



# HANDBOOK FOR FOOD HYGIENE FOR THE PRIMARY SCHOOL STUDENTS

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## **PREFACE**

As the case in all advanced countries, the fundamental principle envisaged on food issue in Turkey is to protect consumers from misleading of food purchasing, to protect their health through adequate and balanced nutrition.

The growing population, environmental pollution, economic inefficiency and lack of education have intensifies the food safety.

Food hygiene comprises the precautions taken for the food chain to serve foods safely. Therefore, for the consumption of a food it has to be clean and should not carry any risk. Germs around the environment could pollute foods and this could contaminate humans.

This directory is a handbook that comprises suggestions for preventing chemical and biological food contamination along with considering ecologic environment, social, economical and cultural factors of elementary school children.

I hope, this hand book would be useful for students and their parents and I thank academicians of Hacettepe University, Department of Nutrition and Dietetics and Food Safety Department, Food Codex and Auditing Division of Ministry of Health.

**Professor Recep AKDAĞ, MD  
Minister of Health  
of Republic of Turkey**





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# INTRODUCTION

*Dear students, adequate and balanced nutrition is necessary for growing up and keeping your health. However, food can sometimes be polluted and threaten our health. Therefore, consuming clean, hygienic foods are important.*

*Do you remember first days of your school? Now, your parents are not nearby as much as past. You are in a new environment with your friends and teacher. Now, you are eating outside instead of your home since you start to school. Do you know these foods are safe or not? How much your lovely foods that you buy are safe and reliable?*

*In short, you can find information about healthy nutrition in this handbook. If you learn and apply “eating safe food” information quicker to your life, you can improve your current and future health.*

## FOOD and NUTRIENTS

Foods can be divided in to two groups accordig to their sources:

1- Animal origin foods: Milk, egg, cheese, meat, chicken, fish etc.



2- Vegetable origin foods: fruits, vegetables, rice, lentil, haricot, bean etc.



There are nutritious substances in each of those foods for your body. These materials are called nutrients.

Nutrients are proteins, carbohydrate, fats, vitamins, minerals and water. The composition of the body is those mentioned. We must eat these nutrients daily to keep on our organs working properly and making daily things to do well. The amount of food is also effects our health. Therefore, we should really be careful about the kind of quantity and safety food consumed daily.

## WHAT IS THE SAFE FOOD?

Safe foods can be described as uncontaminated, and healthy foods.

Food can be polluted and contaminated by lots of ways. This contaminated food might be threaten our health. Therefore, let's look at how those foods pollute, contaminated and threaten our health.



## WHAT IS CLEANLINESS and HYGIENE?

It is important for us to comply with the rules of cleanliness and hygiene at all stages from purchasing to consuming to prevent the pollution of the foods.



*Cleanliness is removing the visible dirt from the food and the surfaces that contacts with food.*



*Hygiene is protecting the healthy environment from anything that causes illness.*



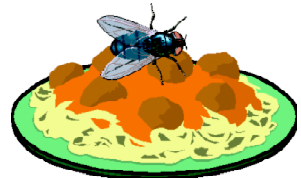
# CAUSES THAT LEADS TO POLLUTION OF THE FOODS

Substances that shouldn't be in foods, causes to pollution of foods.

Three factors as mentioned below causes the pollution;

## 1. Physical Pollution

Those are harmful substances such as hair, fly, glass etc.

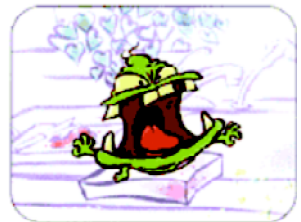


## 2. Chemical Pollution

Those are like agricultural stuff, detergents on the plate, fork etc. and plastics on the foods.

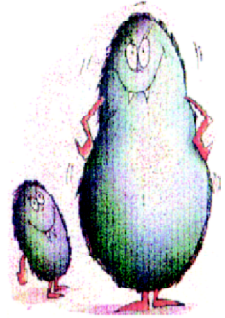
## 3. Biological Pollution

Those are mainly *bacteria* that cause food poisoning and illness.



## BACTERIA and THEIR FEATURES

Bacteria are microscopic organisms that can not be seen by naked eye. They can survive everywhere like on skin, hairs and nails. Most of bacteria may not harmful for us. However pathogenic bacteria having potential hazard on our health.



*Pathogenic bacteria are harmful.*

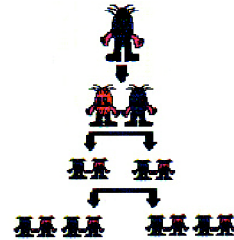
*Those threaten effects our health through increasing in numbers at warm and moist environment.*



Bacteria are so small organisms that only 2000 of them could be seen as pinhead.



At the appropriate environment, bacteria could increase in numbers, within 7 hours it might be steeply increase to 2 million and within 12 hours it might be increase to 1 billion.



*Bacteria can increase in numbers very fast at room temperature. Therefore, you should put your prepared foods, for consuming at school, into fridges quickly. Do not leave them on the table.*

Bacteria can not move on their own. They need agents to contaminate the foods.

*The contamination of bacteria to foods is more easier than home in places such as outside home, refectory, canteens and cafeterias.*

## How Bacteria Contaminate the Foods?

Before consuming foods some harmful substances can contaminate them and so the foods would be polluted.



Bacteria have to need an agent to contaminate foods. Those agents are particularly human and animals.



*You are bacterium carrier  
as well as  
Bob Square Pants.*



Beside, dust, chunk, insects, rodents and other animals, garbage, dirty objects and surfaces, garments are the other agents that contaminate the food.



Human is the main source of many harmful bacteria especially human's;

- skin that injured or sores,
- hair, facial hair and clothes,
- snot and saliva,
- dirty hands.

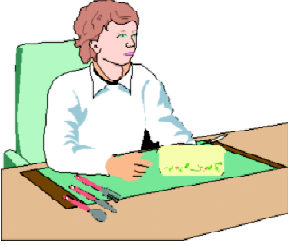


Bacteria can contaminate the foods by the way known as the “cross contamination”. Throughout “cross contamination” bacteria can contaminate foods as follows:

- \* dirty kitchen utensils, dirty hands,
- \* cutting boards,
- \* kitchen worktables,
- \* coughing, sneezing and sputum



## The Story of Emre



Emre sat down immediately to dining table after coming from school without washing his hands since his mother has made delicious meals.

After ate his meal, Emre went to his room to make his homework.



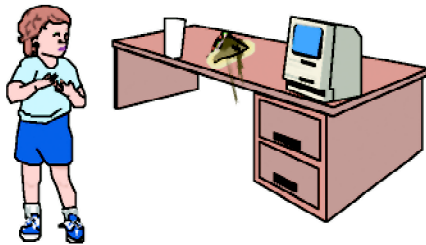
After working a short period, he is getting hungry and he came near to his parents to feed him self and rest.

When Emre saw his mother as busy he decided to make his sandwich on his own.



He forgot to wash tomatoe and cucumber that he cut. And he use the same knife he cut into slice the cheese and puts into the bread.

He took a glass of milk to eat his sandwich in his room. Emre knows how milk is such a beneficial product for the children. However, he forgot to put milk bottle into the fridge back.

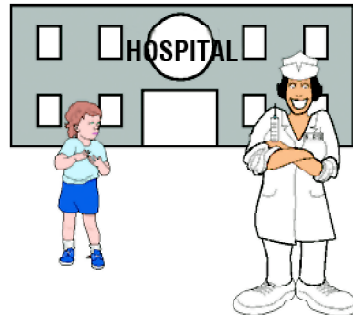


Emre ate his sandwich, then finished his homework, he brushed his teeth before went to bed.



Although Emre know how important is having breakfast, in the morning he did not want to have breakfast because he had a stomach ache. He just drank a glass of milk that he forgot to put into the fridge back yesterday.

At the end of the third lesson, he had a stomach ache. Emre became sick...



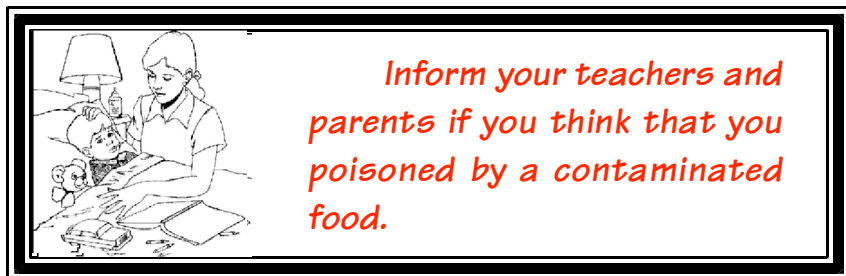
Do you have an idea what made him sick?

## What Happens If The Bacteria Contaminated Foods?

The pathogen bacteria contaminate the foods and spoiled them.



Some of bacteria that make “spore” and become stronger in inappropriate environment. We become sick after eating a food which is contaminated by bacteria or their spores and then some stomach ache begins.





## What Should We Do In Case of a Food Poisoning?

The symptoms of the food poisoning are the stomachache, vomiting, diarrhoea. In such cases it is wrong not to eat anything to stop vomiting and diarrhoea. To control the diarrhoea;

- Consume more clean drinking water, beverages such as ayran (diluted yogurt with salt), fresh apple juice,

- Eat yogurt, rice, boiled potatoes,

- And rest.



*If you suspect that if a food is contaminated you should never taste and eat that food. Do not forget: The bacteria cause symptoms like stomach ache, diarrhoea, vomiting. Contaminated food can not be seen by naked eye and they do not smell different*

# What Should You Do To Protect Yourself From Food Poisoning?

You should be careful about personal, food and utensil hygiene .

## Personal Hygiene

As we mentioned, the most important agent that contaminate foods is human. You should be careful for your personel hygiene.



## *The Rules to Provide Personal Hygiene*

- Before preparing and consuming foods , wash your hands properly.

Remember that; Emre has forgotten to wash his hands when he returned from school and before preparing sandwich. The bacteria at Emre's hands have contaminated foods and this led to his sickness.

### **How to Wash Our Hands Properly?**

1- Wash your hands as clean and hot water as it is.

2- Wash your ankle and finger tip by soap completely.

3- Wash inside part of your hands minimum 20 seconds.

4- Purify your hands under water.

5- Dry your hands by clean towel.

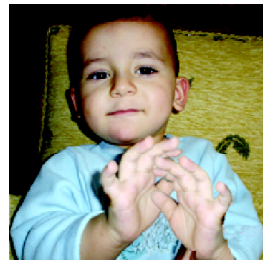


*After washing your hands do not dry your hands on your clothes!!!!*

*Because bacteria on your clothes may contaminate your clean hands.*

Wash your hands:

- when return to home
- before and after meal
- after lavatory
- after touching our nose and after coughing and sneezing



- after playing mucking and chunk
- after touching money
- after touching animals like cat and dogs.

To provide personal hygiene it is important to have clean body and teeth.

You should have a shower at least twice a week and brush your teeth three times a day.

*We should have shower at least twice a week and brush our teeth three times a day.*



## FOOD HYGIENE

A hygienic food is clean and not contain any harmful substance. The foods that are sold at outside are not clean and may be contaminated. Therefore,

- Do not buy foods that are sold at outside.
- Food should have the production permission. Always read the “use by” date of the foods at the label. If the “use by” date passed do not buy that food.



If the foods are not kept in good conditions it can be spoiled, nutrients losses can occur and threaten our health.

- Do not forgot foods such as milk, meat and egg on the kitchen counter and keep them into the fridge immediately.

Remember...

Emre has forgotten to put the bottle of milk back to the fridge and bacteria have increased in numbers steeply along night therefore Emre became sick.

- Do not put your foods on to warm places such as radiators.

*Do not forget to put foods like egg, milk, yogurt and cooked foods in to fridge and do not keep them more than two hours in the room temperature.*

- Do not prepare uncooked and cooked foods together. In this way we can prevent contamination of bacteria from uncooked foods to cooked foods.

Remember...

When Emre preparing his sandwich he has forgotten to clean tomatoe and cucumber at the same time he used the same knife for cheese. Therefore bacteria in the dirty tomatoe and cucumbers have contaminated cheese and this caused the sickness of Emre.

- Wash your vegetable and fruit for a long time in water.
- Be sure that your meal has cooked well. High temperature kills bacteria easily.



- Don't leave foods which you cannot eat any more than two hours on the table and put them into fridge.

*Do not keep the door of the fridge open for a long time.*

*If you have meal at the school be sure that your plate, fork and cup would be clean.*



- ✓ Do not eat foods which are on the floor.
- ✓ Do not use fork which are on the floor.
- ✓ Do not use crossed, broken plate and glass.
- ✓ Do not leave empty box, package and garbage on the table, put them into the garbage.
- ✓ Do not put your food pack on the floor.



Answer:

1. The door of the fridge is kept open
2. The schoolbag is on the table.
3. Rubbishbin is full and open
4. The milk is open
5. The cat is on the table
6. The flower pot which is full of chunk is on the table.



To Fight With The Bacteria and To Protect Our Health;



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