



# NUTRITIONAL AND FOOD SAFETY GUIDELINES TO COMBAT COVID-19



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ANA HELONEIDA DE ARAÚJO MORAIS

COORDINATION

# NUTRITIONAL AND FOOD SAFETY GUIDELINES TO COMBAT COVID-19



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Coordenadoria de Processos Técnicos  
Catalogação da Publicação na Fonte. UFRN / Biblioteca Central Zila Mamede

Nutritional and food safety guidelines to combat COVID-19 [electronic resource] /  
coordination Ana Heloneida de Araújo Morais – Natal, RN : EDUFRN, 2020.  
83 p. : il., PDF ; 21.078 Kb.

Acess mode: <http://repositorio.ufrn.br>  
ISBN 978-65-5569-037-8

1. Respiratory Tract Diseases. 2. SARS Virus. 3. Food and Nutrition Security. I.  
Morais, Ana Heloneida de Araújo.

RN/UF/BCZM

2020/32

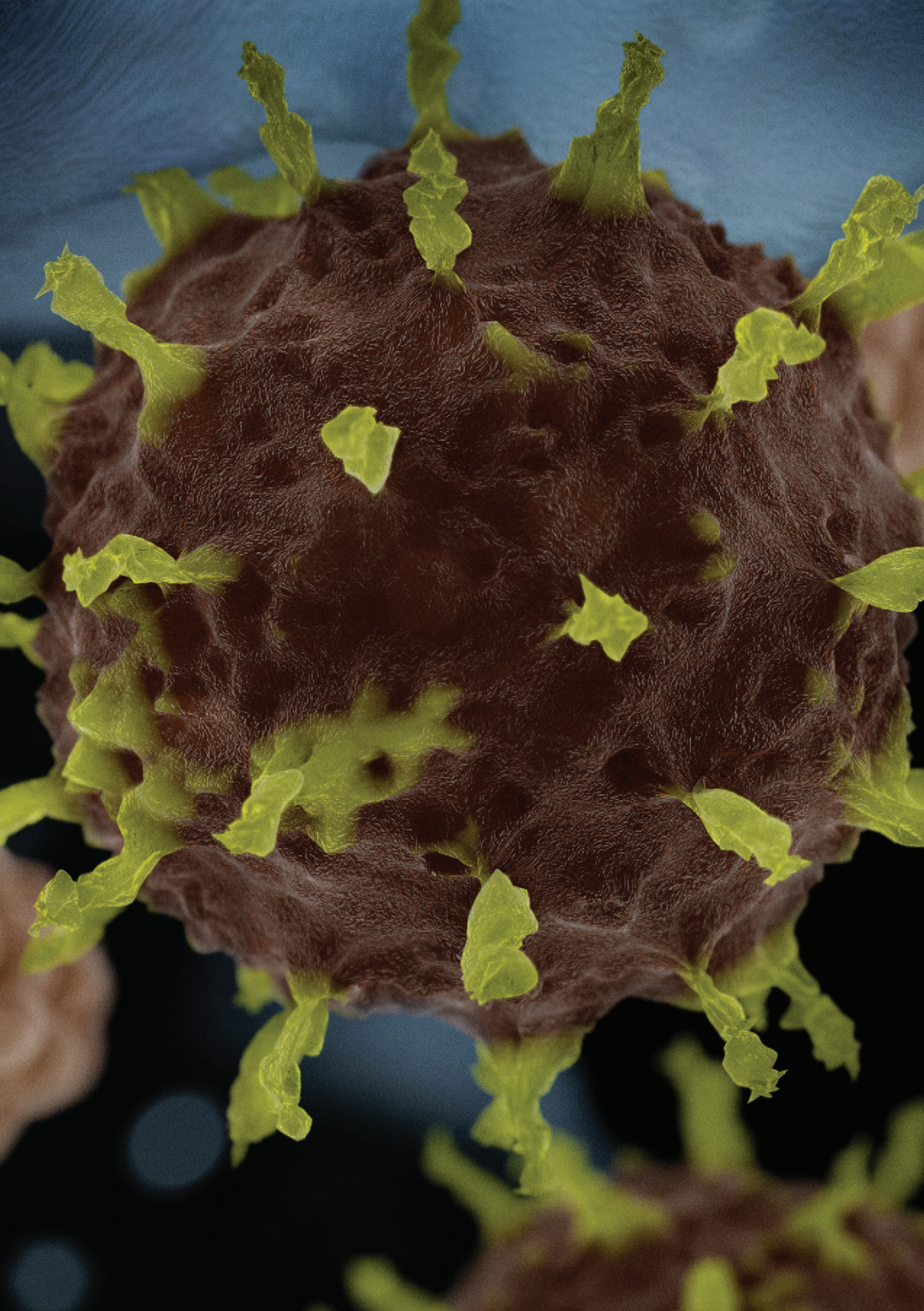
CDD 616.2

CDU 616.2:613.2

Elaborated by Gersoneide de Souza Venceslau – CRB-15/311

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Av. Senador Salgado Filho, 3000 | Campus Universitário  
Lagoa Nova | 59.078-970 | Natal/RN | Brasil  
e-mail: [contato@editora.ufrn.br](mailto:contato@editora.ufrn.br) | [www.editora.ufrn.br](http://www.editora.ufrn.br)  
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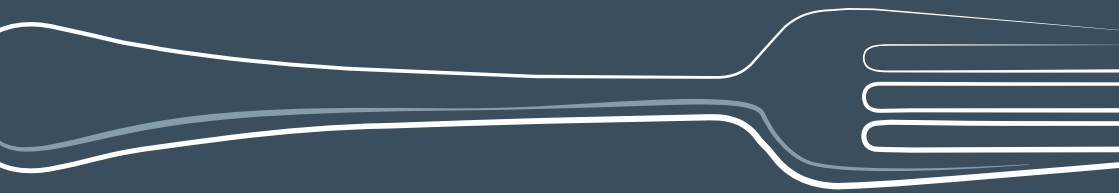






PReface





In a time of experiences with the world COVID-19 pandemic, I received with great honor the invitation to present this distinguished work that disseminates knowledge of food and nutrition to the general population, addressing various topics in a comprehensive, constructive and playful way. The relevance of this achievement can be measured by the impact to be produced in the initiatives aligned with the “stay at home”, a restrictive measure against COVID-19, recommended for all to avoid agglomerations and respect the guidelines of the World Health Organization (WHO).

In this spectrum of an atypical and timeless scenario, it is essential to offer more practicality and safety in food and dietary consumption, and thus continue to defend “the meal as a peaceable element”, as taught us by Luís da Câmara Cascudo, a Brazilian professor, historian and anthropologist. In support of this legacy, this ebook includes three axes that address (i) nutritional guidelines for coping with COVID-19, (ii) instructions for the operationalization of meal delivery services and (iii) making practical recipes for healthy and fun snacks with children. Together, technical and scientific information is presented mixed with basic and applied concepts, extolling the care of the authors in the organization of the work.

The first chapter highlights information on the importance of a balanced diet for microbiota and immune system, the choice of healthy foods, food conservation, fruit and vegetable hygiene techniques, in addition to the perso-

nal hygiene measures to contain COVID-19. The following procedures were presented for the delivery services of fresh food and ready meals, constituting a guide for the health and safety of consumers and service providers of the companies that market these products. Finally, the pleasure of cooking and at the same time, of knowing that there is an affective and quality bond between playing and learning, was the precious touch of the third chapter to animate the new arrangements of domestic activities, faced with sudden changes in family routines. And so, in a light and professional way, the integration of these compositions involved important sub-areas of teaching and research in the fields of nutrition knowledge.

Finally, I followed the speed with which this work was done, proving the originality, competence and innovative spirit of a group of teachers and students in the Nutrition area of Federal University of Rio Grande do Norte (UFRN), many of these, my former students who now give sustainability to training of excellent quality in higher education. Of course, this precious vehicle of information with its potential for visibility in the literature is a highlight among the health actions of UFRN, in the fight against the COVID-19 pandemic.

Thanks for the academic joy of prefacing this book.

Congratulations to all brilliant builders!

Lucia de Fátima Campos Pedrosa,

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UFRN, Brazil*





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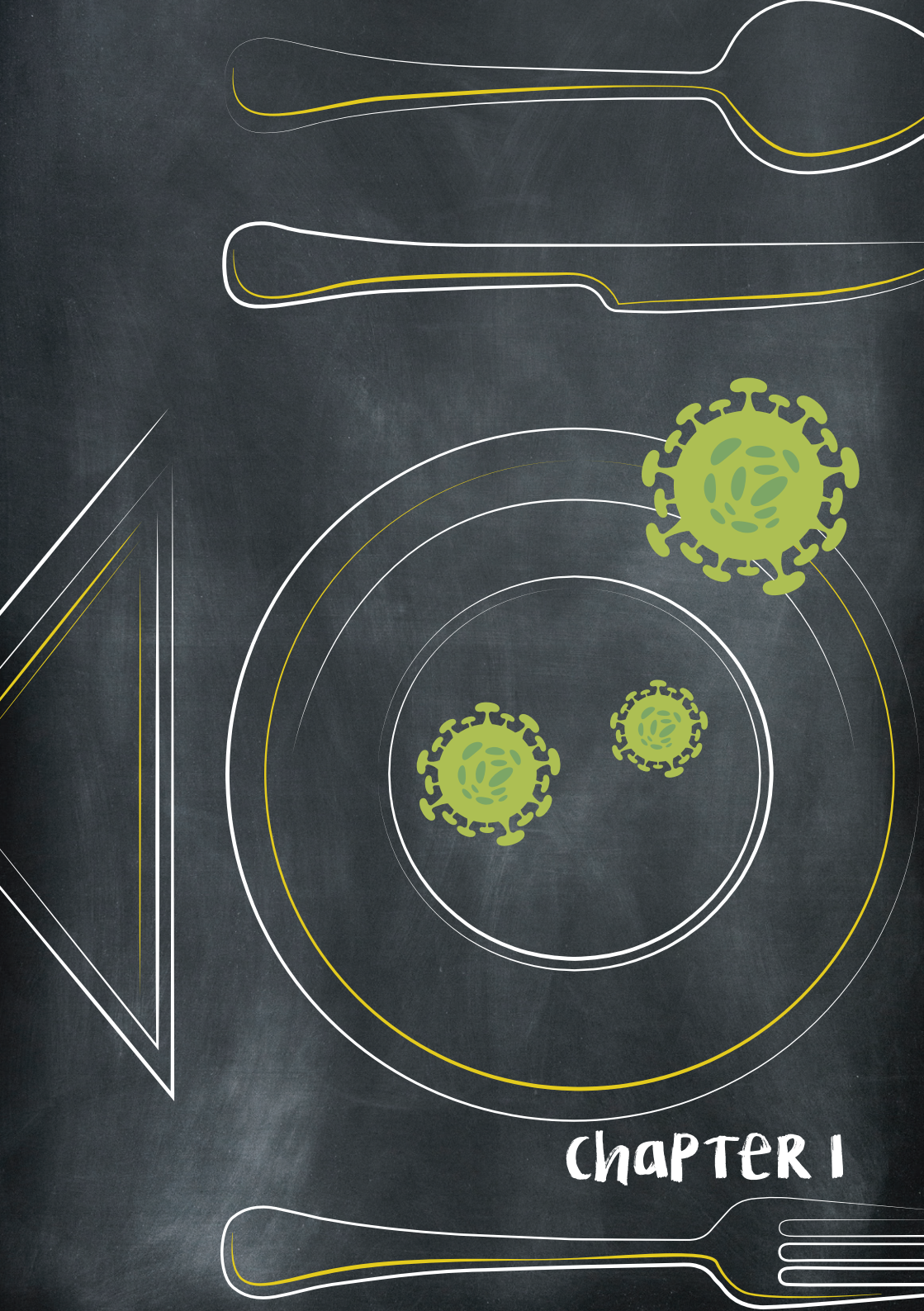
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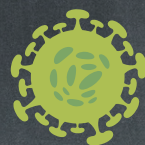
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# CHAPTER I





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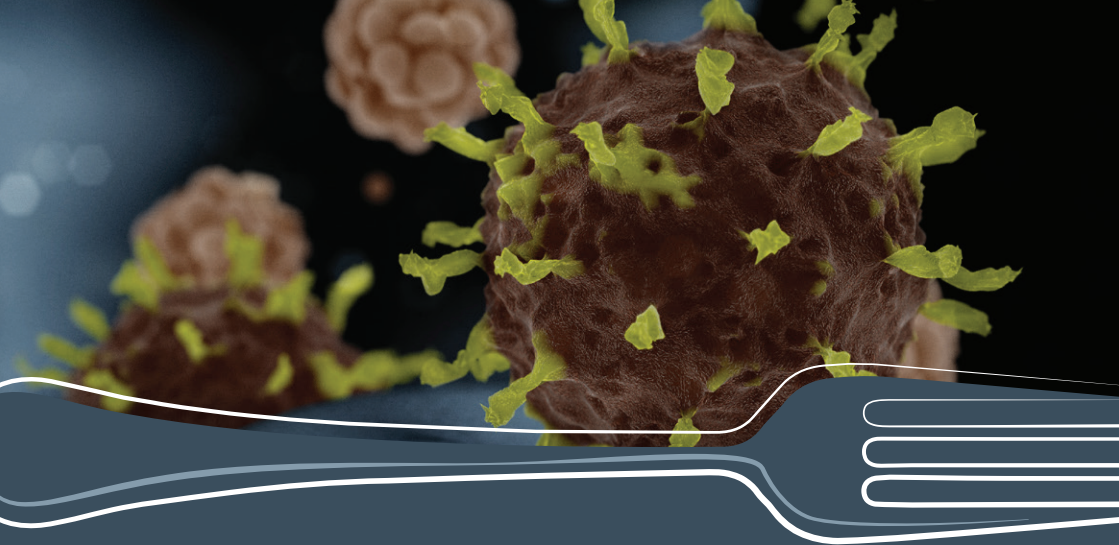
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# NUTRITIONAL and food care GUIDELINES TO COMBAT COVID-19



## INTRODUCTION

Until recently, nutritional status and food safety were not considered essential adjuvants in the treatment of COVID-19, which occurred in other viral infectious diseases. Infection caused by the new coronavirus, SARS-CoV-2, has led the World Health Organization to declare COVID-19 a pandemic. Due to the severity of the disease, related to its easy transmissibility, asymptomatic infections and lack of specific treatment, the scientific community has joined efforts to combat COVID-19. Thus, it is urgent and emergent to find effective and validated methods to prevent and treat COVID-19. In this sense, alternatives related to nutritional therapy, food care and handling can be relevant to control the disease spread. Among nutritional interventions, we highlight the functions related to various nutrients, such as vitamins A, C, D, E, and the B complex. Among the minerals, the adequate consumption of selenium, iron, and especially zinc stands out. This list also includes polyunsaturated fatty acids, prebiotics and probiotics. These nutrients and compounds found mostly in food affect symptoms related to coronaviruses, such as diarrhea, lower respiratory and digestive tract infections. Additionally, studies have found that these nutrients also affect COVID-19 itself, demonstrating their pathways and mechanisms of action. In this material, we bring content in straightforward language, with playful images, dealing with nutritional guidelines, primary food care and handling, focused on food safety.



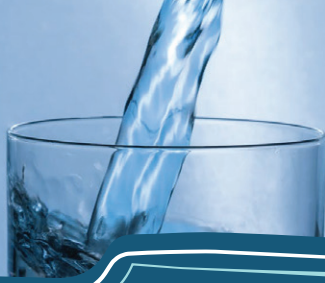
The guidelines are based on consensual information and recommendations made by organizations from all over the world, such as the World Health Organization (WHO), the Brazilian Nutrition Society (SBN) and the Food Guide for the Brazilian Population. Despite the lack of specific consensual nutritional recommendations for COVID-19, the guidelines in this material refer to contamination by pathogens, such as viruses. We intend this material helps society take the necessary precautions in the handling of food and its conservation. We also bring information about vitamins, minerals, probiotics, and antioxidants, valuing healthy and fresh food over the excessive consumption of ultra-processed items. Secure information about these practices and other relevant orientation to prevent viral diseases, as COVID-19, are also in this chapter. The guidelines herein may be supplemented with new information, as they arise from the scientific community, the World Health Organization, or by other organizations in health, considering that studies in all areas about the SARS-CoV-2 pandemic are emerging.

Ana Heloneida de Araújo Moraes

Bruna Leal Lima Maciel







## Hydration

- Adequate hydration is one of the main allies in viral infections.
- Viruses can induce loss of appetite, causing dehydration, diarrhea and vomiting.
- Type A immunoglobulins (IgA), defense molecules, are mainly present in saliva.
- Reducing the salivary flow can decrease the amount of IgA.
- Drink 35 to 40 mL water/Kg weight daily. In sports, this volume should increase.
- Remember, it is essential to maintain good hydration to avoid dehydration.







## IMPORTANCE OF Safe WATER

### POTABLE WATER IS ESSENTIAL TO:

- Washing your hands
  - according to the recommendations of the World Health Organization (WHO).
- Washing fruits and vegetables.
- Cooking.
- Washing dishes and utensils.

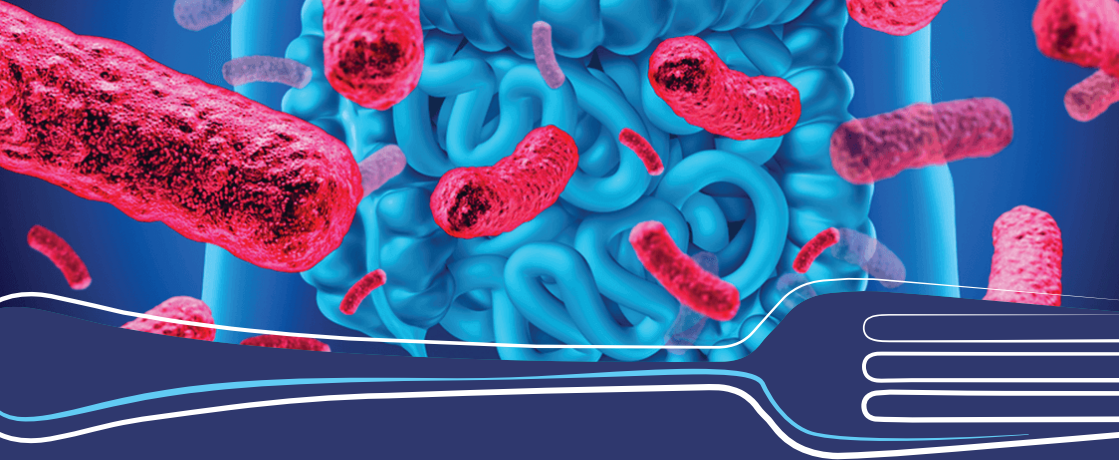
### WHAT CAN BE DONE TO GUARANTEE SAFE WATER FOR PREPARING MEALS, IF THE WATER IS NOT DRINKABLE?

- Boil it.
- Filter it.
- Disinfect it
  - 2 to 5 drops of sodium hypochlorite for 1 L of drinking water.









## PROBIOTICS

The gut microbiota consists of all microorganisms from the gut. They have an essential role in the immune system, nutritional status and health.

Beneficial bacteria from the gut microbiota in association with the gut mucosa, protect us from many pathogenic microorganisms, like viruses.

A balanced microbiota reduces the risk of diseases. It prevents the growth of harmful bacteria that can pass through the mucosal barrier and access the organism.

## RECOMMENDATIONS

- Eat fibers (prebiotics). Those are 'food' for beneficial gut bacteria. Fruits, vegetables, oat and other integral cereals are fiber sources.
- Prefer fresh, unprocessed or minimally processed foods. Ultra-processed foods are rich in fat, sugars and sodium; and poor in fibers.
- Probiotics are microorganisms per se and should be recommended by a licensed health professional guidance.

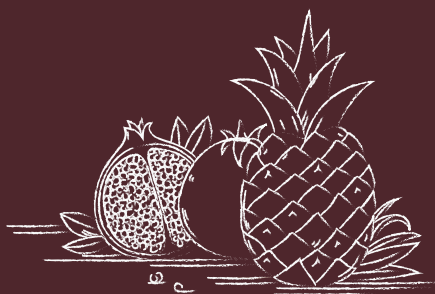








## ANTIOXIDANTS PROTECT OUR CELLS



- Many situations can increase the production of free radicals in our organism, including emotional stress such as we face in this time of crisis.
- Oxidative stress must be avoided because it can negatively impact the immune system.
- Bioactive compounds like polyphenols and carotenoids are antioxidants and can neutralize or minimize the production of free radicals.
- Fruits and vegetables contain plenty of antioxidant compounds.











## VITAMINS AND MINERALS

- Most vitamins and minerals are essential to strengthen immunity.
- Industrialized foods do not have natural vitamins and minerals, and most of the time, they are rich in calories.
- Prefer fresh fruits and vegetables. A colorful dish is the best option, but don't forget the animal foods.
- Meats of all types, mainly red, derived from animals and seafood are sources of zinc.
- Fish liver oil, meat and seafood are good sources of vitamin D.
- Legumes, oilseeds (nuts, almonds, chestnuts) and leafy vegetables are sources of magnesium. The best source of selenium is the Brazilian nut.

THE MAIN SOURCE  
OF VITAMIN D  
PRODUCTION IS  
THROUGH EXPOSURE  
OF THE SKIN  
TO SUNLIGHT.







## VITAMINS AND MINERALS

- The sources of fat (cheese, egg yolk) and orange-colored vegetables (mango, papaya and carrot) are rich in vitamin A precursors.
- Citrus fruits (orange, tangerine, passion fruit, lemon, pineapple) are rich in vitamin C.
- Meats (liver), milk, eggs, legumes, vegetables, especially broccoli and cabbage, whole grains, legumes, such as peas, some oilseeds, such as peanuts, chestnuts and nuts, avocado and beer yeast are rich in vitamins of the B complex.

- The B-complex vitamins are several vitamins, and B12 vitamin is found only in foods of animal origin. Vegetarians and vegans should evaluate the need for supplements with a licensed health professional guidance.

THE WORLD HEALTH  
ORGANIZATION (WHO)  
RECOMMENDS 5  
SERVINGS a  
day OF FRUITS  
AND VEGETABLES.





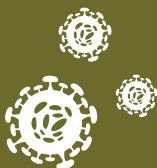




## SANITIZATION OF FRUITS AND VEGETABLES

It is important to sanitize all fresh foods (fruits and vegetables) correctly to avoid contamination by microorganisms.

**REMEMBER THAT ONLY  
SODIUM HYPOCHLORITE  
CAN ELIMINATE  
MICROORGANISMS,  
SUCH AS VIRUSES,  
BACTERIA, AND FUNGI  
FROM FOOD.**



- 1) Remove roots and damaged parts.
- 2) Wash the fruits and vegetables in water one by one or leaf by leaf.
- 3) Sanitize using a solution containing sodium hypochlorite for 15 minutes – one tablespoon of sodium hypochlorite (2 – 2.5 % ) to 1 liter of water.
- 4) Remove the excess of chlorine using potable water, dry with a paper towel or food centrifuge and, store under refrigeration.

Based on [https://www.who.int/foodsafety/consumer/manual\\_keys\\_portuguese.pdf?ua=1](https://www.who.int/foodsafety/consumer/manual_keys_portuguese.pdf?ua=1)









## STORE FOOD IN A SAFE TEMPERATURE

### SOME PRECAUTIONS MUST BE TAKEN TO AVOID CONTAMINATION:

- Keep food in temperatures below 5 °C or above 60 °C to decrease the growth of the microorganisms.
- Do not defrost food at room temperature. Defrost under refrigeration, or use the defrost function in the microwave, or immediately cook in the oven or microwave.

- Food must reach 75 °C during cooking to eliminate pathogens and ensure safe eating. Avoid consuming raw food, except for sanitized fruits and vegetables.
- After cooking, consume and immediately refrigerate the preparations.
- Leftover food should not be stored in the refrigerator for more than three days.

Remember that these precautions are essential to combat coronavirus and other pathogens.

The viruses and bacteria that cause diseases can be grown quickly in food at room temperature.





- A useful tip for vegetables is freezing them after blanching, which consists of rapidly cooking in boiling water (or steaming) and immediately chilling in cold water.

- Blanching helps to inactivate enzymes that would otherwise contribute to vegetable deterioration. To freeze vegetables maintains their nutrients and is a way of guarantying their access for a longer time. Below are cooking times for blanching:

Vegetable	Cooking time in boiling water
Asparagus	2-4 minutes
Broccoli	2 minutes
Cabbage leaf (chopped)	2 minutes or do not blanch
Carrot (chopped)	2 minutes
Carrot (whole)	5 minutes
Cauliflower (chopped)	3-4 minutes
Celery (chopped stems)	2-3 minutes
Chard (chopped)	2 minutes
Chicory (chopped)	2 minutes
Coriander and chives	2 minutes
Eggplant (chopped)	4 minutes
Leeks (stems)	2-3 minutes
Onion (chopped)	Do not blanch
Pea in pod	2-3 minutes
Potato	3-5 minutes
Pumpkin (chopped)	3 min; or cook, knead and freeze the puree
Spinach (chopped)	2 minutes
Sweet potato	Cook completely, cut or smash and freeze
Zucchini (chopped)	2-3 minutes

Embrapa, adapted from ASBRAN (2020).



## WHEN TO WASH YOUR HANDS TO PREVENT FOOD CONTAMINATION BY CORONAVIRUS?

- Before and after going to the bathroom.
- After coughing, sneezing, or blowing your nose.
- After handling the garbage.

- After money-handling.
- After or before handling food.
- After handling raw or not sanitized food (fruits and vegetables).
- Before handling ready-to-eat-food.
- Before eating.

**IT IS IMPORTANT TO FOLLOW THE RECOMMENDATIONS OF THE WORLD HEALTH ORGANIZATION (WHO) TO WASH YOUR HANDS PROPERLY.**







## CLEANING AND SANITIZING OF FOOD-HANDLING SURFACES



- The cooking utensils (cutlery, cutting knives, spatulas, etc.) and food-handling surfaces (benches, boards, and tables) must be adequately sanitized because they can be sources of contamination.
- Cleaning and sanitizing can be done by physical or chemical methods.









## CLEANING AND SANITIZING OF FOOD-HANDLING SURFACES

### PHYSICAL METHOD

- Wash utensils with soap and water.
- Rinse with potable water.
- Place in boiling water for 15 minutes.

### CHEMICAL METHOD

- Wash utensils or surfaces with soap and water and then rinse.
- Immerse for 15 minutes in water containing chlorine (1 tablespoon of sodium hypochlorite 2 – 2.5% in 1 L of water) and then rinse.
- Another option for cleaning utensils and surfaces is the use of alcohol 70%, without the need of rinsing.









## IMPORTANT guidelines

- Always prefer fresh or minimally processed foods.
- Use oils, fats, salt and sugar in small amounts.
- Limit your consumption of processed foods.
- Avoid ultra-processed foods, which are those that suffer many changes in their preparation and contain substances you are not familiar.













## IMPORTANT guidelines

- Prefer to eat in quiet and clean places. When eating out, prefer places that serve fresh, safe food, ensuring the correct hygiene of food, utensils, tables and chairs.
- Do your shopping in places that have a greater variety of fresh foods and, at home, clean these foods correctly. When possible, choose organic foods.







## IMPORTANT guidelines

- Develop your culinary skills, safely preparing your food.
- Distribute food responsibilities in your home. Eating well is everyone's job.
- Be critical. There are many myths and misleading advertising around food. Evaluate the information that comes to you and advise your friends and family to do the same.







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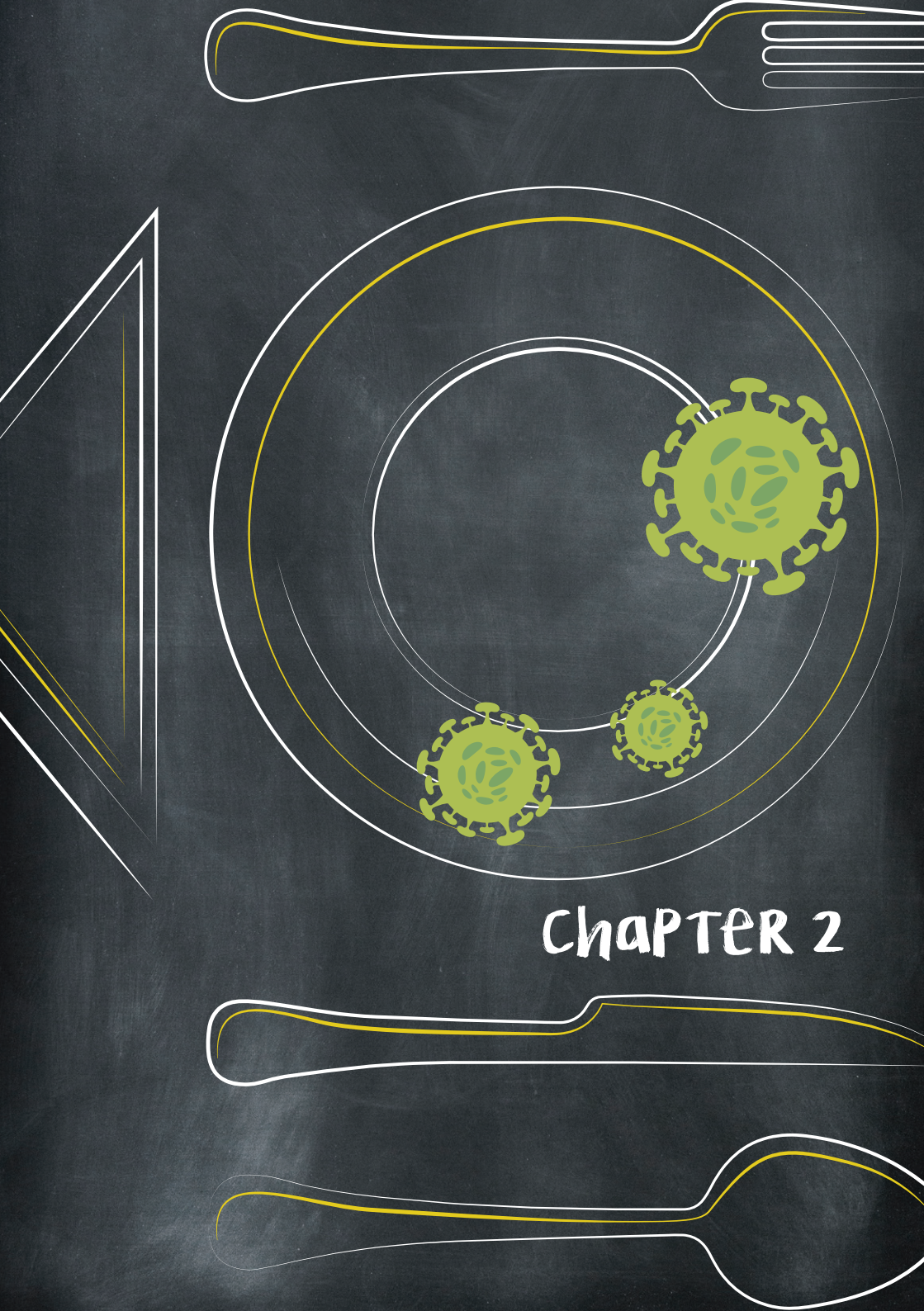
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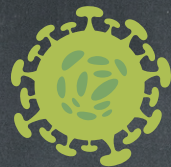
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## CHAPTER 2





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## Guidelines for food delivery during the COVID-19 pandemic



# INTRODUCTION

Infectious diseases have been a matter of concern to humankind since the agricultural revolution 10,000 BC. Possibly, these diseases come from the unprecedented chronic imbalance between humans and the various ecosystems, in which our food chain has given such major impacts.

We have never faced a pandemic in the modern 4.0 world, so connected by our own applied cognition, seen in our devices. COVID-19 is everywhere: in our smartphones, supermarkets, drugstores, streets and schools. This scenario has led scientists and health professionals to try helping in their areas of expertise to combat the new coronavirus. Now, more than ever, The Earth claims for sustainability. Maybe safer and more sustainable food chains could affect our health more than we can measure at this point. For us, those working with food and nutrition, we see potential risks for virus dissemination in handling and preparing food. As far as concerned, there are no reports on SARS-CoV-2 dissemination by food. However, can those who deliver food transmit it? This is what the authors from the present chapter assume and straight forward try avoiding by hygiene measures. The recommended measures come from consensual recommendations from Brazilian and international organizations, such as the World Health Organization (WHO) and the Codex Alimentarius. For the first time, a virus causing a respiratory infection has led to the construction of a material of this kind. The text was elaborated in an easy language and is applicable in most of the establishments where food delivery is done. Hopefully, these guidelines will be supplemented with emerging scientific reports on the transmission of the virus.

Bruna Leal Lima Maciel





## Safe food delivery service

Food can serve as a vehicle for virus transmission, and if the person responsible for the delivery service is sick, there is risk of indirect contamination through the food.

It is important to ensure the health and safety of the employees involved in the operation.

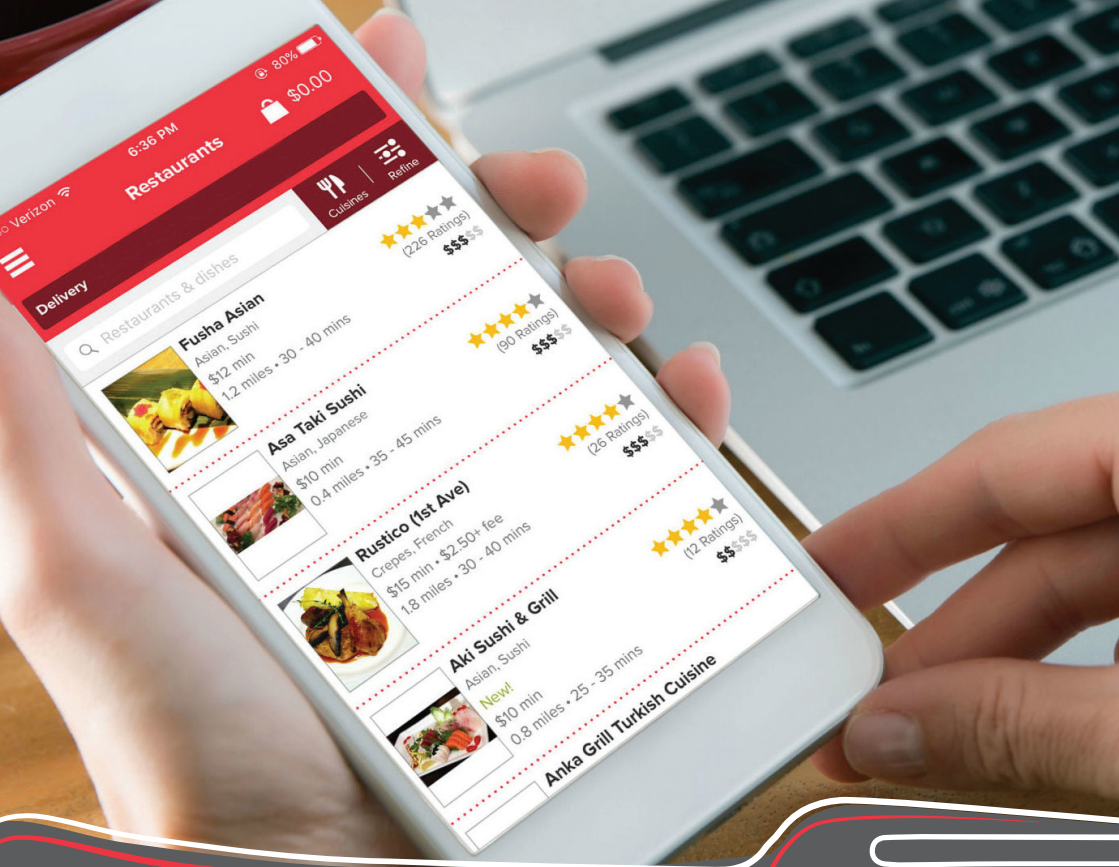
Some tips are important to ensure a safe food delivery service.



## CUSTOMER GUIDELINES

- Avoid consuming food from places you do not know and that do not follow the Good Handling Practices.
- Keep informed about food preparation conditions in the establishments, for example, if there is temperature control and if the delivery personnel received training on good handling practices.





## CUSTOMER GUIDELINES

- Some apps are making the delivery service available without physical contact. However, in case this is not possible, keep some distance from the delivery person, thinking about your health and his.
- Payment should preferably be made via app or online, to avoid contact with cash and credit cards. If you use a card machine, make sure to disinfect it with alcohol 70%.



## CUSTOMER GUIDELINES

- Avoid asking for raw and rare foods.
- Choose a place to unpack the products other than the place where you will eat.
- With clean hands, disinfect the package with alcohol 70%, take out the food, open the package and transfer the food to a clean container.







## CUSTOMER GUIDELINES

- For drinks, follow the same recommendations above. Clean the food package with alcohol 70% before touching and after handling money.
- Sanitize your hands before eating.



## Delivery Staff Guidelines

- Wash your hands frequently before delivery.
- Delivery staff must carry alcohol 70% and use it before touching food packages for delivery and after handling money or credit cards.
- Protect your payment terminal with film or contact paper, to facilitate frequent disinfection.







## Delivery Staff Guidelines

- Remove earrings, bracelets, rings, wedding rings, necklaces. Personal adornments accumulate microorganisms, such as bacteria and viruses.
- Pay attention! Do not cough, sneeze, talk or touch money while transporting food.
- The motorcycle handlebars or the car steering wheel must be cleaned and disinfected frequently with alcohol 70%.



## Delivery Staff Guidelines

- Thermal boxes can be sources of contamination and therefore must be washed with detergent and sanitized with alcohol 70% or using a solution containing sodium hypochlorite for 15 minutes before each work shift. This solution can be prepared diluting one tablespoon of commercial sodium hypochlorite (2 – 2.5 %) to 1 liter of water. While using the thermal boxes, frequently clean them alcohol 70%.





## DELIVERY STAFF GUIDELINES

- Avoid using non-washable parts of objects, or protect them with plastic wrap to facilitate disinfection.
- The use of masks for food handlers (which must be healthy) is not mandatory, because when misused, masks can facilitate the permanence of viruses and bacteria, increasing the spread.



## Food Service guidelines

- Employees belonging to risk groups for COVID-19 severity must be removed from work.
- Make sure employees are healthy, with no cold symptoms. Any suspicious symptom must mean the removal of this employee from work until the suspicion is discarded.
- Employees should be instructed to inform the company of the existence of a suspect case of a cohabiting person.





## Food Service guidelines

- Encourage employees' handwashing, bathing at work, daily changing uniforms, using them only in the company.
- Guide employees when coming to work to avoid touching handrails or support bars and avoid bringing hands to mouth or nose without washing their hands or using alcohol 70%.



## Food service guidelines

- Food must be well cooked, as the virus is instable to high temperatures.
- Food internal temperature must reach 75°C in the cooking process.
- Avoid cross-contamination, which means raw food must be separated from cooked food.







## Food Service guidelines

- Food must be in suitable, clean and sealed packaging.
- Food must arrive at safe temperature for the customer's consumption (60 ° C), so it is important to use good quality thermal boxes and to implement good delivery logistics (delivery time as soon as possible).
- A good tip is to label ready foods with the time they leave the establishment and the maximum security time to be eaten.
- Always use a seal on the package; this ensures that the food has not undergone any changes.









## Food Service guidelines

- Viruses can reach cutlery, plates, handrails, door handles, tables and other surfaces through droplets of saliva and body secretions from an infected person. Therefore, food service utensils and equipment must be cleaned with alcohol 70% or chlorinated solution before and after handling, and whenever necessary.
- Establish time intervals to disinfect handrails, door handles and other places touched by hand frequently.
- If possible, adapt the service area to have air circulation and renewal, and the guarantee of a distance of 2 meters between employees.







## **IMPORTANT INFORMATION**

The World Health Organization (WHO) and the Brazilian Ministry of Health, until the publication of this material, have not presented information on whether it is safe or not to use delivery services in times of COVID-19.

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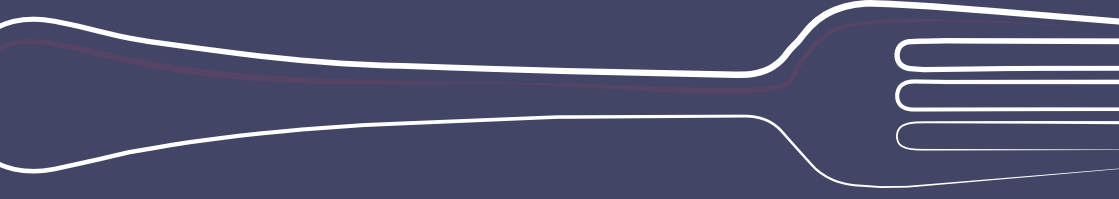
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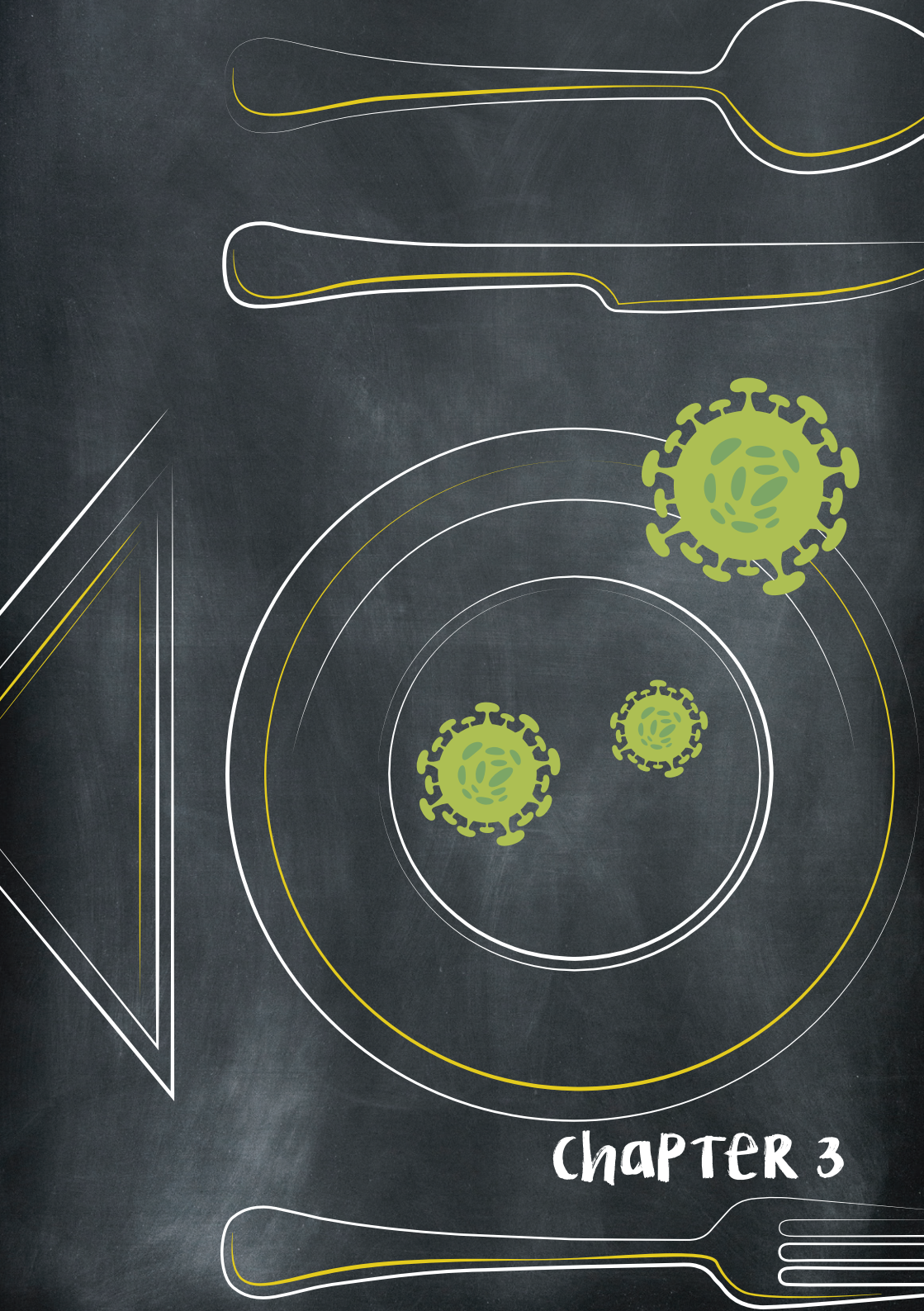
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This guideline is based on basic and consensual information and recommendations made by entities and bodies from all over the world, which refer to care in case of contamination by pathogens, such as viruses, even though some are not specific to Covid-19.



## CHAPTER 3





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**LET'S COOK?  
RECIPES TO  
PREPARE WITH  
CHILDREN:  
AN ALTERNATIVE  
TO PROMOTE  
HEALTHY EATING  
DURING THE  
COVID-19  
PANDEMIC.**





## RECIPES by

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TBSP = TABLESPOON

TSP = TEASPOON





## INTRODUCTION

The COVID-19 pandemic brought several individual and collective protection measures to contain the expansion of its transmission. Social distancing is one of the most effective strategies to contain the disease, according to the World Health Organization. Several countries have adhered to this strategy, which has led to the suspension of activities everywhere, including schools, to keep everyone at home. With adults and children at home, we thought of this calamity time as a time to promote, wherever possible, healthy eating to children. Ideally, this process will include everyone involved and promote adult and children's health in a familiar sociable way.

In chapter 1 we discussed how nutrients and probiotics might affect the new coronavirus infection. Now, in this chapter, we make true healthy eating a practical possibility. By true healthy eating we mean not only proper sufficient nutrients but also social pleasure and involvement.

This chapter provides recipes to be prepared with children and family, using unprocessed and minimally processed foods without ultra-processed food, and with good sources of essential micronutrients to strengthen the immune system, such as carotenoids, zinc, fiber and essential fatty acids. These recipes were based on recommendations of the Food and Agriculture Organization of the United Nations (FAO), Centers for Disease Control and Prevention (CDC Healthy Schools), and the Food Guide for the Brazilian Population. We hope to stimulate cooking within families and disseminate nutritional recommendations for society, strengthening healthy eating during this pandemic.

Karla Danielly da S. Ribeiro  
Bruna Leal Lima Maciel



## BANANA AND CHOCOLATE COOKIES

### INGREDIENTS

- 4 ½ tbsp of thin rolled oat
- 1 banana
- 1 pinch of ground cinnamon
- 1 ½ tbsp of flaxseed flour
- 2 tablets of dark chocolate
- ½ tsp of oil (to greasing the pan)

### NUTRITIONAL TIPS

This cookie is a good source of fiber because it has oats, flaxseeds and banana. The fibers provide a greater satiety and contribute with gastrointestinal function. It's also a great snack option!

### DIRECTIONS

Knead the banana and then add the oats, flaxseed, cinnamon and grated chocolate tablets. Finally, model the cookies, put in a greased pan and bake until golden.



## CARROT CAKE

### INGREDIENTS

- 1 cup of rice flour
- 1/3 cup of demerara sugar
- 1/3 cup of oil
- 1 large carrot
- 2 eggs
- 3 tbsp potato starch
- 2 tsp of sweet polvilho
- 1 tbsp of baking powder

### DIRECTIONS

Put the eggs, oil, carrot, demerara sugar and rice flour in a blender and beat until smooth. Transfer the mixture into a bowl and add the potato starch, the sweet polvilho and the baking powder. Bake in a preheated oven at 180°C for 20 minutes.

### NUTRITIONAL TIPS

This cake is an excellent source of carotenoids, vitamin A precursors, essential fats, and is an excellent option for children with allergy or intolerance to milk and its derivatives. It is nice to have it for breakfast or snacks, and frostings can be added.





## BANANA and OAT cake

### INGREDIENTS

- 5 average bananas
- 1 cup of oatmeal flour
- 1 cup of thin rolled oat
- 1 tbsp of oil
- 1 cup of demerara sugar
- 2 eggs
- 1 tbsp of baking powder

### DIRECTIONS

Put the bananas in a bowl and knead well. Add the flour and oats, oil, sugar and eggs. Stir well and then add the baking powder. Grease the pan with oil and bake in preheated to 180°C oven for approximately 25 minutes.

### NUTRITIONAL TIPS

This cake is a good source of fiber and potassium necessary for normal cell function, nerves and muscles. Its consumption is indicated for breakfast or in the morning and afternoon snacks.



## Oat And Honey cookies

### INGREDIENTS

- 2 cups of thin oat flakes
- 2 cups of wheat flour
- 1 cup of demerara sugar
- 2 eggs
- 2 tbsp of butter
- 4 tbsp of honey

### NUTRITIONAL TIPS

It's a quick, delicious, fiber-rich recipe that can be part of the snacks for the children. Oat flakes are excellent sources of soluble fibers that help to maintain intestinal health!

### DIRECTIONS

Mix all the ingredients to a homogeneous mass. Make small balls and lightly knead. Put on a greased baking sheet and bake at 180°C for approximately 10 minutes or until golden. Wait for it to cool and serve.



## SOUR STARCH DONUT

### INGREDIENTS

- 2 cups of sour starch
- 1 tbsp of oil (suggestion: canola or sunflower)
- 1 egg
- ¼ cup of hot water
- 1 pinch of salt

### DIRECTIONS

Mix with a spatula the starch, oil, egg and salt. Then, add hot water and knead until a homogeneous mass is obtained. Mold on donut format, or as desired, and put on a baking sheet, leaving space between the cookies. Bake in 180°C preheated oven for approximately 15 minutes.

### NUTRITIONAL TIPS

This donut is a gluten-free food option, ideal for snacks. It is perfect with other foods, such as creams and pates.





## Healthy Pizza

### Ingredients

#### Dough:

- 2 tbsp of thin oat flakes
- 1 small carrot
- ½ cup of wheat flour with baking powder
- 1/3 cup of oil
- 1 to 2 eggs (observe the texture of the dough)
- Salt to your liking

#### Tomato sauce:

- 5 tomatoes
- 1 garlic clove
- ¼ of onion
- 1 tbsp of extra virgin olive oil
- Basil to your liking
- Oregano to your liking
- 1 tsp of salt
- 1 tsp of sugar (if necessary)

#### Topping:

- 4 slices of mozzarella cheese
- 1 small tomato
- Oregano to your liking

### Directions

For the sauce: make an X-cut at the tomatoes bottom and cook in boiling water until the skin begins to loosen. Drain in cold water and remove the skin. Blend the tomatoes to the consistency you prefer (liquid or slightly pasty). Sauté garlic and onion in olive oil, add the tomatoes. When boiling, add the other ingredients and cook a little in low heat to improve the flavor. If it is acidic, add sugar.

Mix all dough ingredients in a blender until smooth. Remove and spread on a greased baking sheet. Bake in an oven at 180°C for 15 minutes. Remove it and add the tomato sauce and the topping. Bake again to melt the cheese.

### Nutritional Tips

Compared to a traditional pizza, this pizza is more abundant in fibers from the oat and carrots and presents fewer carbohydrates. You can use your creativity to vary the toppings, using basil, eggs, broccoli, bell pepper, and a different mixture of cheeses, such as mozzarella and ricotta. The sauce can be prepared in larger amounts and kept frozen for 30 days or refrigerated for 3 days.



## CHICKEN AND SWEET POTATO BALLS

### INGREDIENTS

- 1 Baked and mashed sweet potato
- 2 shredded chicken fillet
- Parsley (or cilantro) and chives to your liking
- Oregano to your liking
- 1 egg (for brushing)
- Flaxseed or oatmeal
- Olive oil to grease

### NUTRITIONAL TIPS

This snack is a source of energy and fibers. Using the flaxseed as an ingredient makes the recipe rich in fibers and also a source of omega-3 fatty acids, which are essential to the development of children.

### DIRECTIONS

In a bowl, put the potato and mix with the spices until very homogeneous. Then, shape it into small balls using the hands and fill with the shredded chicken. Place the egg in a bowl and the desired flour in another. Roll the sweet potato balls in the egg bowl and then in the flour to cover entirely. Put the balls in a baking sheet greased with olive oil in an oven at 180°C for 40 minutes.



## Tapioca dice

### INGREDIENTS

- 1 ½ cup of granulated tapioca
- 1 ½ cup of cheese
- 2 ½ cups of warm milk
- 1 tsp of salt
- Oregano to your liking

### NUTRITIONAL TIPS

This is a traditional Brazilian recipe, which can also be prepared frying the dices. Putting in an oven, as presented here, reduces the addition of calories. You can serve the dices with jam as a snack for the children. This recipe is a source of calcium from the cheese and milk.

### DIRECTIONS

Heat the milk in a pan, without letting it boil. Add the granulated tapioca, the grated cheese, the oregano and salt and mix well until it forms a thick dough. Cover a baking sheet with plastic wrap covering the bottom and sides. Put the dough, spread well, cover with the plastic film smoothing with the hands, wait for it to cool a little, and refrigerate for 2 hours. After refrigerated, remove the plastic film and cut the dough into dices. Put the dices in a greased baking sheet and put in a preheated oven until brown-golden.





## POTATO AND ZUCCHINI PIE

### INGREDIENTS

- 5 potatoes
- 1 zucchini
- 2 cups of cooked and seasoned ground beef
- ½ onion
- 1 garlic clove
- 1 drizzle of olive oil to grease and sauté

### NUTRITIONAL TIPS

This is a very light pie when compared to other recipes, because vegetables were used instead of flour and butter in the dough. Using the vegetables also brings in more vitamins and fibers to the recipe. Besides, the meat is a source of iron, essential to prevent iron deficiency anemia. It is an excellent option for dinners, and children will love to prepare!

### DIRECTIONS

Cook the potatoes and the zucchini to a puree point. Sauté with olive oil, garlic and onion. Knead with a fork and put in a small cake pan, greased with olive oil, and leave a space in the middle to put the filling. Put the ground beef and close with more potatoes. Bake at 180°C for 15 minutes and allow to cool before unmolding.



## CHICKEN NUGGETS

### INGREDIENTS

- 1 chicken breast fillet
- 2 eggs
- 1 cup of cornmeal
- 1 onion
- 1 garlic clove
- Parsley to your liking
- Olive oil to grease

### NUTRITIONAL TIPS

This recipe is an excellent alternative to replace ultra-processed nuggets from supermarkets. The presence of lower sodium and fats, and more carotenoids, potassium, magnesium and fibers are advantages of this recipe when compared to traditional industrialized nuggets.

### DIRECTIONS

Mix the onion, garlic and parsley with the chicken. Put in a food processor and let grind well. Mold to your liking, greasing your hands with water. Put the two eggs in a bowl and mix them. Bathe the nuggets in the beaten eggs and then in the cornmeal. Drizzle a little olive oil and place in a preheated oven at 180°C for 25 minutes.



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This book was  
produced by the team  
of EDUFRRN  
in April 2020

