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METHODS OF ADMINISTERING IODINE FOR PROPHYLAXIS OF ENDEMIC GOITER.

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GENERAL CONSIDERATIONS.

Since it has been demonstrated that a deficiency of iodine is the principal, if not the sole, cause of endemic or simple goiter, there has been a steadily increasing interest on the part of public health authorities, physicians, and the laity in the practical application of this knowledge.

That numerous methods have been devised for supplying the iodine deficiency indicates both the interest in the subject and the difficulty accompanying prophylaxis on an extensive scale. The present article has been prepared for the purpose of outlining the prevailing methods of iodine administration, the merits and objections of each being pointed out incidentally.

It should be clearly understood that only prophylaxis is contemplated in the following exposition, the question of treatment being an entirely distinct subject, which had best be intrusted to the practicing physician. While iodine holds a definite place in thyroid therapy, its administration requires study and observation of individual patients as well as caution in application of the remedy, lest untoward results or permanent damage be inflicted. It should also be recalled that endemic or simple goiter, with which this article is concerned, is a condition differing radically from toxic goiter, otherwise known as hyperthyroidism. Moreover, the treatment for each is entirely different.

For the scientific basis of iodine prophylaxis the reader is referred to the plentiful literature dealing with that phase of the subject, noteworthy among which are the collected studies of Marine, Lenhart, Kimball, and Rogoff (1).

Any reference to the subject of endemic goiter would be incomplete unless it included the results of the painstaking and extended observations and experimentation of McCarrison in Gilgit, in Northern India (2). These authorities conclude that thyroid enlargement

is readily produced by the use of diets deficient in iodine. Conversely, iodine in minute doses will prevent and cure goiter, provided this element is administered at the proper time and season. Further lending support to the iodine deficiency theory, McCarrison holds that the prevention of endemic goiter is a matter of attention to the food and water supply and to individual and general hygienic conditions of life as well as to the varying needs of the body for iodine.

HISTORICAL REFERENCES TO THE USE OF IODINE.

That iodine exerted a definite influence upon the thyroid gland has been known for centuries. The early Greeks treated goiter by administering the ash of burned sea sponges, a substance rich in iodine. Beginning with the intentional administration of iodine by Coindet in 1820, this medicament experienced an extensive vogue in goiter therapy for a period of 75 years. In 1895, Baumann declared iodine to be a normal constituent of the thyroid gland, thereby opening up a fertile and profitable field for scientific research (3).

As a preventive of thyroid enlargement in man, iodine was first used by Marine and Kimball in 1917 in the schools of Akron, Ohio (4). Following this pioneer work, numerous methods of iodine prophylaxis were devised and applied by workers in various parts of the world. The principal methods employed will be set forth.

IODINE REQUIREMENTS OF THE THYROID GLAND.

According to Kimball (5), "the normal thyroid contains about 5 milligrams of iodine per gram of dried gland, 25 to 50 milligrams ($\frac{3}{4}$ of a grain) being the total storage capacity. Therefore, the administration of a few milligrams of iodine daily over a period of 30 or more days will supply the deficiency, which, in large part, is responsible for the enlargement of the thyroid. The gland will start to enlarge as soon as the iodine content falls below one-tenth of 1 per cent of the total amount of dried gland tissue."

METHODS AND FORMS OF ADMINISTRATION.

Iodine is readily taken up by the thyroid when administered by mouth, by inhalation, or by external application. Each of these methods has been used, and apparently with success. However, the usual and most popular method is that of administering some form of iodine by mouth.

Inhalation.—Weith (6), cited by Kimball (3), reports favorable therapeutic results following the inhalation of iodine secured by the suspension in the schoolroom of a wide-mouthed bottle containing 10 per cent tincture of iodine. This method, because of its obvious variability and difficulty of accurate dosage, has failed to become

popular as a prophylactic measure. It is interesting, however, as an example of the widespread applicability of iodine prophylaxis.

That this method has its basis in scientific fact is shown by the experiments of Luckhardt, Koch, Schroeder, and Weiland (7). These observers found that iodine, when deposited on the skin in the form of fumes, was absorbed from the skin and appeared in the urine. The iodine content of the gland was greatly increased. When inhaled, the iodine fumes are absorbed by the respiratory tract, leading to death from pulmonary edema when excessive.

External application.—At the present time various iodine-containing liquids and ointments are used in the treatment of endemic goiters. Similarly, such ointments are used for prophylactic purposes. However, some method of administering iodine by mouth is likely to be more agreeable because of the ease of application and the accuracy with which dosage may be estimated.

Painting with iodine should be entirely discarded, according to Crotti (8). This form of iodine application blisters the skin and soon prevents the continuation of the treatment. It is a therapeutic measure which possesses no particular advantage and should be supplanted by one of the more readily applicable and efficacious methods.

Internal administration.—Beginning in 1917, when the first extensive goiter prophylaxis was instituted for the benefit of schoolgirls in Akron, Ohio, Marine and Kimball advocated the use of sodium iodide. In the principal writings of these investigators a uniform method of iodine administration has been followed. The various articles mentioned have been collected in a single volume, where they are available for ready reference (1).

Marine and Kimball have consistently maintained that "the most satisfactory method is the individual oral administration of some salt of iodine, either in solution or tablet form" (3). In the Akron schools 3-grain doses of sodium iodide were given in the drinking water once each day for two weeks each spring and fall (5). In Warren and Niles, Ohio, stock solutions of sodium iodide were provided in each school for the treatment of such goiters as were detected (3).

The disagreeable taste of sodium iodide has been responsible for considerable aversion and open objection to the prophylaxis. Therefore, efforts have been made to combine the drug in such a manner as to make it less objectionable. However, the combination of 1 grain of sodium iodide with sugar of milk did not prove successful in East Cleveland, Cleveland Heights, and Shaker Heights.

On the other hand, the iodine and chocolate tablet originated by the Swiss authorities has proved very popular. Instead of sodium iodide, an organic iodide which is nonhygroscopic, practically taste-

less, and very stable, a vegetable fatty acid compound, is combined with chocolate in tablet form. Each tablet contains between 5 and 10 milligrams of iodine. The preparation is pleasant to take, keeps indefinitely, and is being manufactured by American pharmaceutical houses under conditions which are approved by the Council on Pharmacy and Chemistry of the American Medical Association. One tablet is given each week throughout the school year to the children in need of the prophylaxis.

In 1918 a campaign to eradicate endemic goiter was begun in Zurich, Switzerland, under the direction of Klinger (9). The treatment employed consisted of the administration of a chocolate tablet containing the organic iodide as above described to each child once a week during the 40 weeks of the school year. The method has been employed in all of the schools of the Cantons of St. Gall, Berne, and Zurich for more than three years. The Goiter Commission of Switzerland has recently recommended that this method of goiter prevention be instituted as a public health measure throughout the entire country.

The sirups of hydriodic acid and ferrous iodide may be given in 1 cubic centimeter doses daily for 2 or 3 weeks twice a year with equally satisfactory results. More accurate dosage of these remedies may be arrived at by prescribing one drop per year of age. In some quarters the administration is advised daily during alternate months.

The case in behalf of individual oral administration has been stated recently by Kimball as follows: "From the point of view of thyroid function it makes no difference what preparation or method of administration is used so long as the thyroid gets iodine in amounts which it can store without excessive stimulation. But from a practical point of view, especially in carrying out the prophylaxis of goiter, the preparation used may make all the difference between success and failure."

Abandoning his former advocacy of sodium iodide, Kimball now recommends the chocolate-iodine combination as the most acceptable preparation for individual oral prophylaxis, because it is stable, pleasant to take, most practicable for administration to school children, and contains the proper amount of iodine, making it perfectly safe (10). In many places it is now the practice to have the school nurse give one tablet, containing 10 milligrams of iodine, once a week to each child in need of the prophylaxis.

However effective individual oral administration may appear, it is obvious that the method is both cumbersome and limited in widespread application. Therefore, modifications of the original Marine-Kimball method have been inevitable. Thus, it has occurred to Sloan (11), and also to Hirshfelder (13), that an iodized table salt will prove effective in goiter prophylaxis.

Iodized table salt.—Sloan calls attention to the fact that, next to water, common salt is the most universally used article of food. Most salt brines from which salt is crystallized contain a small amount of iodine, but, unfortunately, in the process of crystallization, iodine and other elements, such as bromine, remain in the mother liquor. Research by E. B. Forbes, of the Ohio Agricultural Station, disclosed the absence of iodine in any one of 12 varieties of salt manufactured in western New York, eastern Michigan, and Ohio. Hence, salt as it comes to the table can not be utilized for goiter prophylaxis without the artificial addition of iodine.

Sloan believes that the concentration of iodine in the proportion of 1:5000 is sufficient to produce results. Moreover, he advocates the use of iodine in cooking as well as the use of table salt, because many persons, particularly children, do not add salt to the food at the table. Sloan does not assume that iodized salt will cure even a simple goiter, especially one of appreciable size. In his opinion many goiters are due to the presence of infection, especially in the mouth and naso-pharynx. The removal of such foci of infection will, in Sloan's opinion, cause a rapid reduction of thyroid enlargement.

In commenting upon the desirability of using salt containing its natural chemical constituents, Hayhurst (12) expresses the belief that salt should contain sodium iodide and other compounds associated with sodium chloride in sea water. Salt for dietary purposes, he believes, should be prepared from sea water or from inland sources known to contain sodium iodide or other desirable compounds. Practically all the salt used in the United States is from inland sources which are, for the most part, inherently free from iodine.

The use of iodized salt for prophylaxis and occasionally for therapy is advocated by Hirschfelder. He gives specific directions for preparing the iodized salt, as follows: 50 cubic centimeters of a 10 per cent potassium iodide solution in 60 per cent alcohol is sprinkled or sprayed over 1 pound of ordinary salt. The resulting mixture is stirred, evaporated, ground, or crushed, forming the stock 1 per cent iodized salt. To prepare the salt for consumption, 5 pounds of common salt are spread in a thin layer and 5 teaspoonfuls of the stock preparation are sprinkled evenly from a salt shaker. This mixture may be used for all household purposes. For table use Hirschfelder recommends the addition of 2 tablespoonfuls of the stock mixture to 1 pound of ordinary salt.

Iodized salt holds forth considerable promise as a goiter prophylactic because of its wide and easy range of applicability. This fact has been recognized by Bayard of Zermatt, Switzerland, who first gave a mixture of common salt and iodine to five goitrous families daily for five months, each kilogram of salt containing

between 5 and 20 milligrams of iodine (14). Cattle were also given iodized salt. Later, Bayard extended his experiments to include 1,200 inhabitants of two villages, the iodization lasting six months. Each kilogram of salt used contained 0.004 gram of potassium iodide. In one of the villages the use of iodized salt was continued for another year, the percentage of iodine being increased to 0.01 gram for each kilogram of salt during the first half year and again increased to double that amount in the next half year. Excellent results are claimed as the result of this method of administering iodine. Goiters that had been refractory to the smaller percentages yielded when the iodine content was increased. No ill effects were noted from the prolonged use of the increased doses.

As a result of his research work, Bayard is convinced that the addition of 20 milligrams of potassium iodide (15 milligrams iodine) to each 5 kilograms of table salt, which is a year's consumption averaging 13.7 grams daily, is ample to prevent the development of goiter and to cause the regression of visible goiters in school children. In Bayard's experiments, 2, 4, 6, 8, and 10 centigrams of potassium iodide in each 5 kilograms of salt used by 5 different families failed to cause disagreeable consequences. Bayard urges the compulsory iodization of all salt to the extent of 0.5 milligrams of potassium iodide per kilogram of salt at first, gradually increasing the dosage to 2 milligrams per kilogram.

At a meeting of the Vienna Medical Society, Professor Wagner-Jaurreg (15) strongly urged the constant use of salt containing 0.004 milligrams of iodine in each kilogram of salt in Styria, a well-defined goiter district in Austria. As salt is a State monopoly in Austria, its iodization would be a simple procedure and its effect would be exerted on all inhabitants. Wagner states that there is no danger of causing ill effects by the use of too large doses of iodine. Analyses of samples of salt from various sources show that larger quantities of iodine are present in some places than others. Thus, in Bordeaux, France, the salt contains three times the quantity of iodine contained in the Swiss experiments, no harm being discernible following its prolonged use. In Bex, salt rich in magnesium iodide is used, and goiter is rare.

Provided no ill effects are noted in Styria following the use of iodized salt over a period ranging between 5 and 10 years, Wagner urges the use of the same procedure for the entire Austrian population.

Iodized drinking water.—An ingenious method of supplying the iodine necessary to prevent endemic goiter is that recently inaugurated in Rochester, N. Y. (16). In that city it is planned to iodize the entire supply of drinking water twice each year for two weeks. The Water Bureau has already started this treatment of the water

from Hemlock Lake, which flows into Rush reservoir about 10 miles south of Rochester and has a normal iodine content of about 1 to 2 parts per billion. The amount of water entering the reservoir is determined at the gate house by means of a "thin edged weir," or dam. As the daily consumption of water in Rochester amounts to 25,000,000 gallons, it is estimated that the addition of 13.3 pounds of sodium iodide daily will be required to provide 1/75 of a grain of iodine to a gallon of that amount of water. With sodium iodide selling at $4.80 a pound, the Rochester authorities estimate that $1,785 a year will suffice to provide the requisite iodization during two 2-week periods.

The Rochester laboratory, checking the iodine content during the process, reported an increase from 1 to 20 parts of iodine per billion parts of water. Next fall it is planned to get about 50 parts of iodine to 1,000,000,000 parts of water during the semiannual iodization. Should the Rochester plan prove successful, and only a term of years can decide the matter, a revolutionary and widely applicable means of combating endemic goiter will apparently have become available. Rochester plans a resurvey next year to determine the influence of wholesale iodization of the public water supply.

In commenting upon the Rochester plan the Weekly Bulletin of the Chicago health department (17) estimates that the consumption of 2 quarts per day of the treated water during the two periods will provide sufficient iodine to prevent endemic goiter in accordance with the present Swiss standard, which is fixed at 1/150 of a grain of iodine. The Bulletin points out the enormous waste occasioned by the treatment of the entire water supply, and also shows that the success of the measure depends upon the daily consumption of at least 2 quarts of water by each individual. Such a condition is manifestly difficult to control from a public-health viewpoint.

POSSIBLE ILL EFFECTS OF IODINE PROPHYLAXIS.

Opinions among physicians as to the possibility of producing ill effects by iodine prophylaxis are by no means in full accord. Kimball (1) states that the possibility of harm from the iodine dosage recommended by him is absolutely negligible. Mild rash was encountered in but one per thousand of the cases treated in Akron. In all of the cases treated in Switzerland no case of iodism has been seen. Neither in this country nor Switzerland has a single case of exophthalmic goiter been produced.

Kimball further contends that a study of the iodine-exophthalmic case reports reveals the fact that the cases resulted from excessive, according to physiologic standards, amounts of iodine or desiccated thyroid gland. However, the possibility of aggravating a mild exophthalmic goiter, or even producing a syndrome in susceptible persons, must be considered.

Quite paradoxically it has been demonstrated by Plummer (18) "that many of the most outstanding and characteristic symptoms of exophthalmic goiter disappear rapidly and with a high degree of regularity following the administration of iodine." A marked drop in the basal metabolic rate, with coincident clinical improvement, is noted in patients with exophthalmic goiter following the administration of iodine in the form of Lugol's solution. These effects are usually noted after approximately 1 dram of Lugol's solution has been given orally in daily doses of 10 minims.

On the other hand, the metabolic rate is likely to be increased with the administration of iodine or iodides in sufficient quantity to patients with adenomatous enlargement of the thyroid gland, a condition sometimes distinguishable with difficulty from the simple colloid or endemic goiter (19). This is undoubtedly due to the conversion of the adenomatous goiter *without* hyperthyroidism into the condition designated by Plummer as adenomatous goiter *with* hyperthyroidism.

Boothby (20) believes that adenomatous, as well as simple colloid, goiters, may be prevented by the proper administration of iodine. He warns, however, against attempts to reduce existing adenomatous enlargements, because such tissue may be excited to hyperfunction through iodine therapy.

A discordant note is sounded by de Quervain in his report to the Swiss Goiter Commission (21). He maintains that there have been no definite results following the addition of iodine to cooking salt and the inhalation of air containing iodine. Furthermore, de Quervain protests that iodine prophylaxis is too delicate a procedure to be carried out on such an extensive scale. The controlled sale of iodine and exclusion of all hypersusceptible persons from treatment are also advocated.

E. Bircher (22) has attacked the renewed agitation in favor of the use of iodine in goiter. The uncontrolled use, especially by the laity, is condemned. All patients, he maintains, should be under the constant care of physicians. In 1920, Bircher saw 36 cases of thyropathy, following the use of iodine, even in small doses. Furthermore, the physiology of the thyroid in normal and goitrous cases is so indefinite, the pharmacology of iodine so contradictory, and the experiences so different that it seems to Bircher a dangerous experiment to administer this effective poison to any great extent for a long period, either in food or otherwise. The results of iodine prophylaxis in the Swiss schools were not convincing to Bircher. Incidentally it may be mentioned that Bircher does not accept the iodine deficiency theory, having advanced and still holding other hypotheses of goiter causation.

Caution should be used in accepting the iodine deficiency theory without further evidence, according to de Courcy (23). This writer cites fatigue as the chief cause of goiter, especially at puberty and during pregnancy.

WHO SHOULD RECEIVE IODINE PROPHYLAXIS.

Endemic goiter is more frequent among girls than boys. Just how much more frequent the condition is in girls can not now be definitely stated, because succeeding surveys have greatly reduced the original estimate of 6 to 1 made by Marine and Kimball in Akron, Ohio. The recently completed examination of all school children in Grand Rapids, Mich., for instance, showed that only twice as many girls have thyroid enlargement (24). In some of the schools in Switzerland and occasionally in this country the sexes have been about equally affected. In Cincinnati, Ohio, the incidence of goiter among girls as compared with boys has been as 6 to 4 in several of the schools.

However, none of the ratios, unless explained accurately, represent the actual conditions. It is now known that the percentage of moderate and marked thyroid enlargement is much greater among girls than boys. Slight enlargements of the thyroid, on the other hand, are about equally distributed between the sexes. This frequency of slight enlargement in the male, therefore, aids in explaining the apparently heavy male incidence when endemic goiters are considered collectively.

In view of the findings it has been necessary to revise the original recommendations of Marine and Kimball that the prophylaxis be extended only to girls between the ages of 11 and 16, the period of adolescence. Inasmuch as thryoid enlargement is frequently found among children between the ages of 8 and 11, it is felt that the preventive measures should be applied earlier than has usually been the custom. Moreover, it is the writer's opinion that boys should receive the benefit of the measure as well as girls. Not only is thryoid enlargement prevented by this method, but existing goiters are frequently diminished in size. Nor is adolescence the only period during which the iodine prophylaxis proves efficacious. During pregnancy, iodine should be administered under the direction of the medical attendant, thereby preventing the development of goiter in the child as well as in the mother.

SUMMARY.

Summarizing, it may be stated that while numerous methods of supplying iodine for the prevention of endemic goiter have been suggested, the most favored one at the present time is the administration of a chocolate tablet containing 10 milligrams of iodine in the form

of an organic acid. One or two of these tablets, according to the age and requirements, should be given each week during the school year both to boys and girls between the ages of 11 and 16. Owing to the presence of thyroid enlargements in children less than 11 years of age, prophylaxis should profitably begin earlier than has ordinarily been recommended. The preventive should be used both in children in whom there is no evidence of thyroid enlargement and in those having such enlargement. In the latter instance, however, the exercise of nominal medical supervision is desirable.

The iodine-chocolate combination or other iodine-containing mixtures may be used advantageously during pregnancy, under the direction of a physician.

While individual oral administration of iodine is the method generally employed, the use of iodized table salt holds forth considerable promise as an efficient means of preventing endemic goiter in a wholesale manner. However, the difficulties of gauging accurately the dosage and of excluding from treatment the hypersusceptible are manifest handicaps to its uncontrolled application.

The wholesale iodoization of a municipal water supply may be cited as an ingenious method in need of further appraisal before a definite verdict as to its efficiency can be given.

According to the best information available there is little, if any, danger in iodine prophylaxis when it is carried out intelligently. Moreover, the rationale of the procedure is sufficiently sound and the results are sufficiently marked to make its extensive application both justifiable and advisable.

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ROCKY MOUNTAIN SPOTTED FEVER: VIABILITY OF THE VIRUS IN ANIMAL TISSUES.

By R. R. Spencer, Surgeon, and R. R. Parker, Special Expert, Hygienic Laboratory, United States Public Health Service.

Ricketts[1] found that complete desiccation of the virus of Rocky Mountain spotted fever in blood would destroy pathogenicity in 24 to 48 hours, and that virus kept in the ice chest retained its infectiousness for 16 days, although the minimal infectious dose greatly increased.

Wolbach[2] found that complete desiccation destroyed the virus in blood in 10 to 15 hours. It withstood freezing longer than four days and less than nine days. He found the virus in testes, liver, spleen, and kidney infectious after it had been in 25 per cent and 50 per cent glycerin at 7° to 10° C. for five days, but it was destroyed after one month. Intermediate periods were not tested.

That the virus survives in the tissues of the fever tick (*Dermacentor andersoni*) through extremely cold weather may be inferred from the

[1] Ricketts, H. T.: Contributions to Med. Science, 1911. University of Chicago Press.
[2] Wolbach, S. B.: Studies in Rocky Mountain Spotted Fever. Journ. Med. Res., 1919, 41: 1–197.

feeding habits and life cycle of the tick. Recently this has been demonstrated experimentally by keeping infected ticks outdoors through the winter in the Bitter Root Valley of Montana. In the spring of the following year, the presence of the virus in infective quantities was shown, either by incubating the ticks at 37° C. for 24 hours and then inoculating their contents intraperitoneally into guinea pigs,[3] or by permitting the ticks to feed upon guinea pigs for two days. Inoculation with infected, unfed, wintered ticks without incubating or feeding has never proved infective, as shown in a previous paper.[4]

With this in mind, it was believed that the virus, under suitable conditions, would also survive in mammalian tissues. Therefore tissues were removed from guinea pigs at the height of typical spotted-fever symptoms and when showing no evidence of secondary infection. Such tissues were treated as shown in the accompanying tables, and tests for viability of the virus were made at intervals by emulsifying from one-half to 1 gram of tissue in 1 to 2 c. c. of salt solution and inoculating guinea pigs intraperitoneally.

Survival of spotted-fever virus in tissues of guinea pigs.

TABLE I.

[Guinea pig No. 6527. Tissue removed from guinea pig October 16, 1922.]

Test No.	Tissue.	Treatment of tissue.	Date of inoculation.	Result.
1	Spleen and liver	100 per cent glycerine kept at about −10° C.	Nov. 20, 1922	Typical spotted fever, with gangrene of testicles. Heart blood culture negative. Virus survived 35 days.
2	do	do	do	Typical spotted fever. Heart blood transferred to three pigs, all of which developed spotted fever. Virus survived 35 days.
3	do	do	do	Typical spotted fever. Virus survived 35 days.

TABLE II.

[Guinea pig No. 6520. Tissue removed from guinea pig Oct. 30, 1922.]

1	Testicle	100 per cent glycerine and −10° C.	Dec. 30, 1922	Typical spotted fever. Virus survived 2 months.
2	Spleen	do	do	Do.
3	do	do	do	Do.

TABLE III.

[Guinea pig No. 7585. Tissue removed from guinea pig Nov. 16, 1922.]

1	Spleen	Spleen chopped into small bits, chilled in CO_2 snow, and placed in vacuum H_2SO_4 at −10° C.	Jan. 16, 1923[a]	Typical spotted fever. Virus survived 2 months.
2	do	do	do	Do.
3	Liver	do	do	Do.
4	do	do	do	Do.

[3] Experiments to be published.

[4] Rocky Mountain spotted fever: Infectivity of fasting and recently fed ticks. Pub. Health Rep., vol. 38, No. 8, Feb. 23, 1923, pp. 333–339. (Reprint No. 817.)

[a] Vacuum good on removal.

Survival of spotted-fever virus in tissues of guinea pigs—Continued.

TABLE IV.

[Guinea pig No. 6374. Tissue removed from guinea pig Jan. 2, 1923.]

Test No.	Tissue.	Treatment of tissue.	Date of inoculation.	Result.
1....	Testicle.....	100 per cent glycerine kept at about −10° C.	Nov. 14, 1923	Typical spotted fever. Virus survived 10 months and 12 days.
2....	Spleen.....	.....do.....	.....do.....	Negative—spotted fever following injection of fresh virus.

TABLE V.

[Guinea pig No. 6131. Tissue removed from guinea pig Jan. 4, 1923.]

1....	Testicle.....	100 per cent glycerine kept at about −10° C.	Nov. 14, 1923	Typical spotted fever. Heart blood culture sterile 48 hours on agar slant and anaërobic meat media. Survival of virus 10 months and 10 days.
2....	Spleen.....	.....do.....	.....do.....	Negative—spotted fever following injection of fresh virus.

TABLE VI.

[Guinea pig No. 7117. Tissue removed from guinea pig Jan. 12, 1923.]

1....	Testicle.....	100 per cent glycerine kept at about −10° C.	Nov. 3, 1923	Typical spotted fever. Survival over 9 months.
2....	Liver.....	.....do.....	.....do.....	Negative. Dead on eighth day from secondary infection.

The above tables indicate that—

1. The virus of Rocky Mountain spotted fever survives in glycerine for more than 10 months when kept at −10° C.

2. The testicle is a more favorable tissue for the preservation of the virus in glycerine than is the spleen or liver. Brain tissue was not tested.

3. Tissue virus dried in vacuo survived two months when kept at −10° C.

No loss of virulence of the virus kept in glycerine was noted, since the eighth passage of the virus still showed full virulence for guinea pigs, producing typical lesions.

Rocky Mountain spotted fever may now be placed among the glycerine-resistant viruses, and a method by which the virus may be preserved for considerable periods has been developed.

DEATHS DURING WEEK ENDED DECEMBER 29, 1923.

Summary of information received by telegraph from industrial insurance companies for week ended December 29, 1923, and corresponding week of 1922. (From the Weekly Health Index, January 3, 1924, issued by the Bureau of the Census, Department of Commerce.)

	Week ended Dec. 29, 1923.	Corresponding week, 1922.
Policies in force	55, 983, 187	51, 541, 201
Number of death claims	9, 032	11, 409
Death claims per 1,000 policies in force, annual rate	8. 4	11. 5

Deaths from all causes in certain large cities of the United States during the week ended December 29, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, January 3, 1924, issued by the Bureau of the Census, Department of Commerce.)

City.	Week ended Dec. 29, 1923.		Annual death rate per 1,000, corresponding week, 1922.	Deaths under 1 year.		Infant mortality rate, week ended Dec.29, 1923.[2]
	Total deaths.	Death rate.[1]		Week ended Dec.29, 1923.	Corresponding week, 1922.	
Total	7,040	12.5	14.2	818	995	.....
Akron, Ohio	32	8.0	11.0	5	9	59
Albany, N. Y.[3]	41	18.2	15.7	3	2	66
Atlanta, Ga	76	17.8	20.4	9	12	.....
Baltimore, Md.[3]	185	12.5	16.6	21	38	62
Birmingham, Ala	60	16.0	16.4	14	10	.....
Boston, Mass	210	14.2	17.1	24	29	69
Bridgeport, Conn	24	8.7	10.9	5	5	69
Buffalo, N. Y	122	11.9	12.8	19	26	80
Cambridge, Mass	24	11.2	19.3	4	7	71
Camden, N. J.[3]	25	10.5	18.0	5	9	83
Chicago, Ill.[3]	614	11.1	11.7	71	90	64
Cincinnati, Ohio	120	15.4	19.1	11	13	72
Cleveland, Ohio[3]	148	8.7	12.5	18	31	49
Columbus, Ohio	69	13.8	17.7	7	13	73
Dallas, Tex	44	12.9	13.9	7	14	.....
Dayton, Ohio	33	10.4	13.5	6	4	99
Denver, Colo	76	14.6	13.1	9	2	.....
Des Moines, Iowa	40	14.8	.....	2	.....	.....
Detroit, Mich	241	12.6	12.2	48	39	96
Duluth, Minn	17	8.3	6.5	2	4	46
Erie, Pa	33	15.3	11.4	3	3	61
Fall River, Mass.[3]	28	12.1	13.0	6	9	85
Flint, Mich	19	8.4	13.1	2	3	40
Forth Worth, Tex	32	11.6	17.3	8	7	.....
Grand Rapids, Mich	25	8.9	14.5	2	7	32
Houston, Tex	39	13.1	12.5	7	8	.....
Indianapolis, Ind	113	17.2	13.9	13	11	100
Jacksonville, Fla	28	14.6	25.1	5	4	.....
Jersey City, N. J	71	12.0	14.3	10	11	67
Kansas City, Kans	32	14.4	9.2	4	2	92
Kansas City, Mo	80	11.9	17.6	14	10	.....
Los Angeles, Calif	260	20.3	15.3	25	25	94
Louisville, Ky	61	12.3	14.6	3	6	32
Lowell, Mass	27	12.2	14.6	3	3	52
Lynn, Mass	14	7.1	23.1	1	9	26
Memphis, Tenn	53	16.2	19.9	6	10	.....
Milwaukee, Wis	77	8.3	11.5	10	8	50
Minneapolis, Minn	98	12.5	12.4	13	17	71
Nashville, Tenn.[3]	38	16.4	20.4	5	5	.....
New Bedford, Mass	15	6.0	16.8	6	9	94
New Haven, Conn	42	12.7	7.7	8	2	104
New Orleans, La	133	17.1	19.8	8	18	.....
New York, N. Y	1,313	11.5	13.0	151	155	60
Bronx Borough	152	9.4	11.5	9	15	32
Brooklyn Borough	455	11.0	13.0	57	67	60
Manhattan Borough	576	13.2	13.6	71	64	69
Queens Borough	84	8.2	9.9	10	5	54
Richmond Borough	46	18.8	23.9	4	4	73

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1922. Cities left blank are not in the registration area for births.
[3] Deaths for week ended Friday, Dec. 28, 1923.

Deaths from all causes in certain large cities of the United States during the week ended December 29, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, January 3, 1924, issued by the Bureau of the Census, Department of Commerce)—Continued.

City.	Week ended Dec. 29, 1923.		Annual death rate per 1,000, corresponding week, 1922.	Deaths under 1 year.		Infant mortality rate, week ended Dec. 29, 1923.
	Total deaths.	Death rate.		Week ended Dec. 29, 1923.	Corresponding week, 1922.	
Newark, N. J	84	10.0	13.8	11	14	52
Norfolk, Va	21	6.9	13.4	2	3	35
Oakland, Calif	48	10.4	13.9	33	7	39
Omaha, Nebr	45	11.5	15.3	5	8	54
Paterson, N. J	41	15.3	13.2	6	4	96
Philadelphia, Pa	473	12.8	16.2	50	77	65
Pittsburgh, Pa	180	15.3	18.3	32	30	111
Portland, Oreg	57	10.9	11.6	5	5	51
Providence, R. I	58	12.5	16.2	5	7	41
Richmond, Va	63	18.1	14.0	9	8	110
Rochester, N. Y	66	10.8	12.4	4	7	32
St. Louis, Mo	223	14.5	15.0	15	22	.....
St. Paul, Minn	45	9.7	15.7	6	5	55
Salt Lake City, Utah [3]	30	12.4	12.2	7	4	114
San Antonio, Texas	38	10.7	18.4	3	15	.....
San Francisco, Calif	165	16.0	12.4	5	9	30
Seattle, Wash	61	10.1	9.1	1	9	9
Spokane, Wash	19	9.5	12.0	1	2	22
Springfield, Mass	33	11.9	13.4	3	7	43
Syracuse, N. Y	43	12.2	13.8	6	4	78
Tacoma, Wash	21	10.8	10.4	1	4	25
Toledo, Ohio	71	13.8	13.6	11	10	111
Trenton, N. J	45	18.4	21.3	7	7	119
Utica, N. Y	28	14.1	.....	0	.....	0
Washington, D. C	142	16.9	17.0	8	16	46
Wilmington, Del	33	14.6	16.2	2	0	41
Worcester, Mass	55	14.9	15.2	4	10	46
Yonkers, N. Y	20	9.7	10.9	3	2	65

[3] Deaths for week ended Friday, Dec. 28, 1923.

MORTALITY SUMMARY FOR 70 LARGE CITIES, 1923.

Deaths from all causes, death rate, and infant mortality in 70 large cities of the United States for 1923 and comparison with 1922.

[From the Weekly Health Index, Bureau of the Census, Department of Commerce.]

City.[1]	Total deaths.	Death rate.[2]	Deaths under 1 year.	Provisional infant mortality rate, 1923.[2 3]	Infant mortality rate, 1922.	Mortality data for calendar year 1922.		
						Total deaths.	Death rate.	Deaths under 1 year.
Total	377,852	13.0	49,106	[4] 75	[4] 80	359,392	12.6	50,089
Akron [5]	1,621	7.8	301	61	70	1,568	7.5	311
Albany [6]	1,910	16.3	205	86	80	1,824	15.7	191
Atlanta [6]	3,933	17.7	557	.....	.....	3,430	15.7	448
Baltimore	11,582	15.0	1,505	84	92	10,824	14.2	1,591
Birmingham [6]	3,041	15.6	456	.....	.....	2,620	13.7	366
Boston	11,383	14.8	1,550	83	92	11,420	14.9	1,719
Bridgeport [5]	1,625	11.4	262	79	64	1,590	11.1	220
Buffalo	7,057	13.2	1,069	87	103	7,081	13.4	1,247

[1] Cities appearing in the summary are those shown for the 52 weeks in the Weekly Health Index.
[2] Allowance has been made for the extra day, which must be added to the 52 weeks to give a period of 365 days.
[3] Infant mortality rate is based upon deaths under 1 year as returned each week and estimated births, 1923.
[4] Infant mortality rate for the 56 cities in the birth registration area, appearing in the summary.
[5] Enumerated population, January 1, 1920.
[6] Cities with no infant mortality rate given are not in the registration area for births.

Deaths from all causes, death rate, and infant mortality in 70 large cities of the United States for 1923 and comparison with 1922—Continued.

City.	Total deaths.	Death rate.	Deaths under 1 year.	Provisional infant mortality rate, 1923.	Infant mortality rate, 1922.	Mortality data for calendar year 1922.		
						Total deaths.	Death rate.	Deaths under 1 year.
Cambridge	1,522	13.7	201	67	76	1,467	13.2	227
Camden	1,783	14.4	285	87	88	1,676	13.7	278
Chicago	33,712	11.7	4,907	87	84	31,715	11.2	4,854
Cincinnati	6,583	16.2	672	81	74	6,043	14.9	581
Cleveland	9,570	10.8	1,379	69	78	8,801	10.3	1,454
Columbus	3,968	15.2	380	70	84	3,366	13.2	423
Dallas [6]	2,175	12.0	355	.....	.....	2,174	12.6	349
Dayton	1,946	11.8	248	80	71	1,783	11.0	218
Denver [6]	3,961	14.6	464	.....	.....	4,293	16.0	425
Des Moines [6]	1,652	11.8	153	.....	.....	(7)	(7)	(7)
Detroit [5]	13,030	13.1	2,456	88	87	11,018	11.1	2,255
Duluth	995	9.4	124	51	74	992	9.5	165
Erie	1,338	11.9	164	65	67	1,196	10.9	164
Fall River	1,661	13.8	336	91	127	1,937	16.0	449
Flint	1,300	11.1	248	82	65	839	7.5	170
Fort Worth [6]	1,191	8.3	159	.....	.....	1,204	9.9	153
Grand Rapids	1,709	11.7	206	62	61	1,583	11.0	193
Houston [6]	1,794	11.6	254	.....	.....	2,038	13.6	264
Indianapolis	4,928	14.4	594	86	77	4,412	13.2	511
Jacksonville, Fla. [6]	1,702	17.1	200	.....	.....	1,513	15.5	174
Jersey City	3,846	12.5	552	77	86	3,632	11.9	628
Kansas City, Kans.	1,652	14.3	211	81	90	1,493	13.1	219
Kansas City, Mo. [6]	5,024	14.3	641	.....	.....	5,006	14.6	638
Los Angeles	10,723	15.9	1,157	69	73	9,636	15.2	1,013
Louisville	4,125	16.1	567	105	76	3,617	14.1	379
Lowell	1,671	14.6	307	105	99	1,536	13.4	288
Lynn	1,188	11.6	145	71	73	1,195	11.8	151
Memphis [6]	3,351	19.8	399	.....	.....	2,985	17.8	341
Milwaukee	5,207	10.8	853	75	83	4,702	9.9	835
Minneapolis	4,489	11.0	506	52	54	4,333	10.8	513
Nashville [6]	2,272	18.6	252	.....	.....	2,000	16.6	263
New Bedford	1,589	12.2	348	104	104	1,566	12.3	348
New Haven	2,156	12.5	274	69	75	2,266	13.3	294
New Orleans [6]	7,129	17.7	761	.....	.....	6,683	16.7	809
New York	69,300	11.7	8,563	67	75	69,846	12.0	9,680
Bronx Borough	7,932	9.5	728	49	64	7,472	9.2	960
Brooklyn Borough	22,886	10.6	2,860	59	72	24,516	11.6	3,514
Manhattan Borough	31,234	13.8	4,204	79	80	30,626	13.5	4,253
Queens Borough	5,250	9.8	592	62	75	5,540	10.7	731
Richmond Borough	1,998	15.7	179	63	78	1,692	13.6	222
Newark, N. J.	5,188	11.9	740	67	75	5,058	11.7	823
Norfolk	1,646	10.4	283	99	86	1,513	12.1	227
Oakland	2,593	10.8	249	60	64	2,628	11.3	257
Omaha	2,724	13.4	341	70	71	2,638	13.1	329
Paterson	1,831	13.2	208	65	75	1,764	12.7	240
Philadelphia	26,658	13.9	3,200	78	83	25,101	13.2	3,361
Pittsburgh	9,529	15.4	1,426	93	96	8,721	14.3	1,420
Portland, Oreg.	3,006	11.0	251	50	56	3,183	11.8	291
Providence	3,579	14.8	536	84	75	3,328	13.8	473
Richmond	2,818	15.6	464	105	89	2,636	14.8	367
Rochester	3,521	11.1	422	64	78	3,691	11.8	506
St. Louis [6]	10,839	13.5	970	.....	.....	9,933	12.5	854
St. Paul	3,021	12.5	322	53	65	2,797	11.7	372
Salt Lake City	1,565	12.4	204	65	73	1,539	12.4	232
San Antonio [6]	2,792	15.2	505	.....	.....	2,744	15.4	584
San Francisco	7,276	13.5	499	58	56	7,462	14.1	485
Seattle [5]	3,006	9.5	252	47	50	3,045	9.6	262
Springfield, Mass.	1,675	11.6	228	74	73	1,601	11.4	225
Syracuse	2,378	12.9	338	81	89	2,290	12.7	358
Tacoma	1,045	10.3	94	41	58	1,079	10.8	115
Toledo	3,375	12.6	409	75	74	3,062	11.7	374
Trenton	1,938	15.3	252	79	107	1,945	15.6	329
Utica	1,286	12.5	161	67	82	1,466	14.4	192
Washington, D. C. [5]	7,098	16.3	819	91	85	6,305	14.4	770
Wilmington, Del.	1,576	13.4	229	95	100	1,393	12.1	247
Worcester	2,424	12.7	336	77	80	2,441	13.0	349
Yonkers	1,071	10.0	142	60	83	1,126	10.7	198

[5] Enumerated population, January 1, 1920.
[6] Cities with no infant mortality rate given are not in the registration area for births.
[7] Not available.

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

CURRENT STATE SUMMARIES.

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers.

Reports for Week Ended January 5, 1924.

ALABAMA.

	Cases.
Chicken pox	64
Diphtheria	15
Influenza	62
Malaria	13
Measles	345
Mumps	20
Pneumonia	65
Scarlet fever	12
Smallpox	7
Tuberculosis	36
Typhoid fever	15
Whooping cough	64

ARIZONIA.

Chicken pox	6
Diphtheria	2
Measles	39
Mumps	3
Scarlet fever	5
Typhoid fever	2

ARKANSAS.

Chicken pox	26
Diphtheria	16
Influenza	120
Malaria	27
Measles	92
Mumps	6
Pellagra	2
Scarlet fever	15
Smallpox	8
Trachoma	1
Tuberculosis	11
Typhoid fever	26
Whooping cough	81

CALIFORNIA.

Diphtheria	268
Influenza	26
Lethargic encephalitis:	
Lodi	1
Los Angeles	1
Oakland	1
San Francisco	1

CALIFORNIA—continued.

	Cases.
Measles	347
Poliomyelitis:	
Santa Clara	1
Kern County	1
Scarlet fever	217
Smallpox:	
Long Beach	15
Los Angeles	70
Los Angeles County	38
Ontario	6
Scattering	14
Typhoid fever	4

COLORADO.

(Exclusive of Denver.)

Chicken pox	36
Diphtheria	23
Measles	221
Mumps	5
Pneumonia	12
Scarlet fever	29
Smallpox	1
Tuberculosis	94
Typhoid fever	5
Whooping cough	2

CONNECTICUT.

Chicken pox	75
Conjunctivitis (infectious)	4
Diphtheria	60
Influenza	4
Measles	251
Mumps	27
Pneumonia (lobar)	35
Scarlet fever	132
Septic sore throat	1
Tuberculosis (all forms)	28
Typhoid fever	2
Whooping cough	56

DELAWARE.

Chicken pox	16
Diphtheria	5
Mumps	1

DELAWARE—continued.

	Cases.
Pneumonia	3
Scarlet fever	10
Tuberculosis	3
Whooping cough	7

FLORIDA.

Diphtheria	10
Influenza	1
Malaria	1
Pneumonia	3
Scarlet fever	2
Typhoid fever	6

GEORGIA.

Cerebrospinal meningitis	1
Chicken pox	18
Diphtheria	17
German measles	13
Hookworm disease	2
Influenza	15
Leprosy	1
Malaria	4
Measles	168
Mumps	11
Pneumonia	31
Scarlet fever	8
Smallpox	84
Tuberculosis (pulmonary)	7
Typhoid fever	1
Typhus fever	1
Whooping cough	4

ILLINOIS.

Diphtheria:	
Cook County	98
La Salle County	10
Madison County	13
Scattering	73
Influenza	16
Measles	499
Pneumonia	296
Scarlet fever:	
Cook County	106
Kane County	11
McLean County	12
Macon County	10
Scattering	87
Smallpox	4
Tuberculosis	146
Typhoid fever	52
Whooping cough	84

INDIANA.

Cerebrospinal meningitis—Ripley County	7
Chicken pox	74
Diphtheria:	
Daviess County	9
Elkhart County	10
Madison County	12
Miami County	12
Morgan County	10
St Joseph County	16
Scattering	74
Measles	306
Pneumonia	9
Poliomyelitis—Lake County	1

INDIANA—continued.

	Cases.
Scarlet fever:	
Allen County	10
Lake County	11
St. Joseph County	16
Scattering	66
Smallpox:	
Delaware County	11
Scattering	26
Tuberculosis	18
Typhoid fever	10
Whooping cough	39

IOWA.

Diphtheria	62
Scarlet fever	57
Smallpox	8
Typhoid fever	8

KANSAS.

Chicken pox	130
Diphtheria	76
German measles	2
Influenza	8
Measles	339
Mumps	87
Pneumonia	51
Poliomyelitis	2
Scarlet fever	99
Septic sore throat	1
Smallpox	16
Tuberculosis	59
Typhoid fever	2
Whooping cough	60

LOUISIANA.

Diphtheria	29
Hookworm disease	17
Influenza	10
Measles	120
Pneumonia	19
Scarlet fever	11
Smallpox	18
Tuberculosis	20
Typhoid fever	5

MAINE.

Chicken pox	49
Diphtheria	14
German measles	4
Influenza	1
Measles	98
Mumps	49
Pneumonia	19
Scarlet fever	25
Septic sore throat	2
Tuberculosis	6
Typhoid fever	1
Vincent's angina	3
Whooping cough	53

MARYLAND.[1]

Chicken pox	129
Diphtheria	37
German measles	4
Influenza	22
Measles	102
Mumps	4

[1] Week ended Friday.

MARYLAND—continued.

	Cases.
Ophthalmia neonatorum	1
Pneumonia (all forms)	83
Scarlet fever	75
Septic sore throat	3
Tetanus	1
Tuberculosis	56
Typhoid fever	14
Whooping cough	46

MASSACHUSETTS.

Cerebrospinal meningitis	2
Chicken pox	310
Conjunctivitis (suppurative)	6
Diphtheria	260
German measles	14
Influenza	9
Lethargic encephalitis	1
Malaria	1
Measles	355
Mumps	210
Ophthalmia neonatorum	13
Pneumonia (lobar)	101
Poliomyelitis	4
Scarlet fever	392
Septic sore throat	1
Tuberculosis (all forms)	114
Typhoid fever	3
Whooping cough	94

MICHIGAN.

Diphtheria	207
Measles	376
Pneumonia	84
Scarlet fever	301
Smallpox	85
Tuberculosis	34
Typhoid fever	7
Whooping cough	43

MINNESOTA.

Chicken pox	94
Diphtheria	96
Influenza	2
Measles	186
Pneumonia	3
Scarlet fever	227
Smallpox	52
Tuberculosis	52
Typhoid fever	3
Whooping cough	1

MISSISSIPPI.

Diphtheria	31
Scarlet fever	4
Smallpox	8
Typhoid fever	2

MISSOURI.

(Exclusive of Cape Girardeau.)

Anthrax	1
Cerebrospinal meningitis	1
Chicken pox	87
Diphtheria	98

MISSOURI—continued.

	Cases.
Influenza	15
Measles	507
Mumps	28
Ophthalmia neonatorum	1
Pneumonia	29
Scarlet fever	115
Smallpox	13
Tetanus	1
Trachoma	2
Tuberculosis	120
Typhoid fever	7
Whooping cough	93

MONTANA.

Diphtheria	11
Scarlet fever	23
Smallpox	39
Typhoid fever	3

NEW MEXICO.

Chicken pox	4
Diphtheria	22
Influenza	1
Malaria	1
Measles	13
Mumps	1
Pneumonia	2
Scarlet fever	5
Smallpox	1
Tuberculosis	24
Whooping cough	8

NEW YORK.

(Exclusive of New York City and including Buffalo figures for two weeks.)

Diphtheria	256
Influenza	27
Lethargic encephalitis	2
Measles	1,163
Pneumonia	303
Scarlet fever	402
Smallpox	30
Typhoid fever	28
Whooping cough	378

NORTH CAROLINA.

Cerebrospinal meningitis	1
Chicken pox	183
Diphtheria	67
German measles	8
Measles	1,273
Ophthalmia neonatorum	1
Scarlet fever	57
Septic sore throat	4
Smallpox	130
Typhoid fever	9
Whooping cough	272

OREGON.

Chicken pox	19
Diphtheria:	
Portland	22
Scattering	22
Measles	446
Pneumonia	[1] 8

[1] Deaths.

OREGON—continued.

	Cases.
Scarlet fever	19
Smallpox	12
Tuberculosis	10
Typhoid fever	2

SOUTH DAKOTA.

Chicken pox	9
Diphtheria	18
Measles	97
Mumps	10
Pneumonia	6
Scarlet fever	62
Smallpox	2
Tuberculosis	4
Typhoid fever	1
Whooping cough	9

TEXAS.

Chicken pox	40
Dengue	4
Diphtheria	50
Influenza	23
Measles	250
Mumps	4
Pellagra	2
Pneumonia	24
Scarlet fever	41
Smallpox	18
Trachoma	17
Tuberculosis	14
Typhoid fever	5
Whooping cough	23

VERMONT.

Chicken pox	38
Diphtheria	6
Measles	47
Mumps	16
Scarlet fever	3
Smallpox	4
Whooping cough	57

VIRGINIA.

Cerebrospinal meningitis:	
Caroline County	1
Henrico County	1
Spotsylvania County	1

WASHINGTON.

Chicken pox	39
Diphtheria	22
Impetigo contagiosa	1

WASHINGTON—continued.

	Cases.
Measles	1,574
Mumps	10
Pneumonia	5
Scarlet fever:	
Spokane	21
Scattering	27
Smallpox:	
Cowlitz County	24
Scattering	15
Tuberculosis	37
Typhoid fever	1
Whooping cough	8

WEST VIRGINIA.

Diphtheria	11
Scarlet fever	16
Smallpox	1

WISCONSIN.

Milwaukee:	
Cerebrospinal meningitis	3
Chicken pox	43
Diphtheria	14
German measles	1
Influenza	1
Measles	5
Pneumonia	3
Scarlet fever	31
Smallpox	1
Tuberculosis	8
Typhoid fever	1
Whooping cough	27
Scattering:	
Cerebrospinal meningitis	1
Chicken pox	161
Diphtheria	71
German measles	2
Influenza	31
Measles	246
Pneumonia	21
Scarlet fever	255
Smallpox	20
Tuberculosis	7
Typhoid fever	1
Whooping cough	129

WYOMING.

Chicken pox	1
Diphtheria	1
Measles	124
Pneumonia	2
Scarlet fever	8

Reports for Week Ended December 29, 1923.

NORTH DAKOTA.

	Cases.
Chicken pox	4
Diphtheria	32
German measles	21
Lethargic encephalitis	1
Measles	137
Pneumonia	14
Poliomyelitis	1
Scarlet fever	74
Smallpox	4
Tuberculosis	2

NORTH DAKOTA—continued.

	Cases.
Typhoid fever	1
Whooping cough	7

WYOMING.

Chicken pox	8
Diphtheria	1
Influenza	2
Measles	46
Scarlet fever	8
Typhoid fever	1
Whooping cough	7

SUMMARY OF CASES REPORTED MONTHLY BY STATES.

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week.

State.	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
October, 1923.										
Ohio	5	1,464	8	3	300	.....	25	1,689	65	302
November, 1923.										
District of Columbia	2	77	3	.....	24	.....	4	101	25	12
New Mexico	.....	54	5	1	146	.....	.....	36	.....	33
North Carolina	3	851	.....	.....	1,907	.....	3	445	228	61
South Carolina	.....	331	51	6	165	.....	1	26	220	10
December, 1923.										
Arizona	.....	26	.....	.....	72	.....	.....	56	2	7
Connecticut	4	306	19	.....	883	.....	7	457	1	28

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923.

CEREBROSPINAL MENINGITIS.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Dec. 22, 1923.	
		Cases.	Deaths.
California:			
San Francisco	0	1	.....
San Jose	0	.....	1
Georgia:			
Atlanta	0	.....	1
Illinois:			
Chicago	1	2	2
Kansas:			
Wichita	0	1	1
Louisiana:			
New Orleans	0	1	.....
Maine:			
Lewiston	0	1	1
Massachusetts:			
Boston	1	1	.....
Michigan:			
Detroit	0	2	.....
Flint	0	1	.....
Saginaw	0	.....	1
Missouri:			
St. Louis	0	4	2
New Jersey:			
Montclair	0	.....	1
New York:			
New York	3	1	2
North Carolina:			
Raleigh	0	1	.....
Pennsylvania:			
Philadelphia	0	2	.....
Viriginia:			
Norfolk	0	.....	1

DIPHTHERIA.

See p. 72; also Current State summaries, p. 61, and Monthly summaries by States, above.

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued

INFLUENZA.

City.	Cases. Week ended Dec. 23, 1922.	Cases. Week ended Dec. 22, 1923.	Deaths, week ended Dec. 22, 1923.
Alabama:			
Anniston		6	
Birmingham	3	8	1
Montgomery	1	4	
Tuscaloosa		3	
Arkansas:			
Little Rock	1	1	
California:			
Bakersfield			1
Berkeley	3		
Long Beach			1
Los Angeles	4	22	3
Oakland	2	5	
Sacramento	3		
San Francisco	4		
San Jose		1	
Santa Ana		4	
Stockton			1
Colorado:			
Denver			2
Connecticut:			
Bridgeport	3		
District of Columbia:			
Washington	2		
Florida:			
Tampa	1		
Georgia:			
Atlanta	85	4	3
Augusta	31		
Brunswick	48		
Macon	35		
Rome	16		
Savannah	23	4	
Illinois:			
Chicago	16	18	8
Danville	1		
Decatur		1	
Jacksonville	1		
Rockford			1
Indiana:			
Muncie			1
Kentucky:			
Louisville	2	1	
Louisiana:			
New Orleans		2	2
Maine:			
Biddeford		1	
Maryland:			
Baltimore	27	15	1
Massachusetts:			
Beverly	1		
Boston	8	5	2
Cambridge	1	3	
Chelsea		1	
Danvers	4		
Massachusetts—Contd.			
Everett	4		
Fall River	1		
Haverhill	1		
Lawrence	2		
Leominster	2		
Lowell	1		
Lynn		1	
Malden	1		
Quincy	1		
Michigan:			
Detroit	3	2	2
Minnesota:			
St. Paul			1
Missouri:			
Kansas City		2	2
St. Joseph	1		
St. Louis		1	1
Montana:			
Great Falls			1
Missoula	1		
New Jersey:			
Kearny	2		
Newark	16	12	
Passaic	1	1	
Trenton		1	
New York:			
Amsterdam		2	
Buffalo		2	1
Cohoes	1		
Mount Vernon	1	1	1
New York	54	22	6
Ohio:			
Akron	1		
Cincinnati	1		1
Cleveland	1	7	
Columbus			1
Pennsylvania:			
Philadelphia	5	4	2
South Carolina:			
Charleston	29		1
Tennessee:			
Memphis			2
Nashville			2
Texas:			
Beaumont			1
Dallas		1	2
Virginia:			
Roanoke	10		
West Virginia:			
Bluefield			1
Fairmont	1		
Wisconsin:			
Kenosha		1	

LETHARGIC ENCEPHALITIS.

City.	Cases.	Deaths.
Illinois:		
Chicago	1	1
Galesburg	1	
Maryland:		
Baltimore	1	
Massachusetts:		
Boston		1
Michigan:		
Detroit	2	1
Missouri:		
Kansas City	1	1
New York:		
New York	1	2
Ohio:		
Cleveland	2	
Wisconsin:		
Milwaukee		1

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

MALARIA.

City.	Cases.	Deaths.
Georgia:		
Augusta	3	

MEASLES.

See p. 72; also Current State summaries, p. 61, and Monthly summaries by States, p. 65.

PELLAGRA.

City.	Cases.	Deaths.
Alabama:		
Mobile	1	1
California:		
Glendale		1
Oakland	1	1
Georgia:		
Atlanta		1
Massachusetts:		
Quincy	2	
South Carolina:		
Charleston		3
Columbia		1
Tennessee:		
Memphis	1	
Texas:		
Waco		1

PNEUMONIA (ALL FORMS).

Alabama:		
Anniston	6	2
Birmingham	18	7
Mobile		4
Montgomery		3
Arkansas:		
Little Rock	3	
California:		
Glendale		2
Long Beach	3	2
Los Angeles	28	17
Oakland		5
Pasadena		2
Riverside	1	
Sacramento		3
San Francisco	22	14
San Jose	6	1
Stockton		5
Colorado:		
Denver		14
Pueblo		1
Connecticut:		
Bridgeport		1
Bristol	3	1
Hartford	3	
New Haven		5
New London	1	
Stonington		1
Delaware:		
Wilmington		5
Florida:		
Tampa		1
Georgia:		
Albany	3	
Atlanta	16	15
Augusta		6
Brunswick	1	
Macon	3	
Rome	1	
Savannah		5
Illinois:		
Alton		1
Aurora	1	
Chicago	178	65
Decatur	9	3
East St. Louis		3
Elgin	5	
Evanston	1	
Illinois—Continued.		
Freeport	3	1
Galesburg	3	2
Jacksonville		1
Kewanee		2
Oak Park	4	1
Pekin	3	
Quincy	2	1
Rockford		2
Springfield	2	
Indiana:		
Crawfordsville		1
Elwood		1
Hammond		1
Indianapolis		1
Kokomo		1
Michigan City		1
Muncie	1	
Terre Haute		4
Iowa:		
Burlington	2	
Kansas:		
Fort Scott		1
Kansas City	8	
Parsons	1	
Topeka	7	1
Wichita	3	
Kentucky:		
Covington		1
Henderson	3	
Lexington		2
Louisville		13
Louisiana:		
New Orleans		15
Shreveport		3
Maine:		
Biddeford	3	1
Lewiston		2
Portland		3
Maryland:		
Baltimore	30	28
Cumberland		2
Massachusetts:		
Amesbury		1
Arlington		1
Boston		31
Cambridge		5
Chelsea		1

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.
Massachusetts—Continued.		
Chicopee	2	1
Everett	1	
Fall River	1	
Framingham		1
Haverhill	4	1
Lawrence	1	
Leominster	1	
Lowell		3
Lynn		4
Malden		4
Medford		1
Methuen	1	
New Bedford		4
Newburyport		1
Newton	3	
North Adams		1
Peabody		1
Pittsfield		1
Somerville	3	
Southbridge		1
Springfield	2	
Taunton		2
Waltham		1
Woburn		1
Worcester		5
Michigan:		
Battle Creek	3	
Detroit	54	21
Flint	4	2
Grand Rapids	4	2
Hamtramck		2
Holland	1	
Jackson	3	2
Kalamazoo	11	5
Marquette	1	
Muskegon		1
Port Huron	1	
Saginaw		3
Minnesota:		
Duluth	2	
Minneapolis		5
St. Paul		10
Missouri:		
Kansas City	20	11
St. Joseph		4
Montana:		
Billings		2
Nebraska:		
Lincoln		1
Omaha		10
Nevada:		
Reno	3	
New Hampshire:		
Keene		1
New Jersey:		
Atlantic City	1	
Bayonne	2	
Bloomfield	2	1
Camden	7	5
Clifton	2	1
East Orange	1	
Elizabeth		1
Garfield	2	
Hackensack		2
Hoboken		1
Jersey City	3	
Kearny		1
Montclair		1
Morristown		1
Newark	68	14
Orange		1
Passaic	2	1
Paterson	7	
Plainfield	1	
Trenton		3
West Orange	2	
New York:		
Albany	8	
Amsterdam		1
New York—Continued.		
Buffalo	33	18
Cohoes	4	
Glens Falls		1
Hornell	2	
Hudson	3	
Lackawanna	3	1
Lockport	2	1
Middletown	1	
Mount Vernon	5	2
New York	319	150
Newburgh		3
Olean	1	
Poughkeepsie		1
Rochester	17	4
Rome	4	
Schenectady	1	
Syracuse	14	9
White Plains	2	1
North Carolina:		
Durham		2
Greensboro		4
Salisbury		1
Winston-Salem		6
North Dakota:		
Fargo		1
Ohio:		
Ashtabula		2
Barberton	2	
Bellaire		2
Canton		5
Chillicothe	1	
Cincinnati		15
Cleveland	32	16
Columbus		4
Cuyahoga Falls	1	
Dayton	2	
East Cleveland	2	1
Findlay		1
Lancaster		1
Lima		2
Lorain		1
Mansfield	1	
Newark		1
Piqua		1
Sandusky	2	1
Springfield		2
Toledo		4
Youngstown		6
Oklahoma:		
Oklahoma		4
Pennsylvania:		
Philadelphia	92	54
Pittsburgh		27
Rhode Island:		
Cranston	2	1
Cumberland	1	
Pawtucket		1
Providence		5
South Carolina:		
Charleston		3
Columbia		4
Greenville		1
Tennessee:		
Memphis		12
Nashville		3
Texas:		
Beaumont		1
Corpus Christi		1
Dallas		4
El Paso		7
Fort Worth		2
Houston		3
San Antonio		5
Utah:		
Salt Lake City		7
Virginia:		
Alexandria	1	
Lynchburg		3
Newport News		1

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Virginia—Continued.			West Virginia—Continued.		
Norfolk		4	Parkersburg		1
Petersburg		2	Wheeling		4
Portsmouth		2	Wisconsin:		
Richmond		9	Ashland	1	
Roanoke	3	1	Eau Claire	6	
West Virginia:			Kenosha	1	
Charleston		4	Milwaukee		7
Huntington		2	Oshkosh		1
Morgantown	1		Racine		1

POLIOMYELITIS (INFANTILE PARALYSIS).

The column headed "Median" for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Dec. 22, 1923.		City.	Median for previous years.	Week ended Dec. 22, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California:				Minnesota:			
Long Beach	0	1		Mankato	0	1	
Los Angeles	0	1		New York:			
Oakland	0	1		New York	0	3	1
Illinois:				White Plains	0	1	
Rock Island	0	1		Ohio:			
Indiana:				Cleveland	0	1	
Muncie	0	1	1	West Virginia:			
Massachusetts:				Fairmont	0	1	
Boston	0	1					
Lowell	0	1					

RABIES IN ANIMALS.

City.	Cases.	City.	Cases.
California:		New Jersey:	
Los Angeles	11	Plainfield	2
Pasadena	1	Tennessee:	
Kentucky:		Memphis	2
Louisville	1		

SCARLET FEVER.

See p. 72; also Current State summaries, p. 61, and Monthly summaries by States, p. 65.

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

SMALLPOX.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Dec. 22, 1923.	
		Cases.	Deaths.
Alabama:			
Birmingham	0	2	.....
California:			
Long Beach	0	11	.....
Los Angeles	1	52	.....
Pasadena	0	4	.....
San Francisco	0	2	.....
Santa Ana	0	1	.....
Georgia:			
Atlanta	4	34	.....
Macon	0	1	.....
Illinois:			
Chicago	1	1	.....
Indiana:			
Gary	0	2	.....
Hammond	0	1	.....
Indianapolis	2	4	.....
Mishawaka	0	1	.....
Muncie	2	17	.....
South Bend	0	1	.....
Clinton	0	7	.....
Council Bluffs	1	1	.....
Des Moines	1	1	.....
Kansas:			
Kansas City	2	2	.....
Kentucky:			
Louisville	0	1	.....
Louisiana:			
Shreveport	.....	3	.....
Massachusetts:			
Adams	.....	4	.....
Michigan:			
Battle Creek	0	2	.....
Detroit	5	17	.....
Flint	1	1	.....
Grand Rapids	0	3	.....
Holland	0	4	.....
Jackson	0	4	.....
Minnesota:			
Duluth	0	5	.....
Mankato	0	1	.....
Minneapolis	12	4	.....
St. Paul	8	18	.....
Virginia	0	1	.....
New York:			
Albany	0	3	.....
Schenectady	0	1	.....
North Carolina:			
Greensboro	0	3	.....
Ohio:			
Dayton	0	1	.....
Hamilton	1	1	.....
Steubenville	0	5	.....
Toledo	1	1	.....
Youngstown	0	15	.....
Zanesville	0	13	.....
South Carolina:			
Charleston	0	3	.....
Columbia	0	1	.....
Greenville	0	1	.....
Tennessee:			
Knoxville	0	3	.....
Texas:			
Forth Worth	0	1	.....
Vermont:			
Burlington	0	3	.....
Washington:			
Spokane	26	22	.....
Tacoma	1	4	.....
Wisconsin:			
Eau Claire	1	1	.....
Manitowoc	0	1	.....
Milwaukee	4	3	.....
Oshkosh	0	1	.....
Racine	0	1	.....
Superior	0	9	.....

TETANUS.

City.	Cases.	Deaths.
Indiana:		
Kokomo	.....	1
Kansas:		
Kansas City	1	.....
West Virginia:		
Huntington	.....	1

TUBERCULOSIS.

See p. 72; also Current State summaries, p. 61.

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

TYPHOID FEVER.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Dec. 22, 1923.	
		Cases.	Deaths.
Alabama:			
Birmingham	1	3	.....
California:			
Los Angeles	1	7	.....
Oakland	0	1	.....
Richmond	0	1	.....
San Bernardino	0	.....	1
San Francisco	1	5	.....
Colorado:			
Pueblo	0	1	.....
Connecticut:			
Bristol	0	1	.....
Delaware:			
Wilmington	0	3	.....
Florida:			
St. Petersburg	1	1	.....
Georgia:			
Atlanta	0	.....	1
Brunswick	0	2	.....
Illinois:			
Chicago	5	32	5
Galesburg	0	1	.....
Oak Park	0	1	.....
Quincy	0	1	.....
Springfield	0	1	.....
Kentucky:			
Louisville	0	2	.....
Maine:			
Biddeford	0	1	.....
Sanford	0	1	.....
Maryland:			
Baltimore	4	8	1
Massachusetts:			
Boston	1	4	.....
Brookline	0	1	.....
Everett	0	1	.....
Michigan:			
Ann Arbor	0	.....	1
Detroit	3	.....	2
Flint	0	2	.....
Grand Rapids	0	2	.....
Saginaw	0	2	.....
Minnesota:			
St. Paul	0	.....	1
Missouri:			
Joplin	0	1	.....
Missouri—Continued.			
Kansas City	0	1	.....
St. Louis	2	2	1
New Jersey:			
Bayonne	0	2	.....
Jersey City	0	1	.....
Newark	1	1	2
Trenton	1	2	.....
New York:			
Buffalo	2	1	1
New York	9	7	4
North Tonawanda	0	1	.....
Rome	0	1	.....
Syracuse	0	.....	1
Ohio:			
Cambridge	0	1	.....
Newark	0	2	.....
Sandusky	0	1	.....
Toledo	0	1	.....
Oklahoma:			
Oklahoma	0	1	.....
Shawnee	.....	1	.....
Pennsylvania:			
Bethlehem	0	1	.....
Easton	0	1	.....
Farrell	0	1	.....
Hazleton	0	1	.....
Lancaster	0	1	.....
Philadelphia	3	1	1
Reading	0	4	.....
Washington	0	4	.....
South Dakota:			
Sioux Falls	0	1	.....
Texas:			
Dallas	0	6	.....
El Paso	0	2	.....
Virginia:			
Richmond	0	1	.....
Roanoke	0	.....	1
Washington:			
Bellingham	0	1	.....
Everett	0	1	.....
West Virginia:			
Fairmont	0	1	.....
Wisconsin:			
Milwaukee	0	1	1

TYPHUS FEVER.

City.	Cases.	Deaths.
Georgia:		
Atlanta	1	.....

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Alabama:										
Anniston	17,734	4								
Birmingham	178,806	56	6		15		3		8	6
Mobile	60,777	34	1				1			4
Montgomery	43,464	15								
Selma	15,589		1		17				1	
Tuscaloosa	11,996		3		16		1			
Arkansas:										
Fort Smith	28,870		2		1		1			
Little Rock	65,142				2		3		2	
North Little Rock	14,048		1							
California:										
Alameda	28,806	8	7		1		1	1		
Bakersfield	18,638	8	1		2		1			
Eureka	12,923	8							2	1
Glendale	13,536	10								
Long Beach	55,593	23	5		1		5		1	
Los Angeles	576,673	208	89	5	9		64		62	21
Oakland	216,261	54	29	2	11		4			
Pasadena	45,354	10			2		6		1	
Richmond	16,843	2	1				1			
Riverside	19,341	6	2		1		1		3	1
Sacramento	65,908	17	3		2		2		1	1
San Bernardino	18,721		5				4			2
San Francisco	506,676	161	62	8	121		53	1	32	12
San Jose	39,642	6								
Santa Ana	15,485	5					1			
Santa Cruz	10,917	3								
Stockton	40,296	19	2		10		5		6	2
Vallejo	21,107	2					11			
Colorado:										
Denver	256,491	85	30	4	8		13			13
Pueblo	43,050	10	3		50		3		11	1
Trinidad	10,906		1		8					
Connecticut:										3
Bridgeport	143,555	28	14		3				3	
Bristol	20,620	4	1				3		2	
Hartford	138,036	21	9				25		9	3
Manchester (town)	18,370	2	1							
Meriden (city)	29,867		2		45					
Milford (town)	10,193	2	1				2			
New Haven	162,537	36	2		10		22	1	7	1
New London	25,688	5					2			
Stonington (town)	10,236		4	1	4					
Delaware:										
Wilmington	110,168	32	7	1			9			
Florida:										
St. Petersburg	14,237	7	1		58					
Tampa	51,608	14			21				2	
Georgia:										
Abany	11,555		1							
Atlanta	200,616	82	4		37	2	2		4	3
Augusta	52,548	19								1
Brunswick	14,413	2								
Lagrange	17,038				1					
Macon	52,995				30				3	
Rome	13,252				28					
Savannah	83,252	28	1		8	1			1	4
Idaho:										
Boise	21,393	5								
Illinois:										
Alton	24,682	5	2							
Aurora	36,397	8	13		1		8		3	
Berwyn	14,150	1			5					
Chicago	2,701,705	677	142	12	45		107	3	137	49
Cicero	44,995	7	1		2				1	
Danville	33,776	10			1		1			
Decatur	43,818	7					3			
East St. Louis	66,767		5	1			4			2
Elgin	27,454	10			13		4		2	
Evanston	37,234	6	1				1			
Freeport	19,669	8			1					
Galesburg	23,834	8	1				1			
Herrin	10,986	0								

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Illinois—Continued.										
Jacksonville	15,713	13							1	1
Kewanee	16,026	3			1		1		1	
La Salle	13,050		1		1					
Mattoon	13,552				2		2			
Murphysboro	10,703	2					1			1
Oak Park	39,858	13			2		1			
Quincy	35,978	10	1	1						
Rock Island	35,177	3	5		112					
Rockford	65,651	13	3							1
Springfield	59,183	27	3	1			1			
Indiana:										
Crawfordsville	10,139	2			1		1			
East Chicago	35,967	6			3					
Elwood	10,790	2			25					
Evansville	85,264		2				2			
Frankfort	11,585	1	1		14					
Gary	55,378	18	4	2			10			
Hammond	36,004	10			1		6			
Huntington	14,000	5	2							
Indianapolis	314,194	67	9		1		5			5
Kokomo	30,067	9	2							
La Fayette	22,486	4	2		1		1			1
Logansport	21,626	7								
Michigan City	19,457	5								1
Mishawaka	15,195	6					1			1
Muncie	36,524	16	4		1		1			
Newcastle	14,458	3			1					
Richmond	26,765						2			
South Bend	70,983	11	17		3		13			1
Terre Haute	66,083	25	1	1	2		3			
Iowa:										
Burlington	24,057	5					1		2	
Cedar Rapids	45,566		1				4	1		
Clinton	24,151		8							
Council Bluffs	36,162	6	1	1	2		1			
Des Moines	126,468				8		10			
Dubuque	39,141		4		1					
Iowa City	11,267		1		1		3			
Marshalltown	15,731	0								
Muscatine	16,068	0								
Ottumwa	23,003		1				2			
Sioux City	71,227		8		22		1			
Kansas:										
Atchison	12,630		2		1					
Coffeyville	13,452	1								
Fort Scott	10,693	5	1		1					1
Kansas City	101,177		7		14		5		10	
Lawrence	12,456	2	1						1	
Leavenworth	16,912	4			21					
Parsons	16,028		7							
Topeka	50,022	7	2		6				2	
Wichita	72,217	17	11		5		1		3	1
Kentucky:										
Covington	57,121	18	1				5		1	1
Henderson	12,169	3					1			4
Lexington	41,534	17			1		1			1
Louisville	234,891	79	4		2		4		7	1
Owensboro	17,424		1				1			
Louisiana:										
New Orleans	387,219	135	26		16		18		18	15
Shreveport	43,874	25	1		38					5
Maine:										
Auburn	16,985	4								1
Bath	14,731	3					1			1
Biddeford	18,008	10			1				2	
Lewiston	31,791	9	4		2				2	
Portland	69,272	23	3		2		3			1
Sanford (town)	10,691	8					2			2
Waterville	13,351				10					
Maryland:										
Baltimore	733,826	212	31	1	26		47		24	11
Cumberland	29,837	12	2				1		1	
Frederick	11,066	5	1				1			

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Massachusetts:										
Adams (town)	12,967	3								
Amesbury (town)	10,036	5								
Arlington (town)	18,665	4	3				4			
Attleboro	19,731	7								
Belmont (town)	10,749	4	1				3		1	
Beverly	22,561	8					2			
Boston	748,060	227	73	4	34		76	1	32	24
Braintree (town)	10,580	4					2			1
Brockton	66,254	17	11				8		1	
Brookline	37,748	11					4		1	1
Cambridge	109,694	31	7		5		20		7	2
Chelsea	43,184	10	3				2		1	
Chicopee	36,214	8	3							1
Clinton	12,979	1								
Danvers	11,108						1		1	
Dedham	10,792	1								
Everett	40,120	7	6				5		1	
Fall River	120,485	29	5				6		2	1
Framingham	17,033	4	1		1		2		1	
Gardner	16,971	3			2		1			
Greenfield	15,462	1			1		1			
Haverhill	53,884	9	4		1		3		2	
Lawrence	94,270	30	2		5					
Leominster	19,744	2					6			1
Lowell	112,759	18	1		1		3		2	2
Lynn	99,148	26	3		3		4		2	2
Malden	49,103	8	6		2		4		1	
Medford	39,038	11	6				14			2
Melrose	18,204	6					2			
Methuen	15,189	1	2							
New Bedford	121,217	34	4				1		3	3
Newburyport	15,618	5					1		1	
Newton	46,054	13	1	1	2		1			
North Adams	22,282	5								
Northampton	21,951	5			1				1	
Peabody	19,552	6					6			
Pittsfield	41,763	12	9		34		4			1
Plymouth	13,045	3								
Quincy	47,876	9	4	1	5		4		2	1
Salem	42,529	12			4		13			1
Somerville	93,091	28	6	1	1		9		4	3
Southbridge	14,245	4	2							
Springfield	129,614	31	2		9		17		2	5
Taunton	37,137	11			2				2	
Wakefield	13,025						2			
Waltham	30,915		7	2			5			
Watertown	21,457	2	2		2		3		1	
Webster	13,258	3							1	
West Springfield	13,443	1								
Westfield	18,604	2								
Winchester	10,485	1					2			
Winthrop	15,455	1					2			
Woburn	16,574	4								
Worcester	179,754	49			3				8	1
Michigan:										
Ann Arbor	19,516	8	1		6		1			
Battle Creek	36,164	0	6				11			
Detroit	993,678	227	69	3	80		90		35	18
Flint	91,599	28	16	2	26		2		6	2
Grand Rapids	137,634	33	7		4		16			1
Hamtramck	48,615	10	3	1			2			1
Holland	12,183						4			
Ironwood	15,739	4	4				12			
Jackson	48,374	14	2				6			
Kalamazoo	48,487	21	13				1		1	
Marquette	12,718	1			2		1			
Muskegon	36,570	8	6		1		4			
Pontiac	34,273	13	3		2		15			1
Port Huron	25,944	5	1				2			
Saginaw	61,903	18			11		16			1
Sault Ste. Marie	12,096	2	1		47					

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Minnesota:										
Duluth	98,917	19	2		6		18		2	1
Hibbing	15,089	6					4			
Mankato	12,469						4			
Minneapolis	380,582	88	25	2	14		65	1	52	6
Rochester	13,722	11			7					1
St. Cloud	15,873		8				1		1	
St. Paul	234,698	65	19	2	13		25		12	2
Virginia	14,022						28			
Winona	19,143	2								
Missouri:										
Cape Girardeau	10,252	0					1			
Independence	11,686		4				2			
Joplin	29,902		1							
Kansas City	324,410	90	16		30		9		7	3
St. Joseph	77,939	34	2		105		10			
St. Louis	772,897	213	42	2	7		73	2	31	9
Montana:										
Anaconda	11,668	2					2			
Billings	15,100	6			79					
Great Falls	24,121	4	1		2		12			
Helena	12,037	4	1		1		2			
Missoula	12,668	4	1				2			
Nebraska:										
Lincoln	54,948	10	15	1	59		2			
Omaha	191,601	55	7	1	11		6			3
Nevada:										
Reno	12,016	1					2			
New Hampshire:										
Concord	22,167	6			11					1
Dover	13,029	3			3					
Keene	11,210	4					3			
New Jersey:										
Asbury Park	12,400	1							4	
Atlantic City	50,707	19	6		1		2		1	
Bayonne	76,754		1		1				2	
Bloomfield	22,019	7			1		2			
Camden	116,309	27	5	2			1		3	
Clifton	26,470	6	1							
East Orange	50,710	6	4	1			10			
Elizabeth	95,783		6		5		3		1	
Englewood	11,627	2			1					
Garfield	19,381	4	3							1
Hackensack	17,667	11			1		3		1	1
Harrison	15,721				1		1		1	
Hoboken	68,166	12	2	1	1		5		5	
Jersey City	298,103		3		13		7		6	
Kearny	26,724	6	1				4			
Montclair	28,810	4					1			
Morristown	12,548	6							1	
Newark	414,524	87	20	1	14	1	11	1	25	9
Orange	33,268	8							2	
Passaic	63,841	15	11	1	1		2	1	1	1
Paterson	135,875		5		8		4		5	
Perth Amboy	41,707	5	1		4		1			
Phillipsburg	16,923	3								
Plainfield	27,700	6			34		1			
Rahway	11,042	2	2							
Summit	10,174	1								
Trenton	119,289	30	19		8				2	2
Union (town)	20,651		2				2			
West Hoboken	40,074	3					1			
West New York	29,926	3	3				1			
West Orange	15,573	2					1		2	
New Mexico:										
Albuquerque	15,157	1							8	1
New York:										
Albany	113,344		9		5		21		4	
Amsterdam	33,524	8	2	1	37		8			1
Buffalo	506,775	138	30	3	22		30		19	13
Cohoes	22,987	6			18					
Geneva	14,648	4								
Glens Falls	16,638	5								
Hornell	15,025	3					1			
Hudson	11,745	3							1	

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
New York—Continued.										
Ithaca	17,004	11	1				1	1		
Lackawanna	17,918	8	5		2					
Little Falls	13,029	5			1	1			1	1
Lockport	21,308	5			5		8			
Middletown	18,420				1		2		3	
Mount Vernon	42,726	12			3					
New York	5,620,048	1,243	168	13	176	7	264	1	[1] 107	[1] 98
Newburgh	30,366	12					4		1	
Niagara Falls	50,760	12	3	1	2		3		1	
North Tonawanda	15,482	6	1				6			
Olean	20,506	5					2		1	
Ossining	10,739	1								
Peekskill	15,868	3					1			
Poughkeepsie	35,000	9					3		2	
Rochester	295,750	60	9				13		5	2
Rome	26,341	4	5		38		2			
Saratoga Springs	13,181	6	1		2					
Schenectady	88,723	30	10		80		12			2
Syracuse	171,717	57	21	1	50		33		6	
White Plains	21,031	6	1		5					
North Carolina:										
Durham	21,719	5	2		1				2	
Greensboro	43,525	17	2		1		1			
Raleigh	24,418	13	5		4			1		
Rocky Mount	12,742	4								
Salisbury	13,884	4								
Winston-Salem	48,395	25	2	1	67				3	3
North Dakota:										
Fargo	21,961	7		1						
Grand Forks	14,010						2			
Ohio:										
Ashtabula	22,082	6	4	1			1			
Barberton	18,811	3	2				3			
Bellaire	15,061	4	1				3			
Bucyrus	10,425	3	2	1			1		2	
Cambridge	13,104	3							2	
Canton	87,091	29	11	1	2		3			1
Chillicothe	15,831	4								
Cincinnati	401,247	125	18	1	21		11		12	13
Cleveland	196,841	174	44	6	24		40	1	42	21
Cleveland Heights	15,236						1			
Columbus	237,031	55	13	1			4		6	5
Dayton	152,559	41	8		2		13		3	
East Cleveland	27,292	6					2			
East Liverpool	21,411		1				3		1	
East Youngstown	11,237	1								
Findlay	17,021	7	1				5			
Fremont	12,468	3								
Hamilton	39,675	8								1
Kenmore	12,683			2				2		
Lancaster	14,706	8	1						1	1
Lima	41,326	15	1		4		1			1
Lorain	37,295		6				8		2	
Mansfield	27,824	7	1				1			
Martins Ferry	11,634	4					2		2	
New Philadelphia	10,718				8		4		1	
Newark	26,718	10					1			1
Niles	13,080	1	3		1					
Norwood	24,966	1	2				2			
Piqua	15,044	2								
Salem	10,305	3							1	
Sandusky	22,897	3					1		1	
Springfield	60,840	18					12			1
Steubenville	28,508	10								
Toledo	243,164	69	20	3	6		23		3	9
Youngstown	132,358	35	8	1	2		10	1		
Zanesville	29,569	4					1			
Oklahoma:										
Oklahoma	91,295	25	5		1		2		3	1
Shawnee	15,348	4	1		1		2			
Tulsa	72,075		4				1			

[1] Pulmonary only.

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Pennsylvania:										
Allentown	73,502		5		2				1	
Altoona	60,331		1		3					
Ambridge	12,730		2				10			
Beaver Falls	12,802		1		7					
Berwick	12,181		1		1					
Bethlehem	50,358		9				3			
Braddock	20,879		3		2				1	
Bradford	15,525				5					
Butler	23,778		1							
Canonsburg	10,632		1							
Carbondale	18,640		1		9					
Carlisle	10,916						2			
Carnegie	11,516						1			
Charleroi	11,516		3				1			
Chester	58,030		4				1			
Coatesville	14,515						1			
Connellsville	13,804		2							
Donora	14,131		2							
Dubois	13,681						1			
Duquesne	19,011		1							
Easton	33,813		7							
Erie	93,372		5		3		12		7	
Farrell	15,583		3				2			
Harrisburg	75,917				3		4			
Hazleton	32,277		1				1			
Homestead	20,452		3				2			
Jeannette	10,627		6							
Johnstown	67,327		5		2		4			
Lancaster	53,150		2		1		5		2	
Lebanon	24,643		12				8			
McKeesport	46,781		1							
Monessen	18,179		6							
Mount Carmel	17,469		3						1	
New Castle	44,938		1		3					
New Kensington	11,987		2				2			
Norristown	32,319		2		1					
North Braddock	14,928						1		1	
Philadelphia	1,823,779	477	86	2	30	2	42	1	79	37
Phoenixville	10,484								1	
Pittsburgh	588,343	143	39	6	16		53			11
Plymouth	16,500		1				1		2	
Pottstown	17,431						1			
Pottsville	21,876								2	
Reading	107,784		4		1		1			
Scranton	137,783		2		7		2		4	
Sharon	21,747		1				4			
Shenandoah	24,726		2							
Sunbury	15,721				3					
Swissvale	10,908		2							
Uniontown	15,692		4							
Warren	14,272						1			
Washington	21,480				56		2			
Wilkes-Barre	73,833		5						2	
Wilkinsburg	24,403		3		1					
Williamsport	36,198				48		1			
Woodlawn	12,495				1					
York	47,512		1				2		1	
Rhode Island:										
Cranston	29,407	4					3			
Cumberland (town)	10,077	2							2	2
Pawtucket	64,248	20	4	2				1		
Providence	237,595	57	20		2		53			2
South Carolina:										
Charleston	67,957	45	1		21	1				1
Columbia	37,524	25	1		104	1	2		1	1
Greenville	23,127	3	1		2					
South Dakota:										
Sioux Falls	25,202	7			82		3			
Tennessee:										
Knoxville	77,818				9		1		3	3
Memphis	162,351	65	11		12		3		8	5
Nashville	118,342	45	3		5		3	1	6	1

CITY REPORTS FOR WEEK ENDED DECEMBER 22, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Texas:										
Amarillo	15,494	10					1			
Beaumont	40,422	7					3			1
Corpus Christi	10,522	4	3	1						
Dallas	158,976	40	18	1	200		11	1	1	
El Paso	77,560	30	4		4		5		7	5
Fort Worth	106,482	27	2		9		4	1		1
Galveston	44,255	12	1				2			1
Houston	138,276	41	4	2	2		3			6
San Antonio	161,379	57	2	1						8
Waco	38,500	5								1
Utah:										
Provo	10,303	4	1							
Salt Lake City	118,110	39	5		14		1		1	1
Vermont:										
Barre	10,008	3			1		2			
Burlington	22,779	2			1		3			
Virginia:										
Alexandria	18,060	5	1	1			1			
Charlottesville	10,688	1								
Danville	21,539	6	2				1		1	
Lynchburg	30,070	11	4		2				1	1
Newport News	35,596	4			2					
Norfolk	115,777		6		31		7		4	2
Petersburg	31,012	6	3		1		1		2	1
Portsmouth	54,387	13			5					3
Richmond	171,667	57	2		6		3		3	6
Roanoke	50,842	19	2		2		1		2	2
Washington:										
Bellingham	25,585				6		1			
Everett	27,644				1					
Seattle	315,312		6		206		6			
Spokane	104,437		7		328		41		28	
Tacoma	96,965		4		12		5			
Vancouver	12,637				5					
Walla Walla	15,503		2							
Yakima	18,539				105					
West Virginia:										
Bluefield	15,282	6								
Charleston	39,608	21			1				1	1
Clarksburg	27,869	10	1				5	1	1	
Fairmont	17,851						1			
Huntington	50,177	18					2		4	
Morgantown	12,127				1					
Parkersburg	20,050	8					1			1
Wheeling	56,208	22	1	1	2		8		4	1
Wisconsin:										
Appleton	19,561	6	3		3		1			
Ashland	11,334	1								
Beloit	21,284	4	2				1			
Eau Claire	20,906				5		3			
Fond du Lac	23,427	3	1				8		2	
Green Bay	31,017		3		1		5			
Janesville	18,293	4	4		1		2			
Kenosha	40,472	9	12				1		2	2
La Crosse	30,421						5			
Madison	38,378	4	4		1		4		1	
Manitowoc	17,563	3	2				1		1	
Marinette	13,610				9					
Milwaukee	457,147	86	23	2	7		29	1	12	10
Oshkosh	33,162	8			20		1		3	
Racine	58,593	12	3				40			1
Sheboygan	30,955	4	3	1			13	1	2	
Stevens Point	11,371						11			
Superior	39,671	11	1				2			
Waukesha	12,558	3	1							
Wausau	18,661		4				4			
West Allis	13,745		1				1			

FOREIGN AND INSULAR.

BOLIVIA.

Communicable Diseases—La Paz—November, 1923.

Communicable diseases were reported at La Paz, Bolivia, during the month of November, 1923, as follows:

Disease.	Cases.	Deaths.	Disease.	Cases.	Deaths.
Cerebrospinal meningitis	.....	4	Scarlet fever	.....	5
Diphtheria	.....	1	Smallpox	10	6
Influenza	22	1	Tuberculosis	35	8
Measles	.....	1	Typhoid fever	2	.....
Poliomyelitis (infantile paralysis)	.....	1	Typhus fever	12	2

Population, 100,000, officially estimated.

Dysentery—Smallpox Prevalent in Vicinity.

During the period under report, 18 cases of dysentery with 12 deaths were reported at La Paz. Smallpox was stated to be prevalent in the vicinity of the city.

BRAZIL.

Disease Notification—Pernambuco.

Information received under date of November 21, 1923, shows that the Department of Health of Pernambuco, Brazil, under date of November 12, 1923, called the attention of physicians in local practice, and the general public, to the requirements of the law imposing rigorous penalties for failure to notify any of the diseases included in the following list:

Yellow fever.
Bubonic plague.
Cholera.
Smallpox.
Diphtheria.
Puerperal fever.
Ophthalmia.
Typhoid and paratyphoid.
Leprosy.
Tuberculosis.
Malaria
Scarlet fever and measles.
Beriberi.
Dysentery.

It was further required that epidemic cerebrospinal meningitis, lethargic encephalitis, and chicken pox be similarly notified.

CANARY ISLANDS.

Plague—San Juan de la Rambla.

Information dated December 11, 1923, shows the occurrence of a case of plague at San Juan de la Rambla, a village situated 52 kilometers from Teneriffe, Canary Islands.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	Dec. 11-20, 1923.		Remaining under treatment Dec. 20, 1923.
	New cases.	Deaths.	
Chicken pox	4		2
Diphtheria	9	2	[1] 7
Leprosy	1		15
Malaria	27		[2] 30
Measles	2		[3] 4
Typhoid fever	6		[4] 26

[1] From the interior, 1.
[2] From the interior, 24; from abroad, 1.
[3] From the interior, 1.
[4] From the interior, 16.

ECUADOR.

Plague—Plague-Infected Rats—November 16-30, 1923.

During the period November 16 to 30, 1923, four cases of plague with two deaths were notified at Guayaquil and the disease was reported present at Jipijapa (Manabi).

During the same period, out of 18,316 rats taken at Guayaquil, 37 rats were found plague infected.

GUADELOUPE (WEST INDIES).

Smallpox (Reported as Alastrim)—Leprosy.

On November 8, 1923, smallpox (reported as alastrim) was stated to be decreasing in the Island of Guadeloupe and dependencies. Leprosy was stated to be present.

JAMAICA.

Smallpox (Reported as Alastrim).

During the week ended December 8, 1923, 21 cases of smallpox (reported as alastrim) were notified in the Island of Jamaica.

Typhoid Fever—Kingston.

During the same period, 16 cases of typhoid fever were notified at Kingston.

LATVIA.

Communicable Diseases—October, 1923.

Communicable diseases were notified in the Republic of Latvia during the month of October, 1923, as follows:

Diphtheria	50	Typhoid fever	106
Measles	14	Typhus fever	[1] 12
Scarlet fever	106	Typhus fever, recurrent	3
Smallpox	3	Whooping cough	22

[1] Paratyphus, cases 7.

Dysentery—Leprosy.

During the same period, 10 cases of dysentery and one case of leprosy were notified in the Republic of Latvia.

MEXICO.

Yellow Fever Work Discontinued—State of Vera Cruz.

According to information dated November 26, 1923, the yellow fever work which was begun on February 1, 1921, under the direction of the International Health Board, was to be discontinued in the State of Vera Cruz, Mexico, from a date not later than November 30, 1923.

PERU.

Plague—November, 1923.

During the month of November, 1923, 23 cases of plague with 18 deaths were reported in Peru. For distribution of occurrence according to locality, see page 83.

POLAND.

Communicable Diseases—October 7–20, 1923.

During the period October 7 to 20, 1923, communicable diseases were reported as follows in Poland.

OCTOBER 7–13, 1923.

Disease.	Cases.	Deaths.	Districts showing greatest number of deaths.
Cerebrospinal meningitis	9	2	Lodz; Warsaw.
Diphtheria	77	1	Warsaw.
Measles	223	4	Kielce.
Scarlet fever	489	47	Lwow.
Smallpox	1	.....	
Tuberculosis	64	162	Do.
Typhoid fever	424	28	Lodz.
Typhus fever	33	3	Former Russian Poland.
Whooping cough	39	4	Galicia and former Russian Poland.

OCTOBER 14–20, 1923.

Cerebrospinal meningitis	5	4	Lodz.
Diphtheria	101	8	Volhynia.
Measles	240	16	Warsaw.
Scarlet fever	543	49	Lwow.
Smallpox	7	.....	
Tuberculosis	60	162	Warsaw.
Typhoid fever	548	46	Lodz.
Typhus fever	19	4	Lublin.
Typhus fever, recurrent	8	.....	
Whooping cough	56	7	Galicia.

Dysentery—Malaria.

During the week ended October 13, 1923, 265 cases of dysentery with 59 deaths, with greatest mortality in the district of Krakow, were notified in Poland; and during the week ended October 20, 1923, 157 cases of dysentery with 32 deaths, with greatest mortality occurring in the district of Posen, and 28 cases of malaria, with one death occurring in the district of Lublin, were notified in Poland.

SIBERIA.

Plague-Infection Among Marmots—Dauria Station.

Plague was reported present, October 21, 1923, at Dauria Station, Siberia, on the Chita Railway. Cases were stated to have been traced to traffic in marmot skins. Dauria Station was stated to be situated near the Manchuria frontier and to be a center of marmot hunting.

UNION OF SOUTH AFRICA.

Typhus Fever Outbreak—Durban.

An outbreak of typhus fever was reported November 23, 1923, at Durban, State of Natal, Union of South Africa, with 47 cases under treatment on that date. The outbreak was stated to be confined to native (negro) stevedores in one barrack in the harbor area of the port. It was stated that the epidemic had been present since November 14. On November 24, 1923, 72 cases were reported present and confined to one compound.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended January 11, 1924.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India				Oct. 14–27, 1923: Cases, 1,569; deaths, 1,107.
Rangoon	Nov. 11–17	1	1	

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
British East Africa:				
Kenya—				
Mombasa	Oct. 14–20	1	1	Infected rats, 2.
Uganda	Aug. 1–Sept. 30	218	211	
Canary Islands:				
San Juan de la Rambla	Dec. 11	1		Locality 52 km. from Teneriffe.
Ceylon:				
Colombo	Nov. 11–17	2		Plague rodents, 5.
Ecuador:				
Guayaquil	Nov. 16–30	4	2	Rats taken: 18,316; found infected, 37.
Jipijapa	Nov. 16–30			Present.
Egypt:				
City—				
Alexandria	Nov. 26–Dec. 2	2	1	
India				Oct. 14–27, 1923: Cases, 3,705; deaths, 1,775.
Karachi	Nov. 18–24	9	11	
Madras	do	203	139	Presidency.
Rangoon	Nov. 11–17	2	1	
Iraq:				
Bagdad	do	1		
Madagascar:				
Tananarive	Oct. 16–29		11	European, 2 cases, pneumonic.

[1] From medical officers of the Public Health Service, American consuls, and other sources. For reports received from June 30 to Dec. 28, 1923, see Public Health Reports for Dec. 28, 1923. The tables of epidemic diseases are terminated semiannually and new tables begun.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received During Week Ended January 11, 1924—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Peru				Nov. 1-30, 1923: Cases, 23; deaths, 18.
Locality—				
Canete	Nov. 1-30	1	1	
Chepen	do	1		
Chicalayo	do	1	1	
Lima (city)	do	15	12	
Lima (country)	do	4	4	
Lurin	do	1		
Siam:				
Bangkok	Nov. 4-10	1	1	
Siberia:				
Dauria Station				October 21, 1923: Present.

SMALLPOX.

Algeria:				
Algiers	Nov. 1-30	1		
Bolivia:				
La Paz	do	10	6	
Brazil:				
Rio de Janeiro	Nov. 18-24	3	1	
Sao Paulo	Sept. 3-9	1		
British East Africa:				
Tanganyika Territory	Sept. 30-Oct. 20	8	1	
Zanzibar	Sept. 1-30	85	3	In areas 27 miles from town of Zanzibar.
Canada:				
Manitoba—				
Winnipeg	Nov. 25-Dec. 15	16	3	
New Brunswick—				
Madawaska County	Dec. 8-15	1		
Ceylon:				
Colombo	Nov. 11-17	1		Port case.
Chile:				
Concepcion	Nov. 12-Dec. 3		5	
Talcahuano	Nov. 26-Dec. 2	3		
China:				
Amoy	Nov. 18-24			Present.
Chungking	Nov. 4-17			Present and endemic.
Manchuria—				
Harbin	Nov. 12-18	2		
Shanghai	Dec. 29			Prevalent.
Ecuador:				
Esmeraldas	Nov. 16-30	4		
Guadeloupe (West Indies):				
Basse Terre	Dec. 18			Present.
Marie Galante	do			Off shore island; present.
Pointe à Pitre	do			Present in vicinity.
India				Oct. 14-27, 1923: Cases, 1,247; deaths, 224.
Bombay	Nov. 4-10	9	3	
Madras	Nov. 18-24	1		
Rangoon	Nov. 11-17	1		
Iraq:				
Bagdad		9	6	
Jamaica				Dec. 2-8, 1923: Cases, 21.
Latvia				Oct. 1-31, 1923: Cases, 3.
Poland				Oct. 1-31, 1923: Cases, 8.
Portugal:				
Lisbon	Nov. 19-Dec. 8	7	6	
Oporto	Nov. 25-Dec. 8	12	6	
Siam:				
Bangkok	Oct. 28-Nov. 10	19	12	
Siberia:				
Dauria Station	Oct. 21			Present. Locality on Chita Railway, Manchurian frontier.
Spain:				
Barcelona	Nov. 15-21		1	
Valencia	Dec. 2-8	30		
Syria:				
Aleppo	Nov. 25-Dec. 1	1		In vicinity, at Djisr Choughour.
Switzerland:				
Berne	do	2		
Turkey:				
Constantinople	Nov. 11-17	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received During Week Ended January 11, 1924—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Algiers	Nov. 1-30	3	1	
Bolivia:				
La Paz	do	12	2	
Chile:				
Antofagasta	Dec. 2-8	4		
Taicahuano				Dec. 5, 1923: Three cases under treatment.
China:				
Antung	Nov. 12-18	1		
Egypt:				
Alexandria	Nov. 19-25	1		
Cairo	Sept. 10-23	2	3	
Latvia				Oct. 1-31, 1923: Cases, 12; paratyphus fever, 7; recurrent typhus, 3.
Poland				Oct. 7-20, 1923: Cases, 52; deaths, 7.
Turkey:				
Constantinople	Nov. 11-Dec. 1	10		
Union of South Africa:				
Natal—				
Durban	Nov. 24	72		Cases occurring among native stevedores in the harbor area of the port and confined to one barrack.
Transvaal—				
Johannesburg	Nov. 11-17	1		

Reports Received from December 29, 1923, to January 4, 1924.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Calcutta	Nov. 11-17	10	7	

PLAGUE.

Bolivia:				
La Paz	Oct. 1-31		3	
Brazil:				
Bahia	Nov. 11-17	1	1	
India:				
Bombay	Oct. 28-Nov. 3	1		
Karachi	Nov. 11-17	12	8	
Madras Presidency	Nov. 4-10	102	62	
Rangoon	do	3	2	
Syria:				
Beirut	Nov. 1-10	1		

SMALLPOX.

Bolivia:				
La Paz	Oct. 1-31	10	4	
Canada:				
Saskatchewan—				
Regina	Dec. 9-15	1		
China:				
Hongkong	Oct. 28-Nov. 3	47	43	
Colombia:				
Buenaventura	Nov. 18-Dec. 1	6		

[1] From medical officers of the Public Health Service, American consuls, and other sources. For reports received from June 30 to Dec. 28, 1923, see Public Health Reports for Dec. 28, 1923. The tables of epidemic diseases are terminated semiannually and new tables begun.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports from December 29, 1923, to January 4, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Greece:				
Saloniki	Oct. 22-Nov. 4		7	
India:				
Bombay	Oct. 28-Nov. 3	7	1	
Madras	Nov. 4-10	3	1	
Rangoon	do	3	1	
Iraq:				
Bagdad	Oct. 24-Nov. 6	5	2	
Jamaica				Nov. 25-Dec. 1, 1923: Cases, 13 (reported as alastrim).
Kingston	Nov. 25-Dec. 1	1		
Java:				
West Java—				
Batavia	Oct. 27-Nov. 2	1	3	
Mexico:				
Vera Cruz	Nov. 3-9		1	
Portugal:				
Lisbon	Nov. 11-Dec. 1	5	1	
Sierra Leone:				
Sherbro District—				
Tagbail	Nov. 1-15	3		
Spain:				
Valencia	Nov. 25-Dec. 1	32	4	
Syria:				
Damascus	Nov. 16-22	1		
Tunis:				
Tunis	Oct. 27-Nov. 2	5	1	
Union of South Africa:				
Cape Province	Oct. 28-Nov. 3			Outbreaks.
Natal	do			Do.
Orange Free State	do			Do.

TYPHUS FEVER.

Bolivia:				
La Paz	Oct. 1-31	6		
Poland				Sept. 23-Oct. 6, 1923: Cases, 81; deaths, 6.
Union of South Africa:				
Cape Province	Oct. 28-Nov. 3			Outbreaks.
Natal	do			Do.
Transvaal	do			Do.

YELLOW FEVER.

Brazil:				
Pernambuco City	Nov. 16	3	2	

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