CATERING ESTABLISHMENTS AND THE PREVENTION OF FOOD POISONING

BY

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Member, Hotel and Catering Institute;
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LONDON
WILLIAM HEINEMANN
MEDICAL BOOKS · LTD
1952

First Published, 1952

Printed in Great Britain by
The Whitefriars Press Ltd., London and Tonbridge

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By the same Author :

FACTORY CANTEENS AND THEIR MANAGEMENT
MODERN ANGLING BIBLIOGRAPHY
HAMPTON ON PIKE FISHING

INTRODUCTION

THE Public Health Laboratory Service investigated 964 outbreaks of food poisoning during 1949. The position was considerably worse than in previous years. The menace of tuberculosis, however, must be regarded as a crisis in our social history, as 38,648 people were being treated for this disease in hospital or were awaiting treatment. I have, therefore, dealt at considerable length with the dangers of cooking meat from animals suffering from tuberculosis.

I wish to thank:

Dr. A. J. G. Hood, Food Inspection Department, Montreal.

M. Russell, Esq., Chief Health Inspector, Capetown.

J. K. Menzies, Esq., Department of National Health, Ottawa.

The Department of Entomology, British Museum.

Dr. L. B. Pett, Nutrition Division, Ottawa.

F. Petitjean, Esq. Ministere du Travail, Bruxelles.

Leif Bruun, Esq., Social Department, Oslo.

Inge Seigs, Esq., Ministry of Labour, Oslo.

A. W. Fuchs, Esq., Division of Sanitation, Public Health Service, Washington, U.S.A.

for all their kind assistance.

In this country, for professional reasons, I am not permitted to thank publicly those T.B. specialists and Medical Officers of Health who have assisted me with this book. I am, however, most grateful to them and to those Sanitary Inspectors and Veterinary Surgeons without whose assistance it would never have been completed.

The Librarians of the Royal Sanitary Institute in London and the Public Health Service in Washington by their wide knowledge of the subject, greatly reduced my research by providing excellent reading lists.

I wish to thank the staff and my fellow lecturers of the Industrial Welfare Society and my former colleagues on the National Council of the Industrial Catering Association.

It is a great pleasure to acknowledge the kind assistance of my colleagues on the Advisory Committee of the Welsh School of Catering.

I am grateful to the British Broadcasting Corporation for allowing publication from my broadcast talks, and to the Editor of " The Times Review of Industry " for permission to quote from my published articles.

All expressions of opinion are purely personal to me and are not necessarily those of my employers, Guest, Keen & Nettlefolds (South Wales) Limited, the Industrial Welfare Society, the Industrial Catering Association or the Welsh School of Catering.

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CHAPTER 1

FOOD POISONING

IT is extremely likely that many cases of minor food poisoning, occurring in private houses, go unreported every year. But woe betide the factory canteen or other catering establishment which has the misfortune to have a minor outbreak. Immediately the Press will give " banner " headlines to the matter.

In all cases of food poisoning it is likely that several persons at least will be affected following a specific meal for which they will blame a single item on the menu. When only one person in a group suffers gastro-intestinal symptoms, it is likely to be caused by disorder of one of the following: the gall-bladder, the renal passage, appendicitis or even some form of food allergy.

Some infectious diseases may have some of the symptoms of food poisoning and some confusion may arise in the minds of people who have had little experience of cases of food poisoning. The early stages of trichiniasis may be mistaken for food poisoning. Generally with food poisoning a number of persons are affected at one and the same time.

There are four types of food poisoning. The first is found with those foodstuffs which are in themselves wholesome but have been infected by poisonous bacteria or their toxins (the poisonous substances produced by some bacteria). The second type is where the food itself is poisonous as with certain types of toadstools, certain berries, rhubarb leaves and certain

poisonous plants, such as hemlock. The third type is associated with the poisonous conditions caused by eating food contaminated by certain metals, such as zinc and copper. The fourth type is when the food, as for example meat, is itself diseased with tuberculosis, trichiniasis, tape worms, etc. The first type can be avoided by a good standard of hygiene by food handlers and their equipment. The second, third and fourth types are largely questions of good management, particularly in regard to skilled purchasing. In recent years much attention has been paid to the first type, while unfortunately the other types have been largely neglected or ignored.

With most communal outbreaks, considerable attention has been paid to the probable cause, but in domestic cases, which despite statements to the contrary still form a most appreciable proportion of the total of annually notified cases of food poisoning, there seldom appears to be a proper investigation.

Liquid foods, such as milk and water, can carry the disease producing germs of scarlet fever, cholera, undulant fever, typhoid and paratyphoid. During 1944 in the United States there were four serious outbreaks of typhoid fever involving 350 people. Milk and milk products were suspected as the cause in all cases. Unfortunately it has not been possible to trace whether polluted water supply was the means by which the milk became infected. Tuberculosis may be contracted from an animal suffering from this disease, both from infected meat and infected milk.

The majority of recently reported cases have been from food poisoning of the first type. Most of the outbreaks of food poisoning occurring in recent years took

place in schools or hospitals. Details of the following cases have been reported:

June 8th, 1948. Certain schools in Yorkshire. Eighteen persons were affected by the outbreak but apparently the investigation was not very satisfactory.

September 20th, 1948. A sheep shearing company. This outbreak affected thirty-two persons, but at the enquiry no evidence was produced which proved conclusively that the outbreak was due to food poisoning. Wool sorting is a dangerous trade and the epidemic may have been due to causes other than food.

February, 1949. Lambs' tongues. Fifty persons.

April, 1949. A Boston school in which nine persons were affected by eating contaminated fish cakes.

April, 1949. A Manchester school outbreak. Although twenty persons were affected, the origin was not identified.

The heaviest outbreak during 1949 occurred in St. Bartholomew's Hospital, London, when 200 persons became ill.

During 1949 there were more than 11,000 cases of food poisoning in this country. School canteens had the worst record with 68 outbreaks, although hospitals with 44 outbreaks and restaurants with 35 outbreaks also showed up badly. Industrial canteens had 32 outbreaks which must be considered as much more favourable when it is remembered that they are serving almost sixty million meals weekly.

During 1950, hospitals and schools again compared badly with other types of catering establishments as these particularly severe outbreaks show :—

March, 1950. Minchendon Secondary School, Southgate, London. 150 children affected.

June, 1950. Four persons died from food poisoning at St. Luke's Hospital, Chelsea and two others died at Springfield Hospital, Tooting, where there were 51 other cases of food poisoning.

July, 1950. 474 cases of food poisoning in ten Surrey schools served from Chilworth Central Kitchen.

It is very widely held that there is more risk of infection from diseased or unsound meat than from any other cause. Fish, if unsound, is easily recognized, particularly after it has been cooked. Furthermore, fish is seldom diseased and therefore can only transmit disease by the first method.

Manufacturing-meat in recent years has been of such a doubtful quality that responsibility for it cannot be accepted. Unless therefore a catering manager has an extremely wide knowledge of meat inspection, he would be wise not to handle manufacturing quality meat or any cooked meat made from it.

It is a strange thing, but some people seem to forget that cleanliness costs money in a catering establishment or anywhere else. Canteen prices do not allow of any margin, and so in many of them even the elementary rules of hygiene are neglected in a vain attempt to keep costs down to a level of ridiculously low selling prices.

The chain stores in this country have set a high standard of hygiene in community feeding. Their

selling prices for meals, however, give a reasonable working margin for good management to have some scope. It might be as well to note the prices of one large chain store group in their cafeterias. These prices are obviously far more satisfactory than the average canteen, which sells a three-course meal for about one shilling and sixpence.

The transport of food often leaves a great deal to be desired. There are comparatively few catering establishments having control of their own vehicles. It is surprising that there have not been more cases of food poisoning caused by food, in transit, being contaminated with the remnants of previous loads, many of which may have been poisonous. Too often the common carrier appears to neglect even elementary precautions of hygiene.

In practically any town it will be noticed that the vans delivering meat from the central slaughterhouse to the local butchers are generally in a dirty condition. The wearing of white overalls, except by the large ice-cream firms, is not generally made compulsory by companies for their employees engaged in delivering food.

Food poisoning appears to be more dangerous for men than for women. During the ten years 1937 to 1946, 149 males died from various types of food poisoning compared to 97 females. It is apparent, from the published figures, that food poisoning is more dangerous to the very young and to the very old rather than to other age groups. It follows, therefore, that school feeding services and hospitals are danger spots, while the great number of old-age pensioners using British Restaurants undoubtedly presents a special problem.

CHAPTER II

THE QUALITY OF BEEF

FROM an experience of having visited a large number of catering establishments, it has been found too often that the person in charge has adopted the attitude: " whether the meat is diseased or not is a matter for the butcher. It is nothing to do with me." It is not possible to find a greater fallacy, as the caterer is solely responsible for the quality of the food which he provides and it is he who is legally liable in the event of someone getting poisoned.

There is such a thing as the " Warranty Defence "; but that only applies if the food is sold in its original condition, and no one is likely to start serving raw meat.

Quality of meat varies considerably with the various types of beef cattle. These are:

Bull	Entire male.
Cow	Female.
Beast, Steer, Bullock, Ox	These are all terms for the castrated male.
Heifer . . .	Virgin female.
Stag	Improperly castrated or castrated late in life.
Calf	Young bovine of either sex until six months old.
Bobbie Calf . .	A very young calf (from birth to fourteen days old).
Veal Calf . . .	Calf from fourteen days to six months.
Stirk	From six months to fifteen months.

Store	From fifteen months to two years (usually imported from Ireland to Scotland or England for fattening).
Baby Beef . . .	Intensively fed bovines. Fed from birth to ten to fifteen months, when the animal will weigh about 9 cwt. live weight.

Under the provisions of the Livestock (Sales) Order, 1949, the Ministry of Food is the sole purchaser of fat cattle in Great Britain. The prices for cattle are determined by the estimated killing out percentage irrespective of quality, which varies as follows:

Home Bred Steers and Heifers

	per cent.
Super Special . .	59 and over
Special . . .	58
A + ...	57
A	56
A —	55
B + ...	54
B	53
B —	52
C + ...	51
C	50

Home Bred Cow Heifers

Grade	Estimated Killing Out Percentage
Super Special . .	59 and over
Special . . .	58
A + ...	57
A	56
A —	55
B + ...	54
B	53
B —	52
C + ...	51
C	50

A cow heifer, on the Ministry of Food's grading, is a beast which has at least one milk tooth in the head and/or has not calved.

Fat Cows

Grade	Estimated Killing Out Percentage
Special	56 and over
A +	55
A	54
A —	53
B +	52
B	51
B —	50

Fat Bulls

Grade	Estimated Killing Out Percentage
Super special	58 and over
A +	57
A	56
A —	55
B +	54
B	53
B —	52
C +	51
C	50

It should be clearly understood that the above system of grading is for *live* animals. Any live animal which, in the opinion of the graders, is likely to kill out at less than 50 per cent. must be sent to the central slaughterhouse at owners' risk. This means that the animal is not purchased by the Ministry until it has been dressed and only then after the carcase has been very carefully examined. Price varies with grading and time of year, but the higher the grade the higher the price.