

What is the quality of the milk supplied to school children? / report of survey by the People's League of Health (Inc.).

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**What is the Quality of the
Milk Supplied**
to
School Children :
Report of a Survey
by the
People's League of Health (Inc.)



Founder and Hon. Organiser : Miss OLGA NETHERSOLE, C.B.E., A.R.R.C.

THE PEOPLE'S LEAGUE OF HEALTH
12, STRATFORD PLACE :: :: LONDON, W.1
MAY, 1936



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Milk Supplied
to
School Children ?

REPORT of SURVEY
by the
PEOPLE'S LEAGUE OF HEALTH (Inc.)



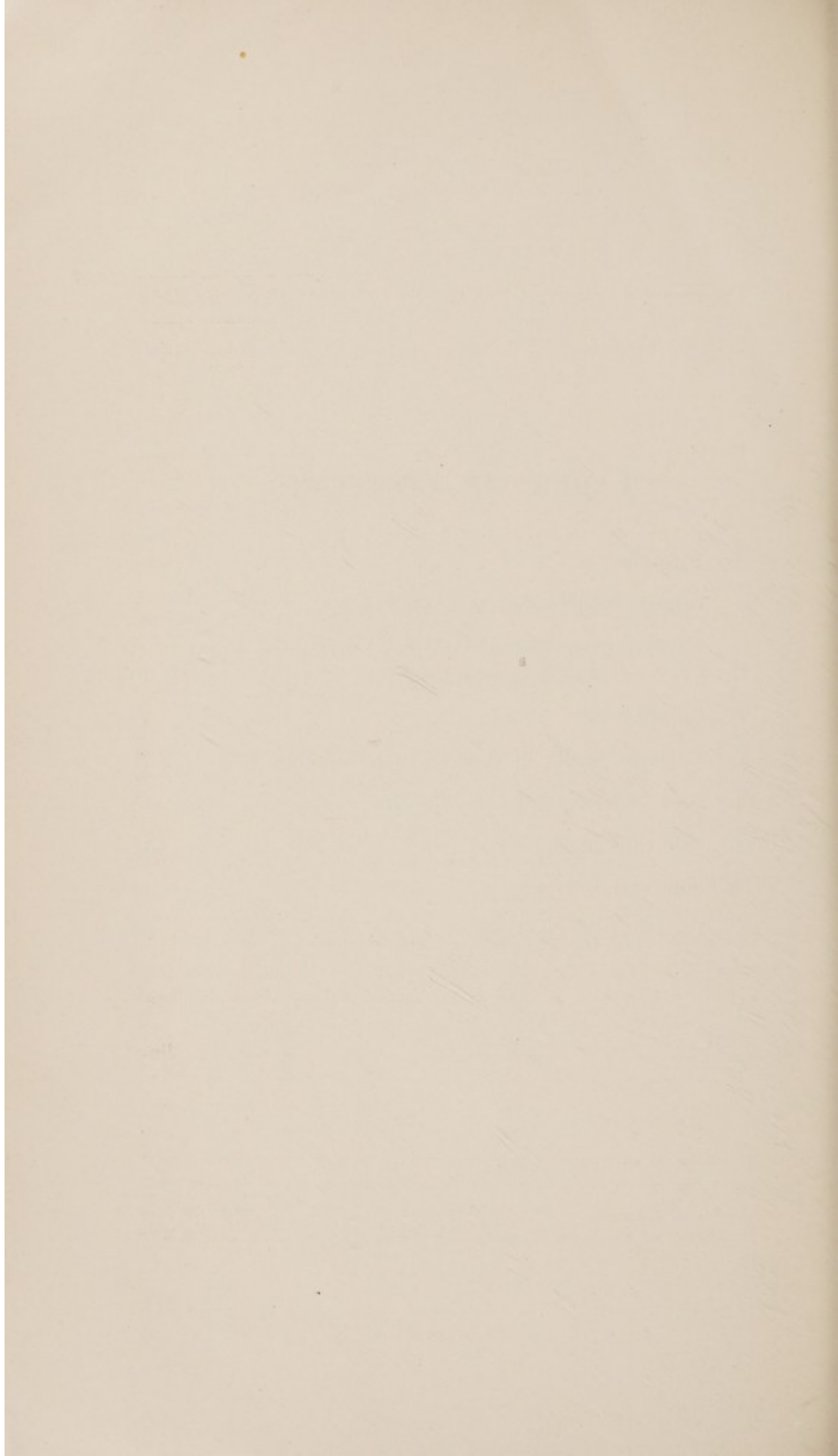
Founder and Hon. Organiser : Miss OLGA NETHERSOLE, C.B.E., A.R.R.C.

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TABLE OF CONTENTS

	PAGE
I. Introduction	5
II. School Children and the Milk Supply . . .	7
III. Reports from Medical Officers of Health in reply to League's Questionnaire	10
IV. Questionnaire	12
V. Tubercle Bacilli in Raw and Graded Milk . .	14
VI. Raw Milk and Tubercle Bacilli	15
VII. Milk and Scarlet Fever	17
VIII. Milk and Infection	19
IX. Personnel of the League	20



INTRODUCTION

The People's League of Health has, by its expert Committees, been engaged in the study of Tuberculosis for several years. In 1932 it published a full Report on Bovine Tuberculosis with special reference to the Milk Supply and to the risk of human infection through milk. Among the conclusions reached by the Committee were :—

1. It is estimated, on the basis of the tuberculin reaction, that at least 40 per cent. of the cows in this country are infected with the tubercle bacillus, though only a minority of them are in an actively infective condition.
2. A proportion of the raw market milk, varying in different parts of the country from 2 to 13 per cent., and having an average figure of 6.7 per cent., contains living, tubercle bacilli.
3. About 2,000 deaths in England and Wales, mostly in children, occur annually from this cause.
4. At least 4,000 fresh cases of bovine infection develop each year, an immense amount of suffering, invalidity and often permanent deformity being thus caused by this bacillus.

Broadly summarised, the opinion of the Committee was that the only classes of Milk which can be considered safe from the risk of conveying tuberculosis are :—

- (a) Milk obtained from herds certified under adequate control to be free from tuberculosis.
- (b) Milk which has been subjected to efficient and controlled pasteurisation or other approved process of heat treatment.

Since 1932 the League has issued several memoranda dealing with the practical need of securing, especially for children, a milk supply free from the risk of tuberculosis and other infections. The present document presents the results of an enquiry directed to the discovery of the qualities or grades of milk which are as a matter of fact being supplied to children in the Elementary Schools. The facts show that there is still need to insist on the risks which attend the use of raw milk and on the protective value of efficient pasteurisation.

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BY SAMUEL JOHNSON

IN TEN VOLUMES

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School Children and the Milk Supply

REPORT OF A SURVEY BY THE PEOPLE'S LEAGUE OF HEALTH

1. The figures quoted below (p. 10) as the basis for this Report have been collected as a result of a Questionnaire addressed by The People's League of Health to School Medical Officers of Health in England and Wales and in Scotland. The League is much indebted to those Medical Officers who have been good enough to complete the returns; they have in this way enabled us to know what are the actual qualities of milk being supplied to the children in the elementary schools of the country under Section II (1) of the Milk Act, 1934. It is due to the School Teachers to recognise the helpful and willing service they have given in the administration of the milk supply to the children.

2. Everyone agrees that the benefits to the children of a milk supply adequate in quantity, and alike clean, pure and safe, are beyond contradiction. With the *quantity* of milk supplied to each child this Memorandum is not particularly concerned, except to say that the amount could be increased with advantage.

3. The need for cleanliness and purity excites universal approval. The People's League of Health has repeatedly urged also the necessity for *safety* in the Milk supply, that is that the milk shall not be the medium of tuberculosis and other infections. Broadly speaking, the League holds that milk can be *safe*, in the sense just defined, only if it is obtained either from tuberculin-tested cows or, failing this, has been subjected to the protective influence of heat (pasteurisation or boiling); or in a complete fashion by the satisfaction of both of these conditions. With this proposition the League repeats its former claim that pasteurisation to be effective must be conducted in accordance with the official regulations; both the apparatus and the process require competent supervision and control. Unfortunately, not

all milks which bear the label have in fact been properly pasteurised.

4. This conclusion and the evidence supporting it were set forth in the League's Report on a Survey of Tuberculosis of Bovine Origin in Great Britain published in February, 1932. Since that date confirmation has been provided by many authorities; the latest of these is the Memorandum issued by the Ministry of Health and the Department of Health for Scotland (March, 1936), which states: "It is an unfortunate fact that milk is a medium through which disease can be conveyed to man" . . . and again, milk "can be rendered safe for consumption by suitable heat treatment such as by efficient pasteurisation or boiling."

5. The Board of Education, naturally concerned for the welfare of the School Children, and contemplating the wider supply of milk to the schools, wrote in Circular 1437: "The source and quality of the milk must be approved by the Medical Officer of Health," and again, "in areas where a supply of efficiently pasteurised milk is available, such milk should in all cases be provided. In other areas, all possible precautions should be taken to ensure as far as practicable the safety of the supply."

6. The figures submitted with this Memorandum (p. 10) show that while the advice given by the Board of Education has had a considerable influence it has not been universally adopted. Thus while 1,531,705 children are effectively protected by milk that has been pasteurised, or sterilised, or boiled, and 200,968 children are receiving milk that is safe from the risk of tuberculosis and carries a minimum risk of other infections (Certified and Grade A.T.T.), there are still 269,258 children who are receiving raw milk with the risks that this involves, and 88,732 children are receiving Grade A Milk, which, though a clean milk, is not obtained from tuberculin-tested cows, and specimens of which to the extent of 5.59 per cent., as recent figures show (p. 14), contain living tubercle bacilli. In these instances the children are not receiving the adequate protection to which they are entitled and which the Board of Education and the Chief Medical Officer to the Ministry of Health most strongly advise. **That is, a considerable number of children, 357,990 at least, are consuming milk which by no admitted standards can be classed as safe from the risk of conveying disease.**

7. The People's League of Health feels bound to impress this position on official and public attention. The League is most anxious to encourage the use of milk as a food, particularly for children. But the milk must be *safe* milk, that is, milk which is made secure from the risk of tuberculosis and of other infections. It is sometimes said that there are local difficulties in obtaining such milk. But where public opinion is alive to the risks of unprotected or imperfectly protected milk, experience has shown that demand creates an adequate supply, and one of the objects of the present Memorandum is to inform and energise public opinion on this point. Risks to the health of children can be avoided and therefore ought to be avoided. **Let the nutritive values of milk be emphasised by all means.** But certainly of not less importance is the demand that milk shall not be allowed to be the medium for the distribution of tuberculosis and of other diseases.

Signed on behalf of The People's League of Health,

WILLIAM G. SAVAGE, M.D.,

*Chairman of the Special Bovine
Tuberculosis Committee.*

C. O. HAWTHORNE, M.D.,

Chairman of Council.

OLGA NETHERSOLE,

Founder and Hon. Organiser.

May, 1936.

RETURNS RECEIVED IN ANSWER TO THE LEAGUE'S QUESTIONNAIRE (see p. 12).

FROM (A), MEDICAL OFFICERS OF HEALTH
IN ENGLAND AND WALES, AND (B), MEDICAL
OFFICERS OF HEALTH IN SCOTLAND.

A. ENGLAND AND WALES.

The figures received from 243 areas, including 1,760,241 children, show :—

GROUP I. PROTECTED.

Certified and Grade A.T.T.	..	..	49,469
Pasteurised	..	..	1,333,807
Sterilised	..	..	14,140
Boiled	..	..	7,700
			<hr/>
			1,405,116
			<hr/>

GROUP II. UNPROTECTED.

Raw Milk	..	..	266,621
Grade A	..	..	88,504
			<hr/>
			355,125
			<hr/>

B. SCOTLAND.

The figures received from 22 areas, including 330,422 children, show :—

GROUP I. PROTECTED.

Certified and Grade A.T.T.	..	..	151,499
Pasteurised	..	..	175,319
Boiled	..	..	739
			<hr/>
			327,557
			<hr/>

GROUP II. UNPROTECTED.

Raw Milk	..	..	..	..	..	2,637
Grade A.	..	..	..	..	..	228
						<hr/> 2,865 <hr/>

The Milks in Groups I may be named "Protected" Milks in the sense that the possibility of the conveyance of disease is practically excluded. In Groups II are "Unprotected" Milks in the sense that either no particular precautions are taken to prevent the conveyance of disease (Raw Milk), or the precautions, though not without value, are inadequate (Grade A).

It may be noted that while in Scotland "Unprotected" Milk reaches only 0.86 per cent. of the children, this quality of milk is supplied to no less than 20.1 per cent. of the children in England and Wales. And again, in England and Wales only 2.8 per cent. of the children receive milk from tuberculin tested cows, while the figures from Scotland show a percentage of 45.8.

PROVISION OF MILK

under the Milk Scheme of the Board
by the Secretary of State for Scotland

QUESTIONNAIRE ISSUED BY THE PEOPLE'S LEAGUE
ENGLAND AND WALES

QUESTIONS

QUESTIONS.

1. Name of Administrative Area ?
2. Number of school children eligible to participate in the Scheme ?
3. Approximate number of school children receiving milk under this Scheme ?
4. The types of milk approved for consumption by the Medical Officer of Health and School Medical Officer ?
5. The approximate number of school children consuming the various types of milk, *i.e.*,
 - (a) Grade A (T.T.) (and including any Certified).
 - (b) Pasteurized Milk.
 - (c) Grade A or "Accredited."
 - (d) Grade A Pasteurized.
 - (e) Sterilized Milk.
 - (f) Ordinary milk, boiled.
 - (g) Ordinary milk, raw.
6. If ordinary raw milk is supplied would you set out the precautions taken to ensure that the quality, as regards freedom from the risk of conveying disease, is satisfactory.
7. If Pasteurized milk is supplied please indicate any steps taken as regards the supervision exercised over the pasteurization process and the bacterial quality of the product.

Note.—No. 3 refers to all School Children receiving Milk in your administrative area, both in

- (a) Voluntary Scheme
- (b) Directly organised by the Local Educational Authority.

Please return to The People's League of Health, Inc., 12, Stratford Place, London, W.1.

OR SCHOOL CHILDREN

ducation and Milk Marketing Board and as approved
nd the Scottish Education Department.

HEALTH TO MEDICAL OFFICERS OF HEALTH IN
AND SCOTLAND.

NNAIRE

REPLIES.

1.
2.
3.
4.
.....
.....
5. (a)
(b)
(c)
(d)
(e)
(f)
(g)
6.
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.....
.....
.....
7.
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.....
.....

Signed..... *Date*.....

TUBERCLE BACILLI IN MILK

SURVEY IN GREAT BRITAIN OF RAW AND GRADED MILKS MADE BY THE PEOPLE'S LEAGUE OF HEALTH WITH THE OBJECT OF ASCERTAINING TO WHAT EXTENT THE VARIOUS FORMS WERE TESTED FOR TUBERCLE BACILLI AND WHAT THE RESULTS OF SUCH EXAMINATIONS HAD BEEN DURING 1930-1935.

By means of a questionnaire addressed to Local Health Authorities the People's League of Health endeavoured to obtain an estimate of the extent to which bacteriological tests were applied to various qualities of milk, and of the results of such tests, during the years 1930-1935. It was in this way learned that in a very large number of areas no examinations of Graded Milks were made at any time.

Of 5,274 specimens of Grade A milk which were tested, 295, i.e., 5.59 per cent. showed the presence of tubercle bacilli.

In reference to similar tests applied to Raw Milk the results were that of 37,920 specimens examined tubercle bacilli were present in 2,799 instances, that is 7.38 per cent.

These results correspond to others which have been recorded. They emphasise the risks which attend the use of raw milk as a food even when it is collected under the conditions demanded for Grade A.

An important factor in modern methods is the "bulking" of milk, that is the product from several farms is mixed and transported in large tanks. Hence tubercle bacilli in milk from a single farm, indeed from a single cow, may affect a relatively large volume of the milk supply.

RAW MILK and TUBERCLE BACILLI

The following Letter signed by

LORD DAWSON OF PENN,
LORD HORDER OF ASHFORD,
LORD MOYNIHAN OF LEEDS,
SIR FREDERICK HOBDAY, and
DR. WILLIAM G. SAVAGE,

Eminent Medical and Veterinary Authorities,

all of whom have been concerned in the PRESENTATION OF THE REPORT OF THE PEOPLE'S LEAGUE OF HEALTH'S SURVEY OF TUBERCULOSIS OF BOVINE ORIGIN IN GREAT BRITAIN, was sent out by the League to the Editors of 600 Newspapers of the country. ITS OBJECT WAS TO EDUCATE PUBLIC OPINION AND TO REFUTE A STATEMENT MADE BY A SPEAKER AT A MEETING OF THE BRITISH DAIRY FARMERS' ASSOCIATION REGARDING THE POSSIBILITY OF CONVEYING BOVINE TUBERCULOSIS TO HUMAN BEINGS THROUGH MILK, a report of which appeared in *The Times* and other newspapers of the 19th October, 1933.

26th October, 1933.

To the Editor.

Sir,

According to a report published in several of the newspapers of the 19th instant, one of the Speakers at a recent meeting of the British Dairy Farmers' Association informed his audience that—"the talk of conveying bovine tuberculosis to human beings by milk was all humbug."

To protect the public from this misleading and inaccurate statement we desire to put on record the following propositions as established beyond reach of challenge :—

- (1) That raw milk as at present distributed for human consumption shows on an average the presence of living

tubercle bacilli in some 6 to 7 per cent. of the specimens examined :

- (2) That about 2,000 children die annually from tuberculous infection of bovine origin, while many others suffer disabling and deforming illnesses :
- (3) That these disasters are due mainly if not entirely to the infection of children through the milk supply :
and
- (4) That pasteurisation properly performed, or failing this, boiling of the milk, reduces the risk of tuberculosis and other milk-borne infections to the vanishing point.

For these propositions there exists a body of well-authenticated evidence, and the public interest demands that they shall be plainly stated and authoritatively affirmed.

We are, Sir,

Your obedient Servants,

DAWSON OF PENN.

HORDER.

MOYNIHAN.

Members of The People's
League of Health's Bovine
Tuberculosis Committee

} FREDERICK T. G. HOBDAY.
WILLIAM G. SAVAGE, M.D.

12, Stratford Place,
London, W.1.

MILK AND SCARLET FEVER

(Reprinted from "The Times," Friday, 22nd March, 1935.)

THE SCARLET FEVER CASES AT DENHAM MEDICAL OFFICER AND MILK SUPPLY

From our Correspondent.

Windsor, 21 March, 1935.

A full report of the outbreak of scarlet fever at Denham was submitted to the Eton Rural District Council by the Medical Officer, Dr. V. A. T. Spong, this week.

Dr. Spong said he was informed on March 6 that two children at New Denham School had scarlet fever. He found that half the children had been away the previous day with sore throats. At Denham School he found nearly half the children had been absent. He found that only those children who had had milk in the schools had been attacked and that the schools had a common milk supply, and he traced its source to two premises. The distributor was instructed that he must either stop all supplies or sterilize all milk sent out and this was done.

On March 8 a cow from which milk had been taken was found to be suffering from mastitis, and swabs taken from the throats of two of the bottlers were found to contain haemolytic streptococci and the two men were immediately put off work. There had been previously an outbreak of scarlet fever at Iver, and suspecting some connection he made investigation and discovered that children of a man working on the farm which produced the milk had been away from school with sore throats from February 20th to March 4th, and that the man had been away from work for a week. All had had bad throats, but no doctor had been called in. No conclusive evidence was found that the children had had scarlet fever. Swabs were taken from the throat of the man and the specific germ of scarlet fever was found. The germ was also found in the milk from one of the cows, but examination of the udders showed no infection. The man was then put off work. Another sample of milk taken from this cow by another milker showed no infection.

The total number of cases infected by the milk was 85. The date of onset was between March 5th and March 7th, and with one exception they had all consumed milk from the same farm on March 4th. Two of them died, one from complicating broncho-pneumonia, and one who was making a good recovery developed appendicitis and died after an operation.

"The outbreak," concluded the Medical Officer, "serves to show the potential dangers of raw milk. Had the milk been pasteurized this outbreak would not have occurred. However sanitary the farm and cowsheds may be there is always the ever-present danger of infection either from a human source or the herd. The following fact may be alarming, but nevertheless is true: that unless all persons engaged in the production of milk are swabbed every two or three days one cannot guarantee that they are not carrying the disease germs which may infect the milk. The only practical remedy is, in my opinion, the pasteurization of the milk supply of the whole country and mechanical bottling after pasteurization."

MILK AND INFECTION

IMMEDIATELY THE REPORT OF THE MEDICAL OFFICER OF HEALTH OF THE ETON RURAL DISTRICT COUNCIL APPEARED IN THE PRESS, THE FOLLOWING LEAFLET WAS SENT OUT BY THE LEAGUE TO MEDICAL OFFICERS OF HEALTH, VETERINARIANS, CHAIRMEN OF PUBLIC HEALTH COMMITTEES, BRITISH DAIRY FARMERS ASSOCIATION, AGRICULTURISTS, AND OTHERS INTERESTED IN THIS GREAT PUBLIC HEALTH PROBLEM.

PRACTICAL METHODS FOR REDUCING THE POSSIBILITY OF INFECTION

In the People's League of Health's Report of its Survey of Tuberculosis of Bovine Origin in Great Britain, with particular relation to the conveyance of Tuberculosis to human beings through milk, issued in 1932, on page 35, paragraph 29, may be found among other recommendations the following :—

- (d) "That adequate supervision and control over the health of all persons engaged in the production and distribution of milk should be secured."

The Report of the recent outbreak of Scarlet Fever at Denham, Bucks, illustrates the necessity for such supervision and control and indicates also how these are to be secured through the responsible medical authorities.

Signed on behalf of the People's League of Health.

C. O. HAWTHORNE, M.D.,
Chairman of Council.

OLGA NETHERSOLE,
Founder and Hon. Organiser.

23rd March, 1935.

The People's League of Health (Inc.),
12, Stratford Place, London, W.1,

where copies of the Report may be obtained.

The Personnel of The People's League of Health (Incorp.)

Founded in 1917 by Miss OLGA NETHERSOLE, C.B.E., A.R.R.C.

" Knowledge is the only armour of defence of which we cannot be robbed by an enemy."

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