as in other industries, with somewhat more of a problem in giving sufficient physical examinations on account of seasonal labor requirements. The author mentions three reasons why the medical department may fail to function in the proper role of job replacement: (1) failure of the physician to familiarize himself with job requirements in the plant; (2) reluctance of the employment department to accept the doctor's recommendations; and (3) lack of contact between the doctor and the employment manager. The results of physical examination should be confidential between the physician and the employee, but a suitable code system should enable the employment manager to know the exact nature of the work which the employee may be permitted to do. Periodic examination is largely on a voluntary basis, as there are few hazardous occupations. Regarding absenteeism, the author says: "The common cold remains the No. 1 seasonal offender as a cause of lost time for illness but it seems there is not a great deal that can be done about it. We frequently think in terms of sending all employees with beginning symptoms of coryza (common head cold) off the job, but I doubt if any industrial physician has nerve enough to advocate such practice at this time. Management would not be in a very receptive mood." The employment practice of the industry at present is to employ all available workers, including the physically handicapped when there are suitable jobs for them.

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128 The Scope of Industrial Medicine and Hygiene. J.G. Cunningham. Can. Med. Assoc. J., 51, 439-443 (Nov., 1944)
The author discusses the extent of industrial disability, non-occupational and occupational sickness, the health program in industry sponsored by medical associations, government industrial hygiene divisions, the training and duties of the industrial physician, and the periodicals devoted to the subject.

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129 Employees' Health in Wartime. I.S. Cutter. Trans. 32nd Nat. Safety Cong., 1, 646-649 (1943)
The health of railway employees has been good in spite of the excess of older men and absence of doctors. The author advocates attention of railway management to the health of employees, and sites several actual cases where employees' health has been saved through their consulting the medical department about apparently minor ailments. Rationing presents a nutrition problem; the supply of protein must be kept up. "In the largest measure, however, the nutrition of workers depends upon their own kitchens. Therefore we depend upon the intelligence and willingness to cooperate of the homemaker to insure good meals, with hot food rather than cold." The problem of the older employee's health is considered. He mist be warned against overexertion off the job. The medical department can greatly assist in employees' health by sound advice, and in a few departments absenteeism has been reduced by 10 to 30%. "If industry doesn't take the lead the Government will move in as it is preparing to do in the 'Cradle to the Grave' program."

130 Fitting Industry to Human Needs: Contribution of Medicine to Industrial Well-Being. T.A.L. Davies. Lancet, 1, 223 (Feb. 12, 1944)
Until an employer has taken every possible step to protect the health, safety and welfare of the workers, little or no bleme can be attached to the workman for any accident or mishap. Health, safety and welfare form a triad on which the whole structure of industrial medicine rests. Accidents and their prevention are discussed. Note is made of the workers themselves, their general diet, living conditions, factory morale and absenteeism, in a logical, intelligent, over-all statement, primarily calling for understanding of the workmen's problems. -- J.I.H.&T.

131 Clinical Approach to Alleged Traumatic Disease. L. Brahdy and S. Kahn. Ann. Intern. Med., 18, 491-499 (1943)
The effects of injury must be studied as any other problem in the etiology of disease. Diseases are divided into three classes: Those due to injury, those never due to injury, and those which usually develop without injury, but which, in some instances, are caused or activated by injury. The data are listed which are necessary for evaluating the role an injury plays in producing any specific disease in an individual. These are: the diagnosis of the disease, the medical condition prior to the injury, its type, site and severity, the immediate effects of the injury, the intercalary period, the bridging symptoms, and the biology of the disease. A number of examples are given to illustrate the principles on which a physician should base his conclusion when he is confronted with the question of the relationship of the disease to an injury sustained by a patient. -- Biol. Absts.

138 Discussion on the Clinical Approach to Industrial Medicine. Proc. Roy. Soc. Med., 37, 241-246 (April, 1944)
Three physicians, who participate in the discussion make observations regarding qualifications, preparation, and practices of industrial physicians. These include: some knowledge of the chemistry of industrial processes and the toxicological risks in the dangerous trades; a competent staff in medical hospitals to study and teach the medical problems of industry; employment of men of wide clinical experience; industrial health research in which the best physicians and surgeons as well as factory inspectors and research workers cooperate; the industrial doctor should keep in touch with clinical medicine; he must understand the psychological factor in disability and learn to assess the effect of physical disability on earning capacity. The importance of the pre-employment examination and of the part played by the industrial nurse in the examination of women is stated. A revision of the laws is suggested that would place

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emphasis, in cases of industrial accidents, on securing proper treatment rather than paying compensation. Wise legislation by the State would aid in the better planning of industrial medical and allied services. -- J.I.H.&T.

133 When You Scratch the Surface. Anon. Safety Eng., 88, 13-17 (Nov., 1944)
The recommendations for medical service for a small plant include contents of a first-aid cabinet, equipment for first-aid room, qualifications of a nurse, and pre-placement examinations.

134 Endicott-Johnson Medical Plan. E.M. Jones. J.A.M.A., 126, 339-341 (Oct. 7, 1944)
An attempt has been made to give to the Endicott-Johnson workers and their dependents a complete medical service without any limitation except for the need of the patient. The patient-physician relationship has been kept as nearly as possible the same as in private practice. Specialists in every field are available to employees. They are entitled to unlimited hospitalization and unlimited amounts of laboratory, x-ray or other examinations. The entire service is free to the worker, the company assuming the whole expense as an operating cost. -- From author's summary.

135 Health Plan Principles in the Kaiser Industries. S.R. Garfield. J.A.M.A., 126, 337-339 (Oct. 7, 1944)
This plan, which has proved highly successful, embodies three major principles: (1) prepayment, (2) group practice and (3) adequate facilities. These principles are believed by the writer to be the solution to medical care, but he thinks the job should be done by the doctors through their medical organizations. A proposed plan would make it possible for all physicians to participate to some extent. There is the suggestion of a new economy of medicine in which the physician would be remunerated for keeping the patient well.

136 The Operation of an Industrial Health Service. R.V. Ward. Can. Med. Assoc. J., 51, 521-527 (Dec., 1944)
In the second paper of the series, the author discusses briefly the relation of an industrial medical service to management, the activities of an industrial medical service, and the personnel and equipment necessary. Under the second heading he includes the pre-employment examination, first aid and treatment of accidents, first aid in illness in the industrial medical service, hygienic supervision of the plant, health education of the employees, and visiting nursing service. Each of these subjects will be treated more fully in subsequent papers.

137 Survey of Medical Care in a War Industry Area. M.H. Merrill and M. Mills. J.A.M.A., 126, 887-892 (Dec. 2, 1944)
The authors report results of a survey undertaken by the California State Department of Public Health in the shipbuilding area including a total population of 140,000 to determine: (1) the proportion of the population reached through the prepaid medical care plan (Permanente Foundation) and through private practice channels; (2) the physician personnel available to care for each of these two segments of the population; (3) the volume of service being rendered each group; (4) adequacy of hospital facilities; and (5) the consumer reaction to medical care being received. Details of the questionnaire, its distribution and results are given. Among the highlights of the information obtained are the high ratio of population to physicians, inadequate hospital facilities, lack of information concerning the medical facilities available, and lack of facilities to care for the negro population. Most of these factors were the result of the large influx of population that has occurred in that region.

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138 Stanocola Medical Care Plan. J.M. Adams. J.A.M.A., 126, 333-335 (Oct. 7, 194
The Stanocola Medical and Hospital Association is an organization owned, supported and operated by employees of the Standard Oil Company of Louisiana in Baton Rouge. Medical care and hospitalization are provided for members and their families. It is distinct from the Company's medical department whose work is limited to industrial medicine, but the company is interested in its success and lends its support in a number of ways. Details of the organization, administration and financing of the plan are discussed.

139 General Medical Coverage for Industrial Employees. Current Comment, J.A.M.A., 126, 708 (Nov. 11, 1944)
Various general medical coverage plans for employees have been published in the Journal recently, and now the Council on Industrial Health of the A.M.A. has adopted a statement of policy which should be helpful to physicians and medical societies faced with the development of plans for general medical coverage. This statement, as approved by the Board of Trustees of the American Medical Association, after a preliminary mention of the reasons for the statement, is as follows: (1) The principles on which medical care plans should be based have been defined by the House of Delegates of the American Medical Association. In developing medical care plans, industry should be in agreement with the local county medical society as to the conformity of such plans with these established principles. Plans of this nature should include provision for health maintenance programs. (2) Because of the essential medical nature of such plans, their policies should be directed and the medical phases should be controlled by the medical departments of industry. (3) The attention of industrial management should be directed to the place of the physician in industrial organization. The expanding importance of health activities in industry demands that the physician be responsible directly to top management and that activities relating to health be centered in and directed through the medical department.

140 Golden State Hospital - Industrial Clinic. C.O. Sappington. Ind. Med., 13, 915-916 (Nov., 1944)
The Division of Occupational Diseases of the Golden State Hospital at Los Angeles, California offers a special service to small plants and industries in southern California which is comparable to many medical programs found in the large industries. Patients come to the main unit of the hospital from its own district emergency units which are situated in various areas in and around Los Angeles and from unaffiliated industrial clinics throughout southern California. The major services rendered at the main unit are: (1) Emergency first aid; (2) Major hospital cases; (3) Plant surveys and medico-legal studies; (4) X-ray and other laboratory studies; (5) Physiotherapy; (6) Work of the claims department. Pre-placement and periodic examinations are also conducted. The Pacific Industrial Hygiene and Research Foundation is affiliated with the Golden State Hospital.

141 Six Years' Experience of Prepaid Medical Care for the Employees of the Hollinger Mine. R.P. Smith. Am. Inst. Mining and Met. Engrs., Tech. Publ. No. 1752. 8 pp. Mining Tech. (Sept., 1944)
The paper describes the medical care plan that has been in operation at the Hollinger Mine at Timmins, Ont. since 1937. Membership is a condition of employment, with provisions for withdrawal after one year. The employee and dependents not in his immediate family are subject to medical examination, but members of his family are not. The services provided include all necessary medical services in home, office or hospital, all necessary surgical operations, hospitalization without limit, x-rays for diagnosis and treatment, special nursing care, complete obstetrical care, drugs and medicines, and services of

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specialists. No cash benefits or any form of monetary return is included. Free choice of doctor and of patient is permitted. Services not provided include treatment for venereal diseases, dentistry, occupational disabilities, results from intoxicating liquors, hospitalization of mental diseases and hospitalization of tuberculosis under direction of the Provincial Government. Most of the funds are provided by contributions of $24.70 per year from each single employee and $37.70 from each married employee, with $13.00 per employee by the company. A small fee is also charged for actual service, to reduce unnecessary visits. All payments are made by payroll deductions. The plan is administered by a committee chosen by employees, and a staff of 3 secretaries keeps the medical and financial records. With 8,500 to 9,300 persons in the plan, the total number of patients for 6 years has been 154,273. The plan has been financially successful, and there have been few complaints.

142 Variations in Current Industrial Medical Service Plans. J.J. Wittmer. J.A.M.A., 126, 344-346 (Oct. 7, 1944)
The writer describes a plan of voluntary health insurance, which he believes will banish the specter of government control which has for many years haunted the medical profession. Action on the plan should be prompt and extensive in scope. The medical profession is urged "to work out a modern way of medical care for all our people with due consideration for their financial resources, with adequate provision for their proper care, with provision for an adequate income for the doctor and with a view toward preserving the dignity of the profession."

143 How Can Ophthalmologists be of Greater Service to Industry in Wartime? D.D. Selby. Sight-Saving Rev., 13, 160 (1943)
The following phases of greater service are suggested: (1) studies of the illumination of industrial areas, and best kind of lighting for various occupations; (2) participation in examination procedures; (3) giving advice to employees on the care of the eyes; (4) possible arrangements for on-the-job service; (5) industrial ophthalmological research; and (6) a goggle program. -- Condensed from C.M.A.J.

144 Chest X-Ray Survey Methods in Practice. A.B. Robins. Am. J. Pub. Health, 34, 637-642 (June, 1944)
Experience with the rapid roll paper method and roentgen-photography on 35 mm. film has demonstrated both to be satisfactory chest x-ray survey methods. Both possess a sufficiently high level of diagnostic accuracy for screening purposes. Thirty-five mm. roentgen-photography is the more flexible method, lending itself to the operation on either service or self-operated basis. Its greatest advantage, however lies in the increased speed in reading and greater convenience in handling of small sized films in roll form. This principle we believe is essential to practical survey operation, and will be a fundamental part of the survey methods of tomorrow. -- Author's summary.

145 Mouth Infection and Industrial Health. E.H. Thomas. Ind. Med., 13, 900-905 (Nov., 1944)
The menace of mouth infection, the most prevalent and prolific source of infection which is the underlying cause of systemic disease, is emphasized and an analysis given of the reasons for its continuing high incidence. The benefits to industrial health of preventing or eliminating mouth infection are pointed out, both by statements made over 25 years ago and by recent quotations of authorities in industry confirming these benefits. The role of a competent dental department in a mouth-health program for industry is discussed. The conclusion is that every industrial plant should make available to its employees a competent mouth-health program. Such a program will be invaluable, not only

03118474

UNITED STATES NOVEMBER 1992

NWBB-0011396

from the standpoint of health and efficiency, but also from that of employee and socio-economic relations.

146 Disability Evaluation. E.D. McBride. J. Indiana State Med. Assoc., 37, 293-294 (June, 1944)
In order to determine compensation figures, every injury must be evaluated in economic terms, which involve loss of earning capacity and economic or social need of disabled/the workman or his dependents. Those factors cannot be predicted in any particular case, and the most generally satisfactory method of evaluating injuries is through the schedule plan, usually specifying loss of parts of limbs or of sense organs. The doctor as a medical witness is usually incompetent to measure disability, but there should be agreement upon some standards. The following points should be respected: (1) impartial history; (2) subjective complaints should be verified by physical findings; (3) reliable interpretation of x-rays; (4) accurate consideration of anatomic loss as to seriousness; (5) knowledge of physics and geometry on the examiner's part to interpret the effect of static deformities; (6) the ability of the body to readjust to deformity. The author advocates a standard of measurement based on the percentage value of the various factors which promote function. There are seven such factors; quickness of action, coordination of movement, strength of effort, security and confidence, endurance of activity, safety as a workman, and prestige of normal physique in securing employment. Percentages of the whole are assigned to these factors, and estimation of each factor varies with the job, possibilities of rehabilitation, surgical improvement, social limitations, age, intellectual aspirations or opportunities, and the suitability of readaptation of working effort.

147 Simple Artificial Respirator. P.W. Nathan. J. Royal Army Med. Corps, 82, 22-25 (Jan., 1944)
The author describes a respirator for emergency use in the interval before a patient is brought to a negative pressure respirator for resuscitation, and where the case is not one of complete respiratory failure but of difficult respiration arising from carbon monoxide, apparent drowning, paraplegia and other affections. The action is simply rocking the patient about 10 times per minute.

148 Influence of Different Forms of Mechanical Artificial Respiration on the Pulmonary and Systemic Blood Pressure. P.P. Volpitto, R.A. Woodbury and B.E. Abreu. J.A.M.A., 126, 1066-1068 (Dec. 23, 1944)
Seven different forms of mechanical artificial respiration were studied for their influence on the pulmonary and systemic blood pressure. This was made possible by employing a new technic for measuring the effective pulmonary and systemic blood pressure in laboratory animals not operated on and unanesthetized. Irrespective of the method of mechanical artificial respiration employed, recovery of the animal was accomplished when respiratory arrest and slow weak cardiac contractions were produced with helium. No significant change in pulmonary and systemic blood pressure was produced with any of the methods of resuscitation studied when cardiac and respiratory arrest occurred, either by helium or by electrically induced ventricular fibrillation. Any blood flow which was produced by the resuscitators did not reach the coronary and cerebral arteries. Instead, blood was pushed toward the extremities and cutaneous areas. Intrapulmonic positive pressure greater than 10 to 12 mm. of mercury, if maintained for a prolonged period of time, may hinder venous return to the right side of the heart. The so-called "milking action" of the intrapulmonic positive-negative type of resuscitator did not effectively increase the return of blood to the heart. -- Authors' summary.

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149 The Paradox of Vocational Disability. L. Brahdy. Diseases of the Chest, 10, 5 pp. (Sept.-Oct., 1944)
The physician may certify disability in the paradox, "From a vocational viewpoint, totally disabled at the present time but capable of doing selected work." The role of rehabilitation should be explained to employers, insurance carriers, and civic authorities who require disability certificates in order to administer sick-pay and insurance benefits. The patient will be able to do useful work and progress toward completely restored working capacity only if a job is made available in which work, hours, and the patient are under medical control. Such rehabilitation is most successfully done by the former employer. Special institutions for rehabilitation are also valuable. -- From author's summary.

150 Industrial Nutrition Program of W.F.A. H.F. Kilander. J. Am. Diet. Assoc., 20, 382-384 (June, 1944)
The general objective of the industrial nutrition program is that of improving the health and efficiency of industrial workers through raising their dietary standards. This objective can be furthered by serving nutritious food under proper eating conditions within the industrial plant and by obtaining the active cooperation of labor groups in improving the eating habits of workers. A corollary to this objective is that of improving the health of members of the worker's family through the carry-over value of the knowledge he has acquired through the industrial nutrition program. An outline is given of W.F.A. activities. The following recommendations are made both to labor and management for their consideration in setting up or improving their in-plant nutrition programs: (1) that management and labor become informed on the relationship between the worker's diet and his health, working capacity, accident rate, morale and absentee record, (2) that food be made available to industrial employees through in-plant feeding, (3) that the lunch supply at least one third the daily protective food requirements, (4) that a well balanced plate lunch be served at a reasonable price, (5) that food be made available to all shifts, (6) that the lunch period be at least 30 minutes in length, (7) that consideration be given to between-meal feeding, (8) that an educational program on food and nutrition be conducted, (9) that a labor-management committee on food and nutrition be formed in the plant, and (10) that management employ a dietitian. -- J.I.H.&T.

151 Absence of Rapid Deterioration in Men Doing Hard Physical Work on a Restricted Intake of Vitamins of the B Complex. A. Keys, A. Henschel, H.L. Taylor, O. Mickelsen and J. Brozek. J. Nutrition, 27, 485-496 (June 10, 1944)
Studies were undertaken to evaluate the effects of a diet low in vitamins of the B complex in men doing hard physical work. Five test subjects and three controls were standardized for 21 days. A deficiency period of fourteen days followed, during which the test subjects were deprived of vitamins of the B complex and the controls received supplements daily. Following the deficient period, both groups received supplements for five days. Throughout the whole experiment, both groups followed fixed rigid daily routines. Careful clinical and psychomotor observations, as well as laboratory examinations of the blood and urine were made at frequent intervals. All results were in conclusive agreement that the vitamin intake and limitation were without effect on all the functions measured. The claims of Johnson et al. that normal men undergo physical deterioration in a few days of hard work on diets similarly restricted in B vitamins are seriously questioned. The latter group of investigators, in an appended note, point out that significant differences in experimental conditions must account for the different results. -- J.I.H.&T.

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152 Management Control in Industrial Cafeterias. Quindara O. Dodge. J. Am. Diet. Assoc., 20, 390-394 (June, 1944)
The plant cafeteria that meets the requirements of both management and workers today needs to be scientifically organized and administered by a cafeteria

IN THE ARMS NOVEMBER 1992

NWBB-0011398

director with training and experience in the applied sciences of foods, nutrition, and institution management. The article is noteworthy for its concise coverage of the various problems of cafeteria management, the foods, menus, labor, cleanliness, waste, etc. -- J.I.H.&T.

153 Nutrition in Industry. F.M. Gatto. J. Am. Diet. Assoc., 20, 384-386 (June, 1944)
Incentive to better nutrition may be created by offering "Victory Lunches" in factories, and incorporating desirable food items. Booklets on adequate diet may add incentive also. It behooves any physician concerned with industrial health to bear in mind the necessity of encouraging the best feasible dietary selections and the appropriate handling, transportation, preparation and serving of food. -- J.I.H.&T.

154 The Employment of Cardiacs: Problems Encountered. F.E. Poole and J.R. Bent. Ind. Med., 13, 479-486 (June, 1944)
This study was undertaken because of difficulties encountered in the placement of cardiacs. They have the least possibility of utilization because of the progressive nature of the disease. Prejudices on the part of lay supervision arise from misunderstanding of the cardiacs' employment possibilities. Use of the pre-employment examination and the system of limitation classification make it possible to place a handicapped employee so that he is as capable on his job as any employee would be. The employment of cardiacs in 99 out of 353 job classifications in the industry resulted from an analysis of plant jobs and a job breakdown. Statistical analysis shows that the study group compared almost exactly with plant averages in the matters of: sex, age, pay rates and reasons for terminations. Experience with cardiacs was above the average in the factors of sickness absenteeism, medical treatments, and, generally, workman's compensation and group insurance. In the matter of duration employment only, was the record of the group poorer. -- From authors' summary.

155 A Survey of 2,000 Industrial Eye Injuries. E. Collier. Brit. J. Physical Med. and Ind. Hyg., 6, 181-182 (Nov.-Dec., 1943)
The author, who is the medical officer of a large engineering works, treated 2,000 consecutive eye injuries with sodium sulphacetamide (albucid sodium) in 10 percent solution. Of those treated only 17 employees lost working time and only 3 were off for more than 3 days. Details of the treatment are given. -- J.I.H.&T.

156 Occupational Potentialities of Cardiac Patients. B. Kresky and L.J. Goldwater. Am. Heart J., 27, 623-633 (May, 1944)
The charts of 2,081 patients who attended the New York Heart Association Adult Cardiac Clinics in 1941 were analyzed with respect to age, sex, type of heart disease, functional capacity, and occupation. The percentage of men and women employed and also the percentages of patients afflicted with the various types of disease are given. The relation between the type of disease with which a worker is afflicted and the class of labor in which he is employed is also expressed in percentages. A direct ratio is observed between the functional capacity (the patient's appraisal of his ability to perform physical activity) and the number of patients who worked, also between the functional capacity and the proportion engaged in unskilled labor. The Work Classification Unit of the Adult Cardiac Clinic of Bellevue Hospital classifies employable cardiacs, recommends jobs for them, and also follows them at their jobs. Details of the work of this Unit are presented. -- J.I.H.&T.

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UNITED STATES NOVEMBER 1992

RMBB-0011399

157 UAW-CIO Health Institute Opens January 18, 1945

The United Auto Workers (CIO) announce the opening of their Health Institute in new and enlarged quarters in Detroit, with Morris Raskin, M.D., as Director. Last Spring the Union purchased the old Edsel Ford home on Jefferson Avenue, Detroit, and this has since been remodeled to house the Health Institute. The program of the Institute is outlined by George F. Addes, International Secretary and Treasurer of the UAW, as follows: "(1) A high standard of individual examinations for all workers with industrial health problems; (2) Group examinations from shops where workers suffer similar symptoms, thus seeking to aid in the discovery and prevention of any industrial health hazard; (3) The establishment in all Local Unions of Health and Safety Committees and the inclusion in all collective bargaining agreements of satisfactory health and safety clauses; (4) A health Education program which will reach every worker; (5) A personal service offering professional help to workers with personal problems that affect their adjustment to work and their relationship with other people."

158 Pittsburgh Coal Names Medical Director

The Pittsburgh Coal Company announces the appointment of Dr. Daniel C. Braun as Medical Director of its new department of Industrial Medicine created to provide better supervision of the health of company employees and research into medical problems peculiar to coal mining. A graduate of the University of Pittsburgh's School of Medicine, class of 1937, Dr. Braun served his internship at Mercy Hospital, Pittsburgh. He joined Pittsburgh Coal as medical examiner in September, 1938. Dr. Braun took post-graduate work in industrial hygiene at Pitt in 1941. He is a member of the county medical society; the Pennsylvania Medical Association, the American Industrial Hygiene Association and the American Association of Industrial Physicians and Surgeons.

159 Michigan Mutual Advances Purdy.

Walter E. Otto, President of the Michigan Mutual Liability Company, announces the appointment of James A. Purdy as Vice-President in charge of Engineering and Industrial Hygiene. Mr. Purdy has been associated with the Company since 1921. Starting as a Safety inspector, he was made Director of Safety Engineering in 1924, which position he still retains. Mr. Purdy is an active member of numerous State and National Safety organizations. He is a past member of the Executive Committee and Board of Directors of the National Safety Council, and last year served as Chairman of the Board of Directors of the Detroit Industrial Safety Council. Under Mr. Purdy's direction, the Company's accident-prevention activities have experienced a steady growth in the fields of Industrial and Public Safety.

160 California Union Urges Legislative Action on Health Insurance.

The California Legislature was informed on January 19 that if it failed to enact a compulsory health insurance law at this session the State CIO council would join with other groups to get an initiative measure on this subject put on the ballot of November, 1946. Mervyn Rathborne, secretary-treasurer of the CIO council, said his organization would sponsor its own prepaid medical service bill. This differs in some respects from the bill to be sponsored by Governor Warren. It provides for a stated payment per year to every doctor or group of doctors participating except for specialists' charges, which would be paid on a fee basis. Governor Warren insists on the fee system all the way through. Both plans provide for a 3 percent payroll tax, the employer and the employee each paying half. The Warren bill tentatively provides that the tax be levied on the first $4,000 of income, the CIO bill on the first $5,000. Governor Warren proposes that collection of contributions start some time in 1946 and that the system begin operation on Jan. 1, 1947. The CIO would start collections next July and begin medical care and hospitalization a year later. -- New York Times, pp. 3 (Jan. 21, 1945)

03118478

UNDER ARMS NOVEMBER 1992

HWBB-0011400

INDEX

(January, 1945)

Absenteeism
  British postal employees 126
  recording 125
Air contaminants
  control of 113
Air duct friction 108
Air sterilization
  committee report 109
  glycol vaporization 110
Artificial respiration 147
  devices for 148
Asbestos corns 68
Asbestosis and pulmonary carcinoma 69
Benzene
  poisoning and diet 50
  toxicity of homologues 49
Beryllium oxide
  health hazards 39
Blasting explosives
  toxic gases from 95
Book Reviews and Notices 13-14-15-16
Brucellosis
  occurrence of 28
Burns
  sulfuric acid 24
Carbon monoxide poisoning
  elimination (experimental) 33
  experimental chronic 32
Carbon tetrachloride
  poisoning 46-47-48
Chemical industry
  health hazards 18
Coal and silica
  effects on lungs (mice) 66
Common cold
  vaccines for 17
Cotton industries
  occupational illness 59
Cyanide poisoning
  treatment of 35
DDT 56
  toxicity of 55
Dentistry
  industrial 145
Dermatitis 74-86
  adhesive tape 78
  allergic contact 88
  and chemical structure 76
  anthracene oils 87
  from arsenicals 75
  cutting oils 77
  experience (Maine) 89
  experience (USPHS) 84
  food industry 83
  jute industry 82
  lemon grass oil 73
  new protective cream 70
  from parasites 79
  prevention 80
  from smoke and fumes 81
  textile 72
  value of patch test 85
  vinyl carbazole 93
Dermatophytosis
  industrial 27
Disability evaluation 146
Dust appraisal 98
Dust control
  foundry 112
Dust system inspection
  Boston Gear Works 111
Electric spark ignition
  test methods 96
Explosives manufacture
  precautions 99
Eye injuries
  in mines 102
  treatment of 155
Fluoride waters
  systemic effects from 34
Food poisoning 19-20
Foundries
  safety from eye injury 63
Hard work
  effect of diet on 151
Heart disease 154
  and work 156
Heat
  effect of diet 31
  physiological factors 29
  prophylaxis 30
Hydrogen sulfide
  in sewage plants 36
Illumination
  machine shops 105-107
  sheet metal shops 103
  welding shops 104-106
Industrial clinic 140
Industrial medicine
  clinical approach 132
  contribution of 130
  scope of 128
Keratoconjunctivitis
  actinic 26
  case history 25
Lead
  analysis for 97
  soldering hazards 43
  urinary 41
Lead poisoning
  statistics 40
Lucite
  toxicity 57
March fracture
  industrial 45
Maximum allowable concentrations (Russian) 58
Meat packing industry
  health prog[illegible] 127
Medical care
  survey of 137
Medical coverage plans
  AMA policy 139
Medical service plans
  154-155-156-136-141
  Book Review 15
  Bollinger mine 141
  small plant 138
  state legislation on
  Book Review 14
Mining
  coal and gold
  morbidity at [illegible]
  [illegible]ality [illegible] 28
  water sprays and roof falls 100
Nitroglycerine
  acute poisoning 45
Nutrition 152-153
  WFA Program 130
Ophthalmology
  industrial 143
Patch testing
  of skin 71

03118479

HWBB-0011401

IN RE: ABRAMS November 1992

INDEX

(July, 1945)

Absenteeism
  non-occupational 900
Accident prevention 919
Aging in man 885
Air-borne infection
  control of 856
  ultraviolet disinfection 855
  use of propylene glycol 857
Aluminum therapy
  in silicosis 886
Anoxia
  acute high altitude 880
Arsenic trioxide 905
Atmospheric pollution
  due to smoke 852
Burns
  therapy of 876
Butyl alcohol
  keratitis from 864
Cadmium poisoning
  outbreak of 859
Carbon monoxide
  determination of 846
  poisoning 906
Carbon tetrachloride
  determination of
    in blood 842
  in medical therapy 887
Chest diseases
  diagnosis of 881
Chlorodiphenyl
  toxicity of 907
Chloroform
  det'n of, in blood 842
Dermatitis 873-875
Ethylene chlorohydrin
  acute poisoning of 870
Ethylene glycol
  toxicology of 865
Exhaust systems
  design 858
Eye injuries 882-883
Finishing tanks
  ventilation of 853

Graphite
  pulmonary disease 861
Halowax
  hepatotoxic effects 871
Heat tolerance 877
  simulated jungle 878
Heated air
  inhalation of 908
Heart
  effect of altitude on 879
Hydrocarbon
  chlorinated
    determination of 845
Industrial hygiene
  survey 901
Industrial medicine 892
Industrial poisoning
  diagnosis of 884
Iron oxide
  effects of 863
  lung changes 862
Labor
  agreements 893
  and industrial hygiene 894
Lacquer
  removing deposits 920
Leptospira
  and penicillin 909
Medical record keeping 889
Mercury poisoning 860
Methyl bromide
  burns 869
  determination of 843-844
  intoxication 866-867-868
Mine arc welders
  safety suggestions 849
Mine disasters
  electricity blamed for 918
Mining, hot
  coolers for 850
Occupational analysis
  publications 895

Phenol poisoning 872
Phlebitis and burns 874
Psychiatry 891
  industrial 890
Quinine
  in respiratory diseases 888
Rock dusting
  British report 851
Silica
  determination of 841
Solvent [illegible]
  safe operation of [illegible]
Sulfur [illegible]
  micromethod for [illegible] 847
Trichlor[illegible]
  toxicity of [illegible]
Trichlor[illegible]
  determination of
    in blood [illegible]
Trinitrotoluene
  [illegible] of [illegible]
[illegible]
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