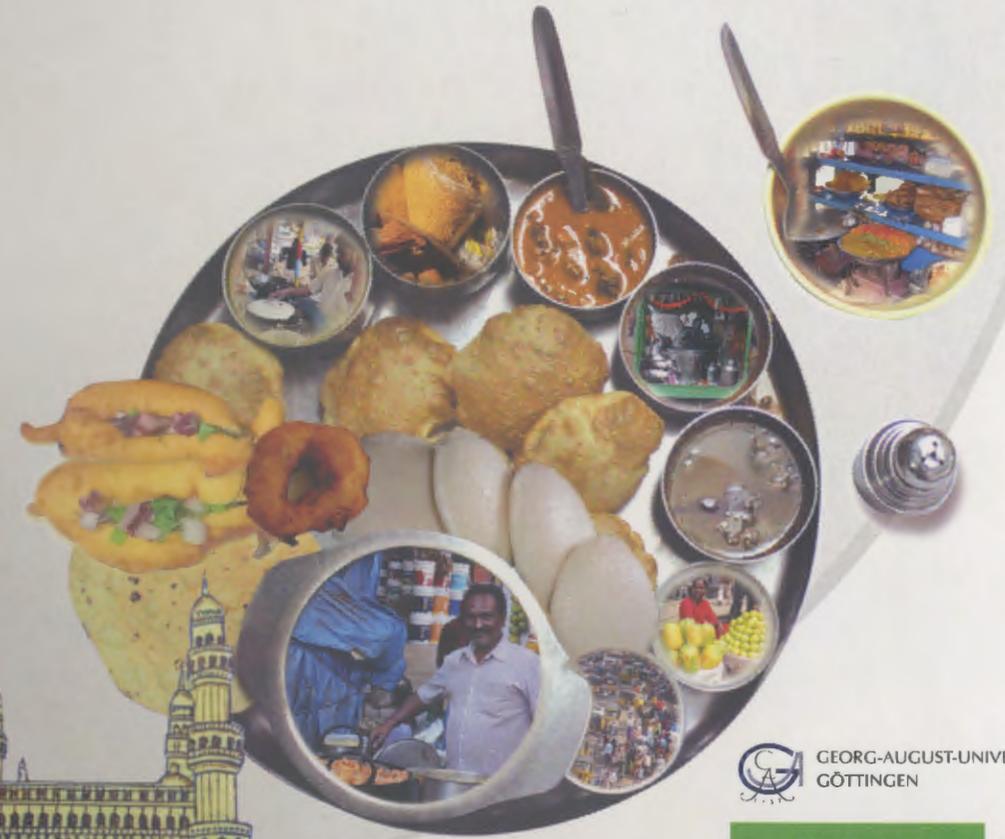




SUSTAINABLE HYDERABAD PROJECT

Street Food Safety Manual

A Training Tool for Hyderabad's Street Food Vendors



GEORG-AUGUST-UNIVERSITÄT
GÖTTINGEN

College of Food Sciences
Acharya N.G. Ranga Agricultural University
Hyderabad, India

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Federal Ministry
of Education
and Research



Future
Megacities
Megastädte von morgen



Street Food Safety Manual

A Training Tool for
Hyderabad's Street Food Vendors



Institute of Geography, Department. of Human Geography, University of Goettingen
and Home Science College, ANGRAU, Hyderabad

2012



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The research project *Sustainable Hyderabad*, funded by the German Federal Ministry for Education and Research, works in various fields to search for practical options towards sustainable mega-urban development. This manual is part of the pilot project *Sustainable Street Food Plan*. It is one element of the *On-Site* training concept for street food vendors to improve food-safety standards of street food items in a mega-urban environment.

This manual is for non-commercial distribution only.
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– Preface from the Dean of Home Science, ANGRAU –

The sector of street food vending provides large-scale employment opportunities to the urban poor, including the migrants from the rural areas, to make hot and palatable food available at affordable rates. The Government of India has identified street food-safety as an important part of capacity building. The Food Safety and Standard Act 2006 has kept this issue of ensuring the food-safety standards.

From 2006 onwards the Home Science College was part of a nation wide capacity building project, assisted by the World Bank, which developed training modules for street food vendors and provided an analysis of the hygiene standards of food vendors. We now continue this work within the pilot project 'Sustainable Street Food Plan', together with the Sustainable Hyderabad Project and the Department of Geography of the University of Goettingen, Germany. The findings of the 2006 project, as well as the lessons learned, have been a good base for the cooperation on this issue.

Food-safety has been an important issue to address. Every day new vendors start their business and every day the conditions to sell ready to eat food in the busy streets of a megacity like Hyderabad, will demand the vendors to take special efforts.

The College of Home Science will continue the work for the improvement of food-safety standards and take efforts to develop training methodologies and tools that are convenient for vendors to understand and provide them with the knowledge and ideas to improve their individual actions.

I appreciate the efforts of the authors to compile this manual.

Sharada .A

Dr. Sharada Devi,
Hyderabad, February 2012



– Preface and Acknowledgments –

During the past years of doing research in Hyderabad we learned a lot about street food vending. How it works, who is involved, what role it plays for public space and how the life of street food vendors looks like. Of course we also learn much about materials, preparation and taste! One can find many different perspectives and opinions about street food. Government officials, civil society groups, NGOs, consumers and most importantly the vendors themselves, give you a different picture of challenges and potentials of street food vending. One thing they have in common is that they see street food as part of the culture and identity of all Hyderabad citizens. Among others, for us the most crucial factor to support street food vending lies in its characteristics as a decentralized, low emission and all-over accessible provision system of affordable food. It's potentials for sustainable development of a megacity and the services it does to those who consume this food should not be dismissed.

The problems vendors face in securing their livelihood in the busy streets of the megacity are plenty. Among many things we discussed, the special conditions of food preparation on the street are only one. Pollution, lack of water and sanitation, long transport, lack of cooling facilities – all this increases the risk for safe food preparation.

In general, many consumers are convinced that especially street food is not healthy, because of the conditions it is prepared in. During our research, we could neither dismiss nor affirm this opinion.

Many vendors already manage to prepare fresh food on a daily base. Their hygiene standards do often not differ from those of small restaurants and if they do, often to the better. Nevertheless, street vendors have to take additional precautions to make sure the food they sell will not cause any illness or long-term health problems for those who consume it. And most important, vendors should be aware of the risk that can be increased or decreased by their very own actions.

This manual is one element of the attempt to search for ways and means to improve the food-safety standards of street food in a megacity. It is a training tool, which covers the basics a street vendor has to know in order to provide safe food to his/her customers. More information and specific instructions depending on the items the vendor sells will be given during the *on-site trainings*. This manual is only the base to start from, and hopefully it will work as a resource for vendors to understand the necessity of safe food preparation.



The compilation of this booklet would have been impossible without the help of many. We thank Dr. Sharada Devi, Dean of Home Science ANGRAU, for the opportunity to work closely with Dr. T. Neeraja, Department of Resource Management and Consumer Sciences. The expertise and support from Dr. T. Neeraja has been of great value.

The same accounts for the discussions we had with the staff from the Food and Nutrition Board, Mr. Natarajan, Mr. Naidu and Mr. Mohan.

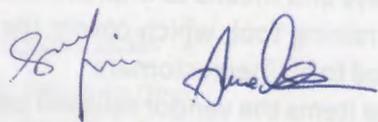
Demonstration officer Mrs. Shuman Shukla, now in retirement, took a lot of her time to share her experience in food-safety trainings during many years at the Food and Nutrition Board.

In various interviews with different experts from medical, water and sanitation background, we learn more about the risk of food and water contamination and the details of how food-borne diseases evolve and spread. Many thanks to those who took the time to discuss with us.

The most valuable information we got from the many vendors we talked with. Letting us observe their day-to-day work and patiently answering the many questions we had, gave us an important insight to structure this manual conveniently to the requirements of the vendors.

We also thank Sharath Vancha for the beautiful drawings he did – in busy times studying for his exams. These give a little life to the otherwise often dry contents of such a manual. We thank Mr. Samuel Selvam for patiently and Mr. G. Satyapaul Reddy for timely printing.

Of course, this manual is only a small element of what is needed to make sure that the food prepared and sold on the streets of a megacity is always safe to consume. Neither does this manual make a claim to be complete, nor can we answer the questions raised on the following pages fully. Foodborne diseases and the contamination of food is a complex issue. Even the most thoughtful behavior of vendors can only minimize the risks but not prevent contamination fully. But, being put in the right context, this manual can be a tool to create greater awareness among street vendors and encourage individuals to actively contribute to fight food-borne diseases.



K. Supriya and A. Dahmen
Hyderabad, February 2012



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– About this Manual –

“We want all food we eat to be safe.” This statement generally means, that we want the food we consume to not harm our body in any way.

It does not matter if you give yourself a treat, eating a dessert full of oil and sugar or if you eat a wholesome lunch. When we consume food, we want it to not harm our digestion or organs in the long- and short-term.

Many people in Hyderabad love street food. It is part of their day-to-day life in the city. However, preparing and selling food on the street also contains many risks. The pollution and the heat of the streets can easily cause the food to spoil and consumers often have the opinion that street food is neither hygienically produced nor healthy to eat every day.

This manual will inform you about easy measures you can take to produce **food with low health risks for your customers**. We call it **safe food**. With the preparation of safe food you cannot only take care about your customers with a good feeling serving them fresh, tasty and safe to eat dishes. You can also secure your livelihood by making sure your customers know that they are in good hands concerning their health and taste buds. They will keep coming back.

All people who work with food – may it be housewives, workers in food processing factories, cooks or waiters in restaurants and hotels or many others – are obliged to not only think about profit or taste. **One should also have the safeness of food and its nutritional value in mind and act accordingly.**

This manual focuses on the major points of food-safety. Many more things can be learned and many innovative approaches can be taken. Here, you will learn the basics and get some ideas how you can take it further. Your customers will appreciate it for sure!

During the preparation of this manual we spoke to many street vendors and customers of street food in Hyderabad. They shared their knowledge and ideas with us and helped us to understand the constraints and advantages of street food preparation. Some of what they said we incorporated in this manual. You will find their quotes attached to the following pictures:



Vendors



Customer



While reading you will also find different signs and pictures. Those will help you by giving more information on different topics or show you what to do or to avoid. A list of these signs you find below:

-  The *reading glasses*-sign gives you additional information on certain topics.
-  The *book*-sign explains definitions of technical terms.
-  The *thumbs up*-sign gives you advices on what is good to do.
-  The *thumbs down*-sign gives you advices on what you should avoid to do.

In the first chapters (I+II), we provide you with the background information that is required to fully understand the importance of safe food preparation. The following chapters (III, IV and V) will apply this knowledge to look into the day-to-day activities and conditions of street food vending. More practical explanations are given, including what you as a vendor can do to lower the risks of food contamination and increase the satisfaction of your customers.

The chapters are divided into different questions. We will look into the topics of what is important for food preparation, storage of materials, the right place to the vending and hygiene of people involved in the cooking process. The answers provided will then give an understanding of the topics raised in the manual.

I The Need of Food-Safety in Street Food Vending

In this chapter the following questions are raised:

Why is it important for Street Vendors to care about Food-Safety?

What can you as a Street Vendor do for Food-Safety?

What is the Benefit of safe Street Food?

No matter the reason of eating something – may it be pleasure in taste or tradition or just to get something to fill your stomach – people who consume food want it not to be harmful for their body. Regardless the margin of profit, all street food vendors want their customers to be satisfied rather than getting sick from what they purchased and ate.

Safe Food – Unsafe Food – Food Safety and Foodborne Diseases

Safe Food ...is food that can be taken without causing any harm to the health of the person consuming it.

Unsafe Food ...is food that has been contaminated and bears potential health risks when taken.

Food-Safety ...is referring to all measures that ensure that food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use.

Foodborne Diseases...are those illnesses, which are caused by eating unsafe foods. This food then can have either been contaminated with microorganisms and chemicals or spoiled by natural toxins.



Why is it important for the Street Vendors to care about Food-Safety?

- **Unsafe food** can cause short-term and long-term **health problems**. In some rare cases it can be life threatening.
- To ensure better health worldwide, producers, consumers and governments among many others are undertaking steps to ensure that food is safe. **Selling food, which is not safe for consumption, is punishable by law** in India and in many other countries.



- The overall public opinion about street food is often: "It's not safe to eat." Many consumers in Hyderabad share this opinion. They would eat street food more frequently if they could be sure it is healthy and safe.
- To sell food on the street – an environment in which the risks of contamination are very high – special measures have to be taken in order to ensure the food is safe.

Research has shown that many vendors already try to sell good quality products. Many sell fresh food and take measures to make sure the food is safe. But more can be done with training and a good attitude.

What can you as a Street Vendor do for Food-Safety?

- During the process of preparing and selling food on the street, **some key procedures have to be followed to prevent foodborne diseases** or at least to reduce the risk of these diseases.
- If you want to **make a difference** and produce food that your customers can be sure of to be safe to eat, you have to think about the following points:

-  **"Be informed"** – Gain knowledge about the various health risks concerned with food preparation, safety standards and understand why it is important to follow these accordingly.
-  **"Act safe, always"** – Follow food-safety standards all the time and fully incorporate these in your day-to-day work.
-  **"Show that you care"** – Make safe food availability visible to your customers and let them know.
-  **"Share your knowledge"** – Share your knowledge and actions with your customers, your family, co-workers and neighboring vendors.

...YOU will be part of a change, which makes food healthy for everyone and improves the public image of the Hyderabad street vendors and cheer the good service, you give to the people in this city.

"Your customers will appreciate if you care about their health. Show them how you take an extra effort for this."



What is the Benefit of "safe" Street Food?

Apart from our demand that food should be tasty and still our appetite, food also needs to be nutritious and serve the body with vitamins and other elements to keep the body strong and healthy.

When the food we eat is not safe, it can cause so called **foodborne diseases** and affected people suffer from short- and long-term illnesses. **Most foodborne diseases can be prevented by the right choice of materials and proper food handling.**

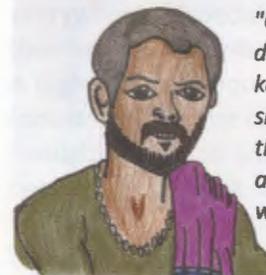
Especially you as a street food vendor, serving food to so many people during the day, have a responsibility to produce food which does not harm your customers.



"I like street food, but I do not eat street food often, because I think it is not healthy!"



Act safe to stop foodborne diseases from spreading. Share your knowledge and help others to act safe.



"One of my daily customers is a doctor. He always reminds me to keep the bandi clean and that I should not use the material from the day before. I know he is right and I act accordingly because I want to keep him as a customer."

If you follow the advice given in this manual **YOU** can make a difference.



There are risks during all steps of the production of food.

The ground the vegetable or fruit grows in or the fodder animal ate can already be contaminated. Risks lie also in the way materials were transported and stored. All of this is important, including the way it is prepared, sold and consumed. Especially **raw materials, meat, dairy products and the water used** are of major concern.





"In chapter II you will learn more about the invisible risks of food."



You, as a street vendor, are especially affected: The environment, in which you work, the busy streets of a megacity, contains special risks like the air pollution and the unavailability of tap-water or cooling facilities.



This is the reason why you should take special care. You will get to know what to do and how in chapter III, IV and V. In the next chapter we look into the issue of what causes food contamination.



Notes...



II Causes of Contamination of Food

Most of the risks concerning foodborne diseases derive from:

- Microorganisms
- Chemicals
- Food adulteration

In this chapter you will find the answers to the following questions:

- What do we have to know about foodborne Diseases?
- How do Microorganisms contaminate Food?
- How do Microorganisms grow and move?
- What do we have to know about the Risks of Chemicals?
- What do we have to know about the Risk of Food Adulteration?



What are Foodborne Diseases?

A disease is called foodborne disease when it is caused by eating contaminated foods. These foods have either been contaminated with microorganisms, chemicals or with natural toxins.

Microorganisms, for example bacteria, are found everywhere, especially where living things (humans, animals, plants) are around.

A high concentration of microorganisms on food items (in some cases a small number is enough) can contaminate it and cause people to get sick after eating. This is because the intake of contaminated food brings the microorganisms into the digestive system.



Microorganisms can very easily spread...

- ...when fresh items have direct physical contact with spoiled items.
- ...when spoiled food is mixed with fresh food.
- ...when food is not covered in places where a lot of microorganisms are around, for example busy streets.
- ...when a sick person coughs or blows his nose to the direction of food items.
- ...when persons who handle food do not maintain proper personal hygiene, for example regular hand wash.



? What do we have to know about foodborne Diseases?

Every year, billions of people in the world experience one or more episodes of foodborne disease. Some people might not even know that their illness is caused by the intake of contaminated food. Sometimes the affected person may also experience fever or other non-stomach related symptoms. It depends on the cause of the disease. Symptoms can occur immediately or after some days—or even weeks.

The most common symptoms of foodborne diseases are:

- Stomach pain
- Vomiting
- Nausea
- Diarrhea



- For most foodborne diseases symptoms occur **24-72 hours** after the food had been eaten.
- For infants, the sick, pregnant women and the elderly, the consequences of foodborne diseases are usually more severe and more often fatal.
- Foodborne diseases **can lead to long-term health problems** and severe diseases (including cancer, arthritis and neurological disorders).



"Also look into chapter IV on vendor's health and personal hygiene."



What should you do when you get a foodborne disease?

One should seek **medical advice** when bowel movement is very frequent, lasts longer than 3 days, is very watery or contains blood. When you consult a doctor, think about what you have eaten before the symptoms occurred, and inform him about it.

- Make sure you **drink enough water** (minimum 3-4 liters a day, not cold) and give your stomach a rest from too much spices and oil, very hot or cold food.
- Try not to handle food **until 48h** after your symptoms stop. Some foodborne diseases can be **transferred** from person to person.
- **Care givers** and people sharing the same toilet can become sick from patients with a foodborne disease.
- If handling food cannot be avoided, **wash your hands with soap and water before and frequently during food preparation.**



? How do **Microorganisms** contaminate Food?

The cause of foodborne diseases is the contamination of food with microorganisms. The following pages will provide you with information on microorganisms, about the risks and how to prevent them. You generally find microorganisms associated with all living things. An average of 1 Lakh bacteria can be found on each square centimeter of human skin.



What are Microorganisms?

Microorganisms, or also called **germs**, are very small living beings. They are so small, that they cannot be seen by the naked eye.

If you want to imagine the size you can compare them with one million dots on one pea. Bacteria, viruses, yeasts and molds are examples of microorganisms.

Microorganisms are found everywhere. In high concentration you find them especially on:

- Feces of people and animals
- People (bowel, mouth/spit, nose/snot, intestines, hands, fingernails and skin)
- Domestic, marine and farm animals (e.g. dogs, chicken, cows, pigs, rats, insects etc.)
- Soil and water.



Microorganisms can easily move, for example, when things have direct physical contact. Our hands are often the mode of transport for microorganisms. Therefore it is so important to wash your hands regularly (learn more about personal hygiene in chapter IV).



There are **VARIOUS POINTS** to keep in mind when **MICROORGANISMS** are attached to food:

Microorganisms can cause food to spoil or spoil faster. But the effects, which you can detect with your senses, are rare or appear only after the food has been spoiled for some time already. These cause food to **smell bad, taste horrible or look disgusting.**

Some microorganisms can contaminate food without any visible effect at all. But they can easily cause the human body to get sick. These microorganisms are also called "**pathogens**" and **can make people sick or lead to death.** The problem is, that these are also not visible to our eyes and do not change the appearance of the food, so **we cannot detect them with our senses.**



Examples of such dangerous microorganisms include:

Bacteria like *Salmonella* (found in **eggs** or egg based processed food like ice-cream) or *Campylobacter* (found on **poultry**)

Parasites like *Giardia* (found in **water** or **raw food** materials which came in contact with animal feces)

Viruses like *Hepatitis-A* or *Norovirus* (found in human and animal feces)

The perception of bad smell or disgusting appearance are indicators of your body rejecting these foods. Your body knows that it **"can" be harmful** when consumed in large quantities. However, warning signals from your body are not sufficient indicators (see box in chapter III). In many cases your body is not able to detect harmful food.

Some microorganisms are important for your body to function. For example, we do have a lot of **bacteria in our stomach, which help our body to digest the food** we eat. Some are used to make cheese or curd. However, a too high concentration of these microorganisms can easily become harmful.

Raw food such as **meat, fish, milk and vegetables grown on sewage** are likely to be contaminated with harmful microorganisms.

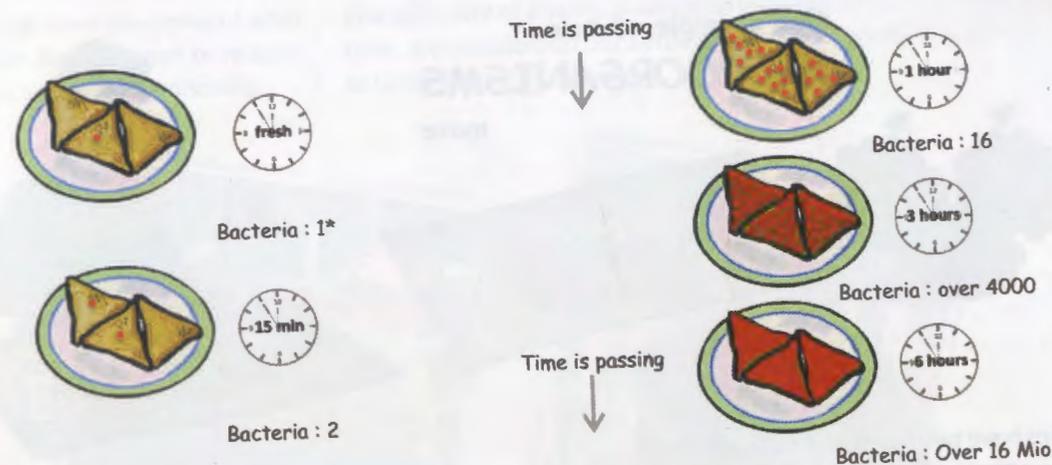
To understand the risk of contamination and the risk of getting sick you not only need to know about where to find harmful microorganisms, but also how they move and develop.



How do Microorganisms grow and move?

Direct physical contact (or when food items are close to each other or sources of contamination for longer time) gives microorganisms the opportunity to move. Microorganisms can also be transported through dust particles or moisture. For example, emissions from vehicles carry a lot of microorganisms.

- **The rate of how microorganisms grow** depends on:
- **Environment/surroundings** (hygienic conditions, density)
- **Temperature** (see box below)
- **Time** (see chart beside)



*In reality the bacteria (microorganism) is many times smaller than shown here.

To understand the speed of spreading you have to know: **1 bacterium can become 2 in just 15 minutes**. 2 will become 4 in another 15 minutes and so on. This means that 1 bacterium can grow to a number of 16 Million within 6 hours.



How can you keep the Food at "safe" Temperatures?

By holding temperatures below 5°C (40°F) and above 70°C (140°F), the growth of microorganisms can be slowed down or stopped. Therefore you have to follow the following rules to keep food items at safe temperatures:

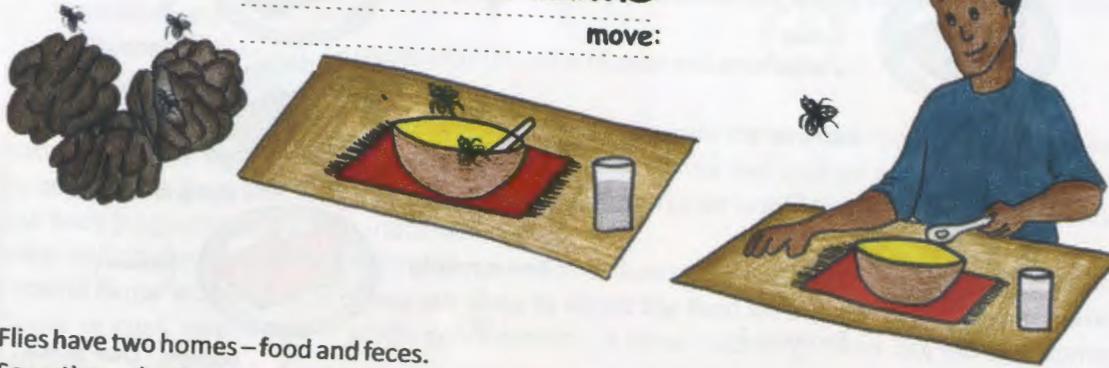
- Do not leave cooked food at room temperature (25°C) for more than 2 hours.
- Do not keep cooked food and leftovers too long (more than 1 day), even if kept in the refrigerator.
- Refrigerate immediately all cooked and perishable food (ideally below 5°C)
- Keep food hot before serving (best above 60°C)

"Left overs should not be stored for a long time. Check also the box in chapter III."



One example of how
MICROORGANISMS

move:



Flies have two homes – food and feces. Sometimes the fly sat on animal or human waste and is then sitting on the food you want to eat. The fly may work as a mode of transport for the microorganisms to move from the feces to the food item. This is why vendors have to make sure the food is covered when sold on the street.

? What do we have to know about the Risk of Chemicals?

Microorganisms are not the only cause of foodborne diseases. Poisonous chemicals in the food are also a reason why people get sick.

Poisoning ...means, the chemical contamination of the food is the reason why people get sick. That's why a lot of people also call foodborne diseases "Food Poisoning".

Some examples of poisonous chemicals are:



- Natural toxins (they occur when raw or cooked food is spoiled in time)
- Metals and environment pollutants (e.g. when vegetables are grown in polluted soil or irrigated with polluted water)
- Chemicals used for treating animals
- Chemicals used for cleaning (e.g. when cleaning the bandi)
- Improperly used pesticides in farming or food additives

Natural toxins can develop by mold growing on the food (e.g. aflatoxin). They also affect nearby materials. The intake of aflatoxin can have harmful effects on the liver and can ultimately lead to cancer.



Here are some examples of what you can do to prevent or reduce the risk of food poisoning.

The difficulty of chemical contamination is, that, most of the time, it is invisible to our senses. Often we cannot see, smell or taste the chemical.



Simple measures can be taken to reduce the risk from chemicals or contamination:

- **Washing** (with clean water), peeling of materials and keeping materials in clean places during the process of cooking.
- **Appropriate storage and transport** can reduce or even avoid the formation of some natural toxins:
 - Materials consumed in raw state should be transported and **stored separately from other raw materials** and non-food items.
 - All materials should be transported and stored until consumption in a way, that the growth of microorganisms and toxin formation is limited to a minimum. You can do so by effectively **reducing time** of transportation and controlling the **temperature** and **water activity** of such materials.
- Obtain your materials from known and **reliable sources**, not from clandestine dealers (e.g. illegal slaughterers).
- Avoid using **cookware and utensils glazed with materials containing heavy metals** (e.g. lead, cadium). The material can dissolve in the food when used during cooking process.
- **Check your materials before you purchase them and monitor them during the whole process until consumption.**

These measures reduce the risk of contamination, but they cannot prevent it fully.



III How do we prepare safe Street Food?

Food produced for others to enjoy has to be of "good quality". Apart from food-safety and taste one has to think about the nutritive value of a dish, its wholesomeness and a balanced diet.

After a short introduction to the chapter we answer the following questions:

- What is safe Water and why should only safe Water be used in Food Preparation?
- What is important for raw Materials on Purchase and during Storage?
- How should Items be covered during Storage, on Display and in between?
- When are Nutrients lost and how are they preserved?
- What to remember about safe Preparation of Street Food?

You as a street food vendor know best what tasty food means for your customers and how to satisfy them. In this manual you learn more about what you can do to prepare safe street food.



"Vendors like us already take precautions in different ways. We try to keep our bandi clean on the dusty streets. We consciously avoid placing our stall beside garbage bins or nallas and we take more effort to keep the surrounding of our vending unit clean."

"That's a good start! But to be sure, you have to act responsible in all stages of producing and selling street food! Selling safer food might increase the costs of your materials slightly but you definitely attract more customers!"

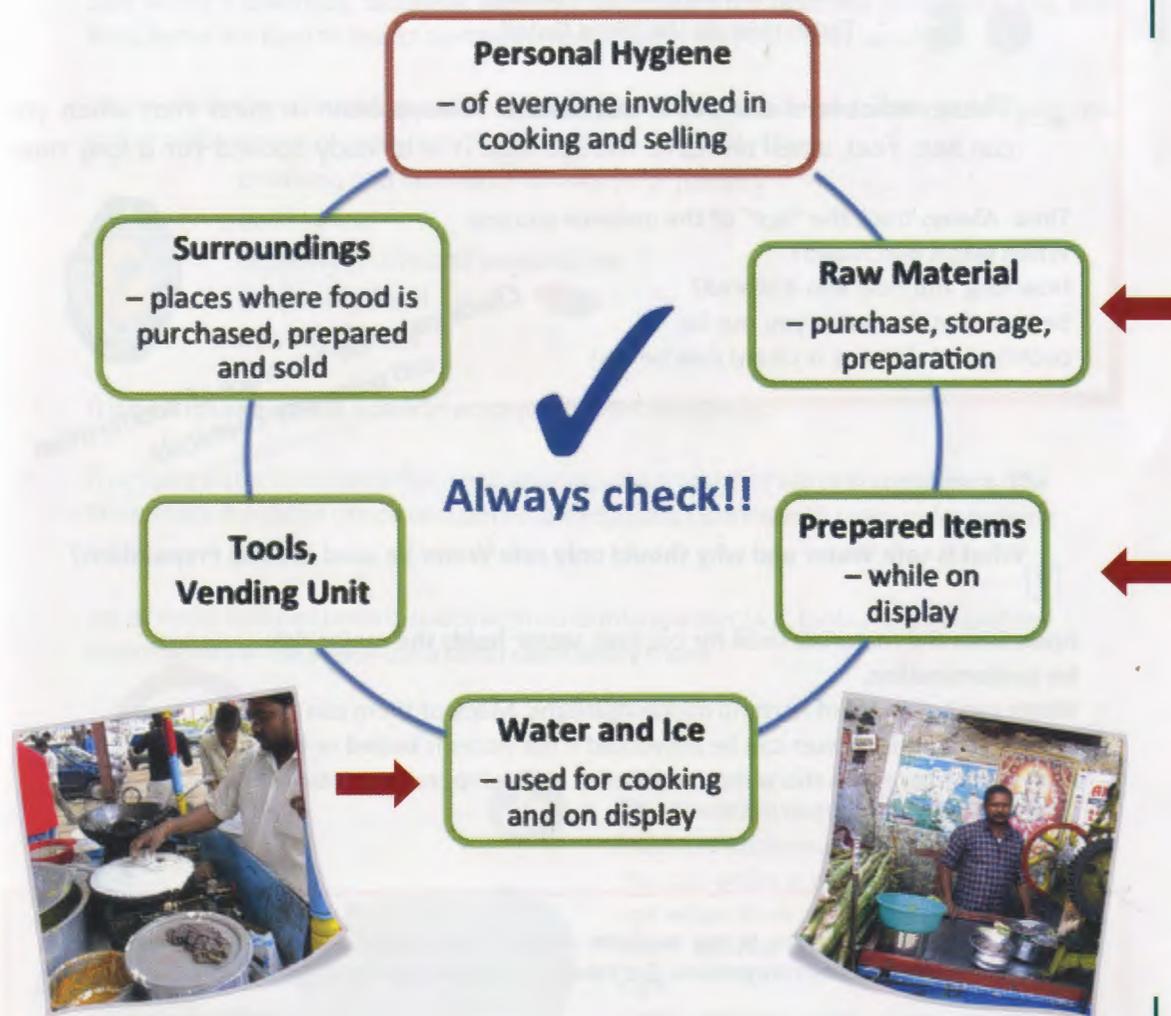


The first basic necessities are to always and constantly check...

- ...the materials used in the process of cooking (raw/prepared items, water/ice)
- ...the persons involved
- ...the area where you handle the food



If you always keep these points in mind you are well on the way to make sure the food you serve is safe to consume. In this chapter, we concentrate on the parts of the circle highlighted by the red arrows.



When does Food become unsafe? – Some Examples:

- Juice containing ice not made out of drinking water is easily contaminated.
- Ingredients on display, for example at chat stalls, which are not covered properly, can be contaminated by particles, dust and the surrounding pollution.
- Chutneys, which are stored for more than two hours without cooling (below 5°C) or reheating (above 70°C), can easily get contaminated!



 When handling food for a longer time, you will soon be able to distinguish between fresh and spoiled items. Do not miss out anything. Here is what you should check to distinguish fresh from spoiled food:

-   - **Appearance:** How do the items look like and feel?
-   - **Smell:** How do the items smell?
-   - **Taste:** How do the items taste?

These indicators are **NOT sufficient!** Always bear in mind that when you can see, feel, smell or taste the spoilage it is already spoiled for a long time.

Time: Always track the “age” of the material you use.
 When was it purchased?
 How long and how was it stored?
 Be sure that the **water** you use for cooking and cleaning is clean! (see below)



Check materials for trace of adulteration and poisonous chemicals.

What is safe Water and why should only safe Water be used in Food Preparation?

Apart from the materials used for cooking, **water holds the major risk for contamination.**

Water can hold a lot of harmful microorganisms. Many of them can be destroyed and sicknesses can be prevented if the water is **boiled** or the item you prepare with this water is cooked at high temperatures (**above 70°C**) throughout.



 If purified water is not available, boiling, chlorinating and filtering are ways to kill dangerous microorganisms. But it does not remove harmful chemicals.

-  **How to disinfect water?**
 Let water boil for at least 3 minutes.
 Add 3 to 5 drops of chlorine to 1 liter of water, or physically remove particles and microorganisms with appropriate filters.

Only water treated like this should be used for hand-washing, dish-washing and cleaning of materials.



When the water you use is not safe, you take a high risk for your customers to get sick. **The majority of food poisoned patients get ill because of unsafe water.**



- Safe water is **colorless, tasteless, odorless and clean** (free from any particles) – but, like food items, it is hard to detect contamination of water only with your senses.
- Attain water from **reliable sources** and use **purified or disinfected water**, otherwise the risk of contamination is very high. You should use clean water for...
 - ...drinking and mixing of drinks (e.g. juices)
 - ...making ice
 - ...washing fruits and vegetables
 - ...preparing food
 - ...washing hands
- It is best to use **running water** to wash your hands and dishes.
- If running water is not available, keep an adequate amount of water in **containers**. **The containers should** be closed or covered and regularly cleaned with soap under running water.
- Let all items that had been in touch with no-drinking water (e.g. tools and plates while cleaning) **dry in the sun** or use a **clean cloth** to dry them.



Idea to obtain water from a reliable source:
 You can **order a water tanker** with safe to use water from many sources, for example from **WATER WORKS/Metro consumer care**.
 Form **groups with your neighboring vendors** who also need safe water and order one tanker together. If you order together you can also obtain only small amounts of water every day.



METRO
 Customer Care
 155 313



What is important for raw Materials on Purchase and during Storage?

Storing raw materials for a long time is always a risk. If you have to store materials, think of the following:

Sort out spoiled items during purchase and before storage.

- Choose your dealer for **materials on the criteria of freshness** rather than price.
- Select fresh and wholesome food.
- Avoid food that is damaged or rotting.
- Choose food that is processed with safety measures (e.g. pasteurized milk, irradiated meat).

Items which are already spoiled contain microorganisms that increase the process of spoilage for items placed next to them.

- Sorting out rotten items will keep the good ones fresh for a longer time.
- Fresh items should not be mixed with stored items. Keep track of what to use first!
- If possible, keep track of **expiry dates!**

Take special care about non-veg items.

Especially **non-veg items** (e.g. chicken or fish) and all **milk products** have a higher risk of contamination.

- They have to be monitored and obtained from a reliable source!
- They have to be **separated** from other items in storage and during preparation.
- Wash pots and pans properly before preparing any non-veg item.

Do not mix stored items and prepared food or materials used in the cooking process (see photograph)! Mixing of ingredients should not take place near the place of storage.

"The mixing of ingredients I used to do in the storage room. Now I know how important it is to keep the stored items away from the prepared ones. I now only take from the storage what I need and move to a different place to mix the ingredients."



Store materials properly, especially those sensitive to moisture.

Choose dry, cool, well ventilated and shady places (away from sunlight).

- Moisture is a mode of transport and source for microorganisms to grow and spread easily. It is important to separate dry materials (rava, flour) and fresh materials (fruits or vegetables) while in storage.
- All animals and products related to them are more prone to contain a lot of microorganisms and spoil easier.
- Dirt, mud and particles like dust can contain bacteria or other microorganisms, which either make the items **spoil faster or contaminate** the item.
- Good ventilation helps to keep the items dry.
- Store all items in shaded places. Direct sunlight increases the spoiling process.
- Storage places have to be cleaned and kept free from any pest (cockroaches, rats).

Cover all materials and always close the openings after use.



- Cover all pots and tins to protect them from pollution and pests (especially on the street). Covers prevent microorganisms to spread or to reach the items at all.
- The preferred materials for covers and containers are made of glass or non-glazed metal.
- Keep rice and rava bags intact and close them tightly. Avoid holes and damages.

Try to leave room for the items.

- Do not store items directly on the floor or near walls (for example use some wooden planks to create height).
- Pressure between the fresh items like vegetables or fruits causes a faster process of spoilage.

Make sure all containers are washed under running water and with soap regularly, especially if you use a new load of materials.

- Do not place plastic containers near to heat (stove, hot pots etc.). Melted plastic releases toxic particles, which can be hazardous to the customer's health. Avoid using plastic in general for that reason.

Keep storage time to a minimum.

- Especially non-veg items and fresh products like vegetables and fruits should not be stored for a long time.
- Best alternative: **Get materials often to avoid long storage!**
- Vitamins and other nutrients can be lost when prepared food is kept for a long time.



? How should items be covered during Storage, on Display and in between?

Covering all food items will prevent spoilage and contaminations, because it keeps away direct sunlight, dust and other particles flying around.

- Openings for **materials in constant use** (e.g. spices) should be small and easy to cover when not used.
- **Items on display** also have to be covered, if possible with glass (so your customers can still see it).
- After preparing materials for cooking on the street and during transport all items have to be kept in tins or boxes with lids.
- For facts about long-term storage please see the information above.



Waste of Food – What to do with Leftovers?

Spoiled items should not be consumed and leftovers can only be consumed for a short period of time.

Nobody wants to waste food, but it is more important not to give spoiled food to your costumers. The health of consumers has priority! Prepare only as many items as you can sell. Work efficiently during the process of storage and preparation.

- **Work efficiently:** Prepare in **small amounts** to reduce the amount of leftovers.
- Only store leftovers which can be **reheated** before next consumption.
- Store the leftovers in a **closed container in a fridge** immediately after usage.
- Leftovers which have been prepared and stored in a safe way have to be **consumed within 1 day after preparation**. Food containing non-veg items spoils more easily! Remember: Keeping your food in the **fridge does not stop the microorganisms to grow**. It only slows down the process.
- **Do not mix the leftovers with fresh items** (e.g. fresh items might be the next leftovers and stored again in the evening).
- Reheat the item throughout the process to a temperature **above 70°C**. This will kill some of the bacteria but unfortunately reduces the nutritive value of the food.



? When are Nutrients lost and how are they preserved?

Washing and Soaking

- **Wash first and then cut!** Vitamins are destroyed when fruits and vegetable are cut before they are washed.
- **Do not soak foods longer than necessary.** Food that is soaked for a long time can lose important vitamins.
- When purified water is used for soaking, you can **use this water in the cooking process**. Otherwise you will throw away vitamins.

Cutting and Cooking

- **Cut medium size pieces to preserve vitamins.** Nutrients are easily lost when vegetables are cut into small pieces.
- **Avoid to fry vegetables.** Vitamin A dissolves easily in fat and oil.
- **Avoid soda or minimize the amount used.** Cooking soda destroys Vitamin B and has other health impacts.

Time

- **Cut vegetables shortly before cooking** and fruits immediately before eating. Nutrients are lost when vegetables are **cut a long time before** they are cooked. Additionally, cut vegetables are more prone to contamination.
- **Do not overcook your food.** Heat is necessary to destroy microorganisms but if food is cooked longer than necessary, the nutrients are lost.
- **Put food and leftovers in the fridge or freezer.** It can preserve nutrients and vitamins. All food and leftovers **lose their nutritive value over time** and the cooling slows this process down.



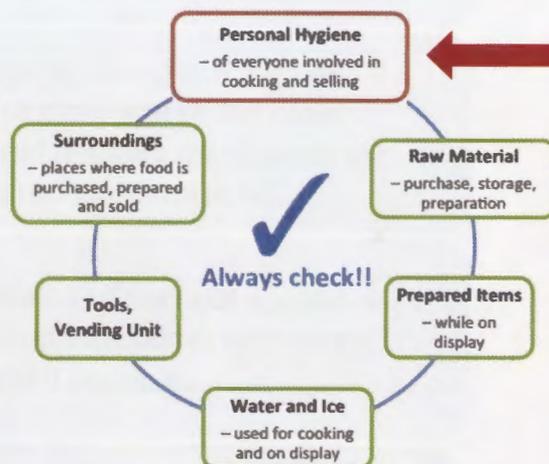
IV The Importance of Personal Hygiene and Vendor's Health

In the previous chapter you learnt a lot about how you can take easy measures to lower the risk of contamination of the food you prepare. **All these measures are important and necessary.**

However, they are only efficient if you monitor the personal hygiene of all people (including yourself) involved in the process of cooking and serving the food to your customers.

As you have read in chapter II, microorganisms are found everywhere. Especially the human body is a **source and means of transportation** for them. The same accounts for clothing, jewelry and other things that are constantly near to our body. Bacteria or other germs can easily accumulate there and spread to the food we prepare.

The vendor's health is important for many reasons. When you fall sick, your body is full of microorganisms, which leave or surround the body, for example when we cough or sneeze. It is important that we are aware of the risks in certain situations. If a sick person prepares food, those who eat this food are prone to be infected too. So the health of the vendor is important to, firstly, avoid long-term health problems and, secondly, to lower the risk of contamination of the food.



In this chapter we attend the issue of how to lower the risk of food contamination by keeping our body clean and healthy. Now we take a look at the following questions:

What do I need to know about proper Hand-Washing?

What do I need to remember about general Cleanliness?

Why is the Health of Vendors so important and how to maintain it?

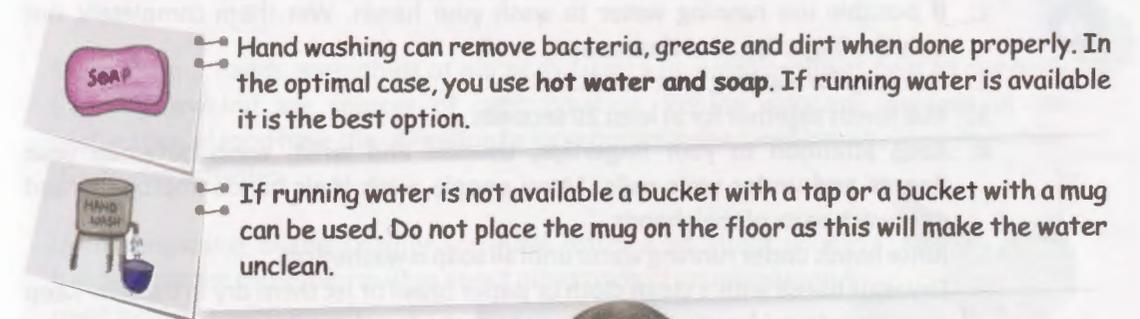
Our hands are the part of the body that is **most involved in the preparation and serving of food**. So let us start with the hygiene that concerns our hands.

What do I need to know about proper Hand-Washing?



Even if we do not touch the food directly, we **touch utensils like spoons, pots or plates**. At the same time our hands are touching a lot of things during the day. For example, hands touch hands of others during handshakes; touch body parts while going to the toilet and touch countless other things in our day-to-day activities.

From chapter II we know that it is impossible to "see" the microorganisms, so even when your hands look clean you cannot be sure. We also learnt that physical contact is the easiest way for microorganisms to spread. **Hands are by far the best means of transport for microorganisms**, therefore hand-washing is very important.



"I always make sure that I do not mix the fresh water in the bucket with the water I used for hand-washing. We have a separate bucket for the wastewater."

When preparing food, you should wash your hands...



- ...before handling food and several times during food preparation
- ...before eating
- ...after going to the toilet, urination or changing baby's nappy
- ...after handling non-veg items
- ...after blowing your nose or coughing in your hands
- ...after touching other hands (you can never be sure what they touched before)
- ...after handling rubbish
- ...after handling chemicals (for example cleaning material)
- ...after smoking
- ...after handling money





"Remember (from chapter III) to divide work (or hands) e.g. handling money separately."

Money is a good example. It is almost never clean and touched by people in all kinds of situations. Banknotes or coins are exchanged limitless and work easily as means of transportation for microorganisms.

Wash your hands properly to reduce the risk of infection:

1. If possible use **running water** to wash your hands. Wet them completely, not only the fingertips. Use **clean water**.
2. Use **soap** for washing your hands.
3. Rub hands together for at least **20 seconds**.
4. Keep attention to your **fingertips, thumbs and wrist, wash between your fingers and under your nails**. Many people wash their hands improperly and only wash parts of their hands.
5. Rinse hands under running water until all soap is washed off.
6. Dry your hands with a **clean cloth** or paper towel or let them dry in the sun. Keep a separate towel for your hands. Do not use the towel you dry other things with.



"Make hand-washing also available for your customers. For them it is also important to wash their hands before and after eating."



Hand Wash Day, worldwide!

October 15th is the Global Hand Wash Day. It has been established to raise awareness for the importance of hygiene to our health.

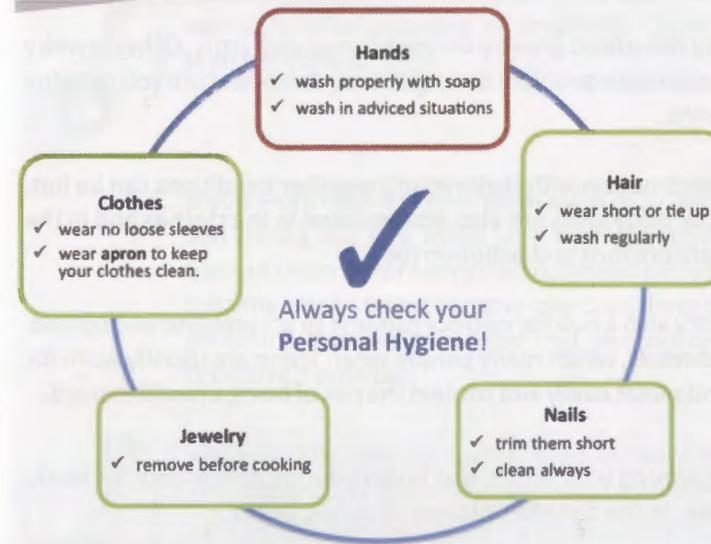
Every year over 35 lakhs (!) of children die worldwide of infections that could be easily avoided.

According to ENNANDU daily news, which reported on the Hand Wash Day, the majority of infections can easily be avoided if people wash their hands regularly.

What do I need to remember about general Cleanliness?

Same like our hands, everything of our body (skin, hair, nails) or things near to our body (clothes, jewelry) are sources of contamination. People who are involved in the preparation of food have the obligation to incorporate a clean and healthy lifestyle in their day-to-day activities.

In the beginning of this chapter you have learnt a lot about your hands. Here are some information about other parts of your body you need to take special care of:



Hair: Standing on the street for a long time your hair becomes full of dust and other particles coming from the air and your own body. These particles can easily "fall" into the food when the hair is not tied up or cut short. At the same time long hair needs to be tied so that it will not disturb you during cooking. In food factories and a lot of restaurants, the people handling food usually have to cover their hair with a special hat for that reason.

Wear your hair short or tie it up. Wash your hair regularly.



Nails: Give special attention to your nails while washing your hands. Under your fingernails dirt can easily accumulate. Once accumulated, this place under your nails is a breeding hub for microorganisms.

Keep your fingernails short. You can use a **brush or toothpick** to clean fingernails. Cleaning your nails is easier while or after washing your hands because the nails are softer.

Clothes: Our clothes come in contact with many things during the day: seats in the bus, people or air pollution. Especially during cooking, clothes can become oily etc. The fabric can easily absorb a lot of particles, which can contaminate food. This is one of the reasons why waiters or chefs often have to wear a uniform during their work. This uniform is only worn during the preparation of food and washed often to keep the risk of contamination low. You do not need to get a special uniform but we advise you to:

"All those rules and things to remember might seem to be a lot. But most of them are easy to achieve when you incorporate them in your day-to-day activities."



Change and wash your clothes often. It is optimal if the clothes you wear for cooking are washed in hot water. During cooking, wear an **apron** or shirt that you do not wear for other purposes. Wash it often. Wear **shoes** or slippers to avoid direct contact to the street.

Jewelry: In this context we only talk about jewelry on your hands and arms. Other jewelry (e.g. necklaces or earrings) is not a major problem as long as they do not disturb you or come in touch with the food you prepare.

Standing near to the stove in combination with Hyderabad's weather conditions can be hot. Your sweat and the particles your body loses are also accumulated in the clothes and in the jewelry you wear. Your clothes absorb dust and pollution too.

Unfortunately, this makes jewelry also a hub for microorganisms to accumulate and spread. This is especially true for **holy threads**, which many people wear. These are usually worn for a very long time, absorb dust and sweat easily and contain the risk of being a health hazard.

Avoid wearing anything around your wrists and fingers during preparation of food. Do **not wear holy threads**, in the broader interest of public health.



*"It is important to be hygienic to prepare safe food for our customers. There is a saying: **'Manava seva a Madhava seva'** which means service to the public is service to God."*



Why is the Health of Vendors so important and how to maintain it?

In chapter II you have already learnt that you **should not handle food when you are sick**. The main reason for this is that sick people are more likely to infect others. The body secretes bacteria through e.g. snot of a running nose.

A lot of diseases, not only those we mentioned in chapter II, are easily transferable when people come in contact with each other. You as a street vendor are exposed not only to pollution and heat of the street but to many people who pass your stall during the day. This means that you are in an environment, which is a special risk for your health.

*"Street Vending is exhausting work and it is important that you take good care of yourself in order to **keep your body healthy and resistant to all the health hazards around you.**"*



Illnesses like a cold or cough often seem to be negligible. But they do cure much faster if considered early. Long-term health problems can often be prevented, if small health problems are treated in the right way.

Avoid handling food, when you are sick. Take a rest. Wash your hands often, especially after sneezing or coughing. Consider an upcoming illness (e.g. cold) at an early stage.

If you work near the heat of an oven or in the heat of the sun during the day, make sure that you drink at least 3 liters of clean water every day to prevent dehydration. Inhaling smoke from the stove can cause long-term health problems. It is recommended that vendors take turns on the stove if possible.



Wounds like cuts or burns need to be covered during the cooking process. This is especially important to prevent infections of the wound. Clean wounds with purified water and apply an antiseptic. Cover the wound with a clean bandage. Keep smaller wounds uncovered when you are not cooking. Air will help the healing process of the skin.



Deworming

Many infections are spread because of worms or other parasitic diseases. They can be caused by contamination of water or unhygienic conditions like malfunctioning of sanitation. So-called intestinal worms (worms which can live in your bowel) are a reason for many children and adults to suffer. Worldwide more than 2 billion people are infected. Especially those who are working with food are likely to be infected and also have a higher potential to infect others.

Doctors from the Fever Hospital in Hyderabad and food inspectors strongly advice street food vendors to undergo deworming treatment, at least every 6 months.

The treatment consists of a tablet that has to be taken. It cures the inner organs from the worms effectively. Ask a physician in this regard.

Fighting germs THE HINDU 21-02-2012

HOMOEOPATHY CALL Lack of hygiene can cause infections

The human immune system is always on high alert and on guard to stave off challenges from common infective agents or germs that infect the body and cause disease. A few hygienic interventions would go a long way to prevent many diseases.

Washing hands while walking into the house, coming out of the toilet, before every snack or a meal and after every activity, would not allow any germ to penetrate the security systems of the body. Nothing can be more overrated than an anti-bacterial soap, the regular usage of such soaps would only breed stronger and more resistant germs. Moreover they are no better than the usual soaps.

If a family member has caught a cold, it makes sense for everyone in the household, especially children to wash their hands more often than usual and also have separate food, drink, plates and utensils for themselves till they get out of the episode. Talking about a hand wash, it is also important to note that during seasonal changes and also when certain viral infections are in the air, it is better to use an alcohol-based hand wash which is likely to neutralise many infective agents.

Some of the commonest germs find their homes in the sockets of gums and teeth. It's therefore very important to brush teeth at least twice a day to prevent the infections. Teaching children the importance of sharing is very important, but sharing need not extend to comb, hats and brushes. When shared, sports



PLAT SAFE Wash hands more often if someone has a cold

equipment are more likely to spread the germs from one to another because of sweat-soaked natures. A cold and a cough is just waiting to happen and the affected would do well to use a tissue so that the air around is not filled with those germs. Intake of fruits and vegetables and cooking with ginger, garlic and cinnamon would help boost immune proportion of the body.

Heartburn

Ever since living in a hostel my stomach has always been complaining of heartburn. Even now on slightest change of food there is heaving and distaste for food.

The gastric juices can digest and break down the food ingested but due to increased intake of spicy, oily foods, non-veg food, alcohol or immoderate eating habits, a larger quantity of acids are produced, upsetting the gastric balance thus causing heartburn. Making a few lifestyle changes while taking Homeo medicines like Nux vom, Kali bich, Natrum phos etc will help.



Homoeopathic medicine has remedies to boost the immune system when the infective agent strikes. Not all germs are harmful and there is no point in living in fear just imagining the germs to be there in the tooth brush or comb we use. Well, atleast with Homoeopathy around AR is well and that ends well. Dr. VENUGOPAL GOURI 92463 72625 drvenugopal@gmail.com

Lined area for taking notes.

V How to upgrade the Vending Unit, keep it clean and take care about the surrounding Area

In this chapter we talk about special precautions and easy measures to keep the vending unit and its surroundings in safe conditions.

The most important things we talk about here are...

- ...the **place of vending** you choose.
- ...the **design** and quality of your vending unit.
- ...some basic amenities you have to provide.
- ...the requirements of general cleanliness.

Therefore, we will deal with the following questions:

- What is the appropriate Place to prepare and sell Street Food?**
- What is the appropriate Design of a Vending Unit?**
- How to maintain and improve the Cleanliness during Vending?**

Keeping your vending unit clean and applying careful precautions is a mandatory precondition in order not to lose the impact of your earlier efforts for food-safety. It is important and useful for you because...

- ...the **risk of food contamination on the street is very high.**
- ...a **clean surrounding area interplays with many of our efforts** to improve hygiene standards, for example the correct storage during display.
- ...a clean space makes your **efforts more visible for your customers.**

You have already learnt about food-safety concerning preparation, storage and personal hygiene. All of this is important and you have to integrate the things you learn in your day-to-day activities, especially while preparing and selling the food on the street. **Always bear in mind, what you have already learnt while reading this chapter.**



Vending Unit

We often speak about your bandi or vending unit. Vending unit we call the whole **space on or near to the street**, where you do the **preparations, cooking and selling**, including the cart, surrounding space and utilities.

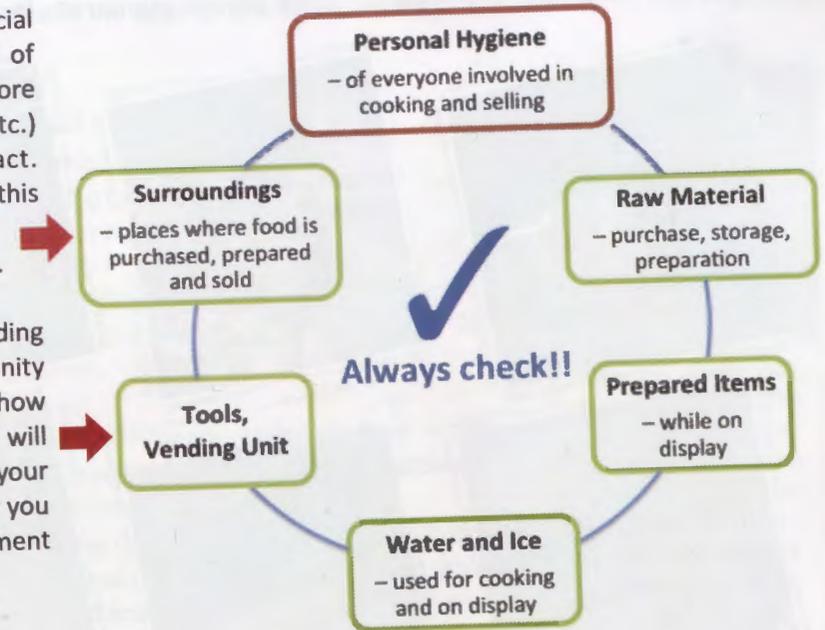
"Your effort to produce safe street food will not only contribute to public health. It also improves the image street food vendors in Hyderabad!"



V Vending Unit and surrounding Area

If you do not take special care at this stage, a lot of efforts you had taken before (preparation/storage etc.) will lose their impact. Following the advice in this chapter will complete the "always check-circle".

A clean, well-run vending unit is the best opportunity to show your customers how much you care. They will immediately recognize your efforts and can see how you maintain a clean environment to cook in.



What is the appropriate Place to prepare and sell Street Food?

Of course, availability of space, flow of customers and other factors are reasons why you choose to do the vending in a particular spot. To lower the risk of food contamination you should also consider the following aspects.

Check the surrounding area before you decide where you put up your business.

Choose a place that provides **sufficient and adequate space**, allowing food hygiene practices (see below for more information). Certain areas have an increased risk of food contamination. Therefore, do not put up your vending unit near to:



- Garbage dumps** or waste collection areas
- Nalas, canals, sewage** or other contaminated water bodies
- Washing places** or other areas where chemicals are involved
- Highly polluted areas**, like crossroads with frequent traffic jams

If possible, the place should be equipped with access to **water, electricity (light)** and good **ventilation**.

"To choose the right place is not only of concern because it reduces the risk of food contamination. It is also important in regard to your own health and safety."



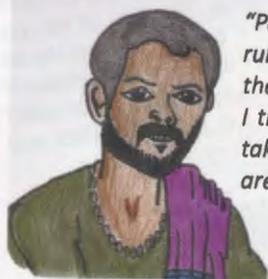
Below you find some examples of places, which are not appropriate for food vending:



Before you start the vending the surrounding space should be cleared from all rubbish and other sources of contamination! Please remove...



- ...all solid or liquid waste, rubbish etc.
- ...animal or human waste
- ...animals (dogs, goats etc.)
- ...all objects that can be moved (cars, boxes etc.)



"People who pass by throw their rubbish everywhere, even when they see we are selling there. I think everybody should take care that the streets are not dirty."



"I only eat in hygienic places. Before I approach a street vendor I check the cleanliness of the bandi and it's surroundings."



What is the appropriate Design of a Vending Unit?

A well-designed vending unit will...
 ...reduce the risk of food contamination.
 ...make maintenance and cleaning easy.
 ...help the vendors to work efficiently.

On the street you have a lot of other influences, like the pollution and dust in the air or your many customers who actually stand "in your kitchen".

Having food prepared in the open space makes it even more important to take precautions, because **the risk of contamination is much higher** due to these many influences. The construction of your vending unit has to be equipped with the **basic amenities**. You can **"upgrade" your vending unit and your way of vending with some small and easy measures**. They will also make the appearance of the bandi more attractive.



Here the vendor took extra precautions. The prepared items are protected by the glass and metal structure. The surrounding is clean. To protect the materials under the bandi he wrapped it with a strong fabric that also can be washed.

In order to make your work efficient and to make it easier to keep the vending unit clean, you have to make sure that the basic amenities are provided.



The following facilities should be found, wherever you put up your stall:

- Dustbin
- Storage facilities (see also below)
- Hand-wash facility, best with tap and bucket to store the wastewater
- Container for used plates etc.
- Dish-wash bucket
- Broom to clean surroundings



Additionally keep the following points in mind:



- Provide **drinking water** for yourself, your co-workers and your customers.
- The area around the bandi should be swept with a **broom daily** before starting the vending and whenever time permits.
- Make the **customers aware of the dustbin** and other facilities. If they do not litter, you have less to clean up in the end.
- To **prevent cross-contamination** place your rubbish bin and other sources of contamination away from the food on display and stored materials.
- By providing these facilities, you **offer your customers alternatives** for example to not litter the place.



Here the vendor took extra precautions. The prepared items are protected by the glass and metal structure. The surrounding is clean. To protect the materials under the bandi he wrapped it with a strong fabric that also can be washed.

Storage facilities have to be provided for materials you use for cooking and for prepared items on display.



- All food items need to be covered, especially liquids.
- Adequate space has to be provided (shelves etc.) to keep all materials and tools off the floor.
- Use containers of durable and easy to lean materials.
- For stored items (ingredients), choose a safe place away from sunlight, wind and dust.
- Frequently used materials (e.g. spices, prepared items on display) should be kept in containers with small openings and in a place that is protected from dust and other sources of contamination. Containers should be closed when not in use.
- Keep only small quantities of materials in the open. It is better to refill often.

"Remember what you have learned in chapter III about long- and short-term storage!"



At these stalls the items on display are not covered. Space for cooking and display are not separated. Dust and pollution can easily accumulate on those items and make them unsafe to eat.



Here the vendor uses the limited space very efficiently. The glass protects the materials and the covers for the ingredients are at hand. Under the bandi the vendor stores more ingredients, especially those, which spoil very easily.



All these facilities should be of durable structure, easy to access and convenient for customers.



- The structure of your vending unit has to be made out of material that is easy to clean. The surface has to be of smooth and impermeable materials.
- Make sure the design of your vending unit does not show breaks or open seams. Small openings or cracks are hard to clean. There, microorganisms can easily accumulate.



The metal plate the vendor is using is a good example for an easy to clean surface.

The many advices you have read in this chapter might make it necessary to upgrade your vending unit. Upgrade your bandi to make efficient and clean vending possible and easy.



- Check the surfaces of your vending unit. If they are not appropriate for efficient cleaning they have to be replaced.
- Check the basic amenities of your vending unit. Is everything provided (dustbin etc.)?
- To build a new structure or upgrade the existing one contact a person specialized for that (e.g. see business card below).



How to maintain and improve the Cleanliness during Vending?

You have to consider different aspects to meet the satisfaction of your customers:

- **Taste** of your products
- **Service** to your customers
- **Food-Safety** and healthiness of your products
- **Price** of the food you sell
- **Appearance** of your unit and the surroundings

To satisfy as many customers as you can, it is advisable to think of everything you have learnt. That is not so hard to do, because many things interplay with each other, for example:

- A clean, nice looking place attracts more customers, while it will help you to keep your food safe and healthy.
- A vending unit that is efficiently organized with a clean and appropriate division of work will improve your service quality but also lower the risks of contamination.



"I observed how some vendors change the plastic cover of the plate but do not wash it before handing it out to the next customer. This I consider as very unhygienic and I do avoid eating at those stalls."

On the street there are sources of contamination that can hardly be avoided (e.g. air pollution). Thus, it is even more important to monitor the cleanliness of your vending unit.

- **All surfaces and tools should be kept clean.** Materials have to allow easy cleaning.
- Keep **separate tools** to prepare veg- and non-veg items.
- Use **separate cloths** for wiping of tools, surfaces and hands.
- Use clean tools (e.g. spoons) rather than your hands in all activities.
- Leftovers, waste and other things you do not need at the stall anymore have to be put away immediately. **Do not litter** and advice your customers also not to.
- Place sources of contamination (dustbin, broom, cleaning materials) away from food items.



"The towel- and textile-shop always has a lot of leftover cloth-pieces. They give many of those to us for a very small price or for free. I always have a bag of new cloths so I can make sure to have a clean one at hand when I need it."

"Remember what you have learnt in chapter III. There you find more information on safe food preparation!"



To work efficiently in terms of cleanliness but also regarding the service to your customer, divide different work-steps.

- It is optimal to **divide different work-steps between persons and space.** This will prevent cross-contamination. Assign at least one person to handle the food items (mixing, cooking etc.) and one person to handle non-food items (money, dish-washing etc.).
- Divide the space of your vending unit as much as you can to prevent cross contamination between raw materials, prepared food etc.
- If this is not possible divide the work between your hands. For example you use only the right hand to handle food items and the left one to handle non-food items (e.g. money) and wash your hands in between.
- Division of work is advisable in the following activities (see also chapter III):
 - ☑ Preparation of ingredients and mixing
 - ☑ Preparation of ready-to-eat food
 - ☑ Serving food to your costumers and wrapping
 - ☑ Handling money
 - ☑ Dishwashing, handling rubbish and cleaning

At this stall the vendors divide their work efficiently. One person is only cooking and his station is away from other works. The person handling the money uses only the left hand for that. The right hand he uses to wrap the items on sale. Covers of items on display are missing, one point to be improved.



If you have read the content of this manual carefully you learnt a lot about what you as a vendor can do, to improve the food-safety standards in street food vending. The ideas and advices mentioned here are only the very basics. You can learn a lot more and you can be innovative to improve your individual actions.

In the following pages you will find some further information on the topic of food-safety and some remarks on where you can obtain a deeper knowledge.



- **Institute of Preventive Medicine (IPM)**

The IPM, Public Health Laboratories and Food Administration works on the issue of public health. They monitor water quality affected areas of the state through the Water Quality Monitoring laboratories and provide many other service regarding public health, e.g. food-adulteration testing.

- Analysis of food sampling in food adulteration
- Check the quality of food in accordance with the PFA Act and Rules
- Imparting training in Food, training of Food Inspectors
- Inspection and Sampling work to various categories of trainees
- Enforcement of prevention of Food Adulteration Act
- Grant and renewal of license to manufacturers/whole sellers/retailers/Hawkers under the PFA Act and issue of registration certificate under Edible Oil Packaging Order

IPM is located at Narayanaguda, Hyderabad.
<http://ipm.ap.nic.in/>

- **Metro Consumer Care**

The Metro Consumer and Care is part of the Water Works and Sanitation Department of the city government. It's task is to constantly check the quality of water in the different areas of the city and provide safe water to the public. If you want to get further information on the water quality of your neighborhood or if you want to order a water tanker.

You can so at the helpline of the Metro Consumer Care 155.313. There are many other providers of purified water in the city. We recommend you to form groups with neighboring vendors to obtain water from this reliable source on a daily base.

- **Food Poisoning Ward at the Fever Hospital**

There are many different Hospitals which can treat patients suffering from food poisoning. We recommend the Fever Hospital, it is a Government Hospital. They have one ward that is specialized on the treatment of those patients, with very experienced and well trained staff in the regard of foodborne diseases. It is located at Nallakunta X Roads, Hyderabad.

The Food Safety and Standards Regulation 2011

In chapter II we told you about the law to regulate food safety: The Food Safety and Standards Act. It came into force in 2006, but was notified only in August 2011. It tries to cover every aspect of food safety and consumer rights protection. This act will be implemented by the Food Safety and Standards Authority of India (FSSAI), a new agency assigned for this task. For example they lay down the limits for food additives. They also set up procedures for accreditation of bodies associated with



food safety management and regulate/monitor the manufacturing, processing, distribution, sale and import of food.

The FSSAI will provide scientific and technical support to the Central and State governments to help them to frame policies or rules related to nutrition or food-safety.

The Food Safety Standards Act also regulates the fees or punishments if you do not follow the set standards. An example of those you found below*:

Section	Offence	Punishment (Impresionment/penalty)
50,51	Selling poor quality products	Penalty upto Rs.5 lakhs
52	Selling wrong brands	Penalty upto Rs.3 lakhs
53	Missleading advertisments	Penalty upto Rs.10 lakhs
56	Food preparation in unhygenic surroundings	Penalty upto Rs. 1lakh
57	Mixing of food additives(Kalthi)	Penalty upto Rs.10 lakhs
59	Selling food with harmful contents	Penalty upto Rs.10lakhs/ 7 yrs. impresionment
60	Food business with out licence	Penalty upto Rs.5 lakhs/ 6 months impresionment
65	Causing food poisoning with major health impacts or death of consumer	Penalty from 1 lakh to 5 lakhs

*from the Food Safety and Standards Act 2011



