leat well to stay healthy



Editorial Team

Jean Pierre ADJABA BIWOLI.

General inspector and coordinator of sciences Ministry of Secondary Education, Cameroon

Felix KEMBE ASSAH. MD, MPhil, PhD, FCAYS

Medical Doctor, Epidemiologist University of Yaounde 1, Cameroon HoPiT Research Group, Cameroon Yaounde Central Hospital, Cameroon

Mesmin Y. DEHAYEM. MD

Endocrinologist Diabetologist Yaounde Central Hospital, Cameroon

Ruth Viviane DJUIKWO APOUAMOUN. PhD

Biologist, Food and Nutrition Sciences Laboratory of food sciences and metabolism University of Yaounde 1, Cameroon

Leopold FEZEU. MD, MPH, PhD

Medical Doctor, Epidemiologist, Associate Professor University of Paris 13, France Research Unit in Nutritional epidemiology-(EREN) - INSERM/INRA/CNAM, Paris, France

Magellan GUEWO-FOKENG. MSc, PhD, FCAYS

University of Yaounde 1, Cameroon Biochemist, Molecular biology/Genetics Biotechnology Centre, Yaounde, Cameroon RSD Institute, Yaounde, Cameroon

Jose Gomer KAMGANG NANKAM. MD

Medical Doctor, Endocrinology – Diabetology Yaounde General Hospital, Cameroon

Jean-Claude KATTE. MD, MSc, FCAYS

Medical Doctor, public health specialist RSD Institute, Yaounde, Cameroon

Jeannette Célestine KOUAMOU.

Biologist and Biotechnologist PLEG RSD Institute, Yaounde, Cameroon

Clarisse MAPA-TASSOU. MSc, MPH, PhD

Researcher – Public health HoPiT Research Group, Cameroon

Jean Claude MBANYA. MD, PhD, FRCP, FCAS

Professor of Endocrinology – Diabetology, Biotechnology Center, Yaoundé, Cameroon University of Yaounde 1, Cameroon HoPiT Research Group, Cameroon Yaounde Central Hospital, Cameroon

Bernadette MBIAH-SANSI.

Director DOVAS

Ministry of Secondary Education, Cameroon

Magy Camille NGO SONG. Msc, PhD

Biochemist, Food and Nutrition Sciences

University of Yaounde 1, Cameroon

Eugene SOBNGWI. MD, PhD, FAAS, FCAS

Professor of Endocrinology – Diabetology, University of Yaounde 1, Cameroon Yaounde Central Hospital, Cameroon RSD Institute, Yaounde, Cameroun

Crista TABI-ARREY. MSc, RD

Nutritionist – Dietician Yaounde Central Hospital, Cameroon

Joelle TAMBEKOU-SOBNGWI. MD, MPH, PhD

Medical Doctor, Epidemiologist RSD Institute, Yaounde, Cameroun

Yves Florent WASNYO WASNYO. MD, MPH

Medical Doctor, RSD Institute, Yaounde, Cameroun

Table of content

1	Introduction	1
	Objectives	1
	Training approach	1
	Target group	1
2	Guidelines for the facilitators	1
	How to prepare the training sesion?	1
	Profile of participants	2
	Instructions	2
	Worksheet of the facilitator	2
3	Content of the training	3
	Theme 0 - Word of welcome and presentation of participants	3
	Theme 1 - Why should I eat?	4
	Theme 2 - What does my meal contain?	4
	Theme 3 - How do I cook my meal?	5
	Theme 4 - When should I eat?	5
	Theme 5 - Which quantities of food should I eat?	6
	Theme 6 - Why is physical exercise good for my health?	6
	Theme 7 - What are the consequences of a poor diet and physical inactivity on my health?	7
	Theme 8 - Practical tips	8
	Theme 9 - Examples of daily meals	
4	Teaching material	10
5	Evaluation	11

1 Introduction

This document is made to assist teachers in using and comprehend the nutritional guide designed for students entitled "I eat well to stay healthy." The nutritional guide, developed in the form of a training manual, presents the different types of foods we eat and provides tips for a healthy and balanced diet.

This manual has been designed for facilitators (teachers and peer educators) to organise and effectively conduct discussion sessions in schools or elsewhere with young people in general and students in particular. It proposes a work plan for the discussions and instructions for the adequate presentation of each theme developed in the nutrition guide.

Objectives

The training aims to strengthen the level of knowledge of young people on their diet, the role of a healthy and balanced diet in the prevention of diseases, and induce in them, the adoption of responsible eating habits.

Training approach

The approach must be participatory to enable a better understanding of the principles of a good diet proposed in the guide. It is based on a series of questions and pictures to be presented and interpreted by the facilitator. The facilitator also has to encourage participation and sharing of experiences between participants. The key messages developed from the questions answered must be validated by both the facilitator and the participants.

Target group

Adolescents in general and school students in particular but also any other person involved in their education (teachers, parents, etc.)

Guidelines for the facilitators

2.0 How to prepare the training session?

- Select the pictures to be displayed.
- The session should take place in a classroom to maintain a learning attitude.
- Avoid noisy places, for example near markets or beside roads.
- Inform participants of the duration and the number of sessions. It is better to do several sessions of one to two hours each with short breaks.
- Provide bold markers of different colours and blank sheets of papers for group work.
- The disposition of the seats is essential to ease learning. Arranging the participants' chairs in a circle promotes better participation in discussions. All participants must have an excellent view of the posters during the training.

2.1 Profile of participants

- The number of participants per session should not exceed 40.
- All students are required to take part in the group discussion.

2.2 Instructions

The discussion session must be interactive.

- Incite all participants to take part in the discussion. Everyone should be encouraged to participate, not just those who seem to lead the group.
- Stir up participants by asking questions. For example by asking "are there any other questions?" Or ask "what do you think it should be?" Etc.

2.3 Worksheet of the facilitator

Duration	220 minutes
Target group	Adolescents in general and students in particular
Objectives	Acquired knowledge The participants: Know the facilitator and know each other; Know the different types of food and their role in the body; Have a shared understanding of a healthy and balanced diet; Know tips to improve their diet and that of their family. Know-how acquired Help participants know how to: Assess the quality and quantity of their current dietary habits; Develop strategies to improve their diet Attitudes acquired Participants must be able to: Adopt and maintain a balanced diet Motivate other people (youths and their family members) to improve their diet.
Importance	Importance for health A healthy, balanced and varied diet guarantees good health. It reduces the risk of diseases such as obesity, diabetes, cardiovascular diseases and certain cancers. Importance for growth and education Well-nourished children are less likely to fall sick, have adequate growth and have better academic performances.

Content overview	Time *
Thème 0: Word of welcome and presentation of participants	15 min
Theme 1: Why should I eat?	05 min
Theme 2: What does my meal contain?	30 min
Theme 3: How do I cook my meal?	15 min
Theme 4: When should I eat?	05 min
BREAK	10 min
Theme 5: Which quantities of food should I eat?	10 min
Theme 6: Why is physical exercise good for my health?	10 min
Theme 7: What are the consequences of a poor diet and physical inactivity on my health?	20 min
Theme 8: Practical tips	30 min
BREAK	10 min
Theme 9: Examples of daily meals	15 min
Theme 10: Self-evaluation	30 min
Conclusion - closing remarks	15 min
TOTAL	220 min (3hrs 40 min)

*Approximate

3

Content of the training

3.0

Theme 0 - Word of welcome and presentation of participants

Teaching method	Duration
 Presentation: The facilitator and the participants introduce themselves. Put the participants in pairs. Each participant could introduce his partner Name and first name, nickname, favourite meal, practised sports or leisure Establish eye contact with each participant Encourage participation with questions or jokes 	00:15



3.1 Theme 1 - Why should I eat?

Méthode d'enseignement	Durée
• The discussion should lead to answers such as: to grow, to work, for pleasure, to have strength, to look healthy, because we are hungry, to be healthy, etc.	
 What are the different types of nutrients? The discussion should lead to answers such as lipids, carbohydrates, proteins, vitamins and mineral salts, etc. 	00 :05
1 Key messages	
 A healthy and balanced diet is essential for good health To cover my nutritional needs, I should have a varied diet! 	

3.2 Theme 2 - What does my meal contain?

Méthode d'enseignement		Durée
•	Use poster No.1 on the different food groups by introducing each group with the question: What do you see on this poster? Referring to each answer, explain the function of these food groups: o Building nutrients (rich in proteins) that help in the growth and repair of body tissues. o Energy nutrients (rich in starch and lipids) are the primary sources of energy for our body o Protection nutrients (vitamins and mineral salts) protect us and keep us healthy. What happens if one of these types of foods is missing from our daily meals? o (Refer also to the answers from the 1st Theme) Encourage participants to list the consequences	00:30
	Key messages To have a balanced diet, all the different types of nutrients have to be present in my daily meals in sufficient amounts. Poster: A1: What does my meal contain?	

3.3 Theme 3 - How do I cook my meal?

Teaching method	Duration
 The discussion should lead to answers such as (boiling, steaming, smothering, grilling, frying, etc). Insist on the way some cooking methods can affect health. Key messages Certain foods such as fruits and vegetables are eaten raw (ideal to preserve their nutritional value). I have to limit the consumption of fried foods to stay healthy. Salt and seasonings (bouillon cube, aromas) give food a good taste, but their sodium 	00:15
content favours high blood pressure. I have to eat less salty. Poster: A2: How do I cook my meal?	

3.4 Theme 4 - When should I eat?

Teaching method	Duration
Always redirect the debate to revolve around essential information: I should try to take three meals a day to ensure adequate growth. I can grab a snack between the main meals if I am hungry. It is important to eat at regular hours. Key messages	00:05
 I must avoid nibbling. Taking sweets leads to obesity and other diseases such as dental cavities, hypertension and diabetes. 	

Theme 5 - Which quantities of food should I eat?

Teaching method	Duration
 The nutritional needs of young people are higher during periods of growth. They value according to gender (girls and boys, therefore, have different needs), age, physical activition and health status. Food requirements are defined in terms of servings. A serving of carbohydrates is, for example, half of a medium-sized plantain, two small potatoes or two tablespoons of cooked rice. A serving of protein is an egg, a portion of fish having the size of two eggs, or a piece. 	ty
of meat having the size of an egg.	
 One serving of fat is one tablespoon of groundnut, egusi, butter or oil. 	
 A portion of fruit is equivalent to a mango, a banana, an orange, an apple, two mandarins, a slice of watermelon, or five to seven cherries. 	
 A portion of vegetables is a medium-sized tomato, an onion, a handful of green beans, a big carrot, two tablespoons full of leafy vegetables. 	00:10
Key messages	
 I have to eat at least one fruit per day. 	
 To have a balanced diet, each of my meals should be made of four proportions of carbohydrates (tubers, cereals and vegetables) for two proportions of protein (meat, fish, legumes, insects) and one of lipids (oil and hidden fats). 	
Poster: A3: Which quantities of food should I eat?	

3.6

Theme 6 - Why is physical exercise good for my health?

Teaching method	Duration
A teenager should have at least 60 minutes of moderate or intense physical activity per day. Ask students to name the different types of physical activity they can practice Exercise strengthens the heart, muscles and bones. It contributes to the development of the respiratory system and helps to stay healthy. Key messages I must avoid being declared physically unfit by fantasy. Regular physical activity reduces the risk of diseases such as obesity, diabetes,	00:10

3.7 Theme 7 - What are the consequences of a poor diet and physical inactivity on my health?

The discussion should lead to responses such as (illness, fatigue, back pain, heart diseases, etc.). Q1: What are the diseases linked to a poor diet and physical inactivity? A1: obesity, cardiovascular disease (high blood pressure, cerebrovascular accident CVA or stroke), diabetes, gout and cancer. Q2: How can these diseases be avoided? A2: They can be avoided with regular physical activity and having a healthy and varied diet. Q3: What else can I do now to be healthy and ensure a bright future? A3:	ration
 Avoid the consumption of alcoholic beverages, Avoid all forms of tobacco (cigarettes, shisha, etc.), 	00:20
 Take care of my personal and dental hygiene, Avoid excessive screen time (telephone, video games) and other electronic devices. 	
Key messages Regular physical activity added to a healthy and balanced diet is essential to stay	

3.8 Theme 8 - Practical tips

Teaching method	Duration
 1. Potable water Q0: Q0: What is potable water? A0: This is water that is safe to drink (which cannot cause disease). Q1: How can water be purified? A1: Use a clean container to take water from a spring, well or borehole; allow this water to settle for two hours; keep the overlying clean part of this water, then put it in a 10-litre bucket. Separate this portion into two 5-litre portions, and put a teaspoon of bleach in one of the containers. Then mix the contents of the two buckets again, and you're done: this gives 10 litres of drinking water, which can be used for cleaning food, cooking and drinking! Practical tips I avoid drinking water sold in plastic bags because their source, processing and conditioning are uncertain. 	00:05
2. How to hand wash? Use poster P4 poster to show how to do proper handwashing. Practical tips Hand washing should be done regularly, for example: before and after meals, after using the bathroom, before and after taking care of a baby or sick person. Poster: A4: How to hand wash?	00:05
3. How to brush teeth? Use poster P5 to show how to brush the teeth. Practical tips I take care of my teeth by brushing them at least twice daily or after each meal. The total duration of tooth brushing is about 2 minutes. Poster: A5: How to brush teeth?	00:05

Teaching method	Duration
4. Plastic bags	
Q1: How to package food? A1: I can package my food with clean natural wrapping (a sheet of paper, banana leaf, etc.)	
Use poster P6 to show how to package food (good packaging, inadequate packaging, etc.).	00:05
Practical tips	
 I do not transport hot food in plastic bags. 	
Poster: A6: How to package food?	
5. How should I read food labels? Use poster P7 to explain how to read food labels.	
Q1: What information does a label give on a food product? A1: Ideally use a box or packaging or bottle on which participants can find the manufacturing date, expiry date and the nutritional composition of the food.	
Q2: How to determine the nutritional composition of the portion of food I want to eat from its label?	
A2: manufacturers often give the nutritional composition for 100 grams of food or 100 millilitres of drink. I do a conversion by cross multiplication to determine the composition of the portion I would like to eat.	00:05
Practical tips	
 I always read the expiry date of the food on the label before consuming it. 	

Poster: A7: How should I read food labels?

Teaching method	Duration
6. How to lighten my meal? To reduce the number of calories in my meal, I have to reduce its content in fats (fries) and fast carbohydrates (soda, pastries, candies).	
Conseils pratiques	00:05
 I limit the consumption of soft drinks because they are rich in calories. I reduce the consumption of mayonnaise and fries. I prioritise vegetables and broths. 	

3.9

Theme 9 - Examples of daily meals

Teaching method	Duration
Ask the participants to propose a balanced menu for a day - discuss.	00:15



Outils de formation

Posters (A)	Theme
A1: What does my meal contain?	Theme 2
A2 : How do I cook my meal?	Theme 3
A3 : Which quantities of food should I eat?	Theme 5
A4 : How to hand wash?	Theme 8
A5 : How to brush teeth?	Theme 8
A6 : How to brush teeth?	Theme 8
A7 : How should I read food labels?	Theme 8

Teaching method		
The facilitator should:		
o	Have the children work in groups of five.	00:10
o	Propose two exercises for each group	
Organise a plenary session for restitution and discussion		00:20

Answers to the exercises proposed in the nutrition guide

- Onana's day is not nutritionally balanced. Although we find the three main food groups (carbohydrates in doughnuts, pap, sodas and "bobolo", lipids in the oil of doughnut and beans, mayonnaise and "Nnam wondo" and proteins in beans, eggs and sausage), their quality and quantity are not reasonable. Also, during the day Onana consumed a lot of processed foods, such as sodas which contain a lot of fast carbohydrates and artificial sweeteners; sausage and mayonnaise provided only low-quality proteins and lipids. Such a diet every day is dangerous for his health.
- Yes, Dikoume consumed all of the classes of food in reasonable amounts. Also, he ate a lot of natural foods, including homemade food, natural fats in avocado, slow carbohydrates and dietary fibres in fruits and yoghurt, which is a good source of calcium. I have to adopt a diet similar to that of Dikoume.
- Ngum should take a mango with yoghurt because our body digests the sugar in mango more slowly thanks to its dietary fibres; moreover yoghurt is a good source of calcium and is excellent for growth. Doughnuts are rich in low-quality oil (frying oil). As for "folere", it is a natural drink to which we often add fast carbohydrates (sugar).
- Amadou is right, Amadou's concern probably comes from the fact that vegetables, even if they are excellent for our health, do not always provide all the essential amino acids which are very useful for our organism. Nono should add proteins of animal origin (meat, eggs, milk) to balance his diet.
- Alcohol is bad for your health; it mainly damages the adolescent's brain. When mixed with sugar it decreases resistance to drunkenness, making individuals consume more. Alcohol is richer in calories than sugar; so if Sandrine continues with her habit, this will lead to disastrous consequences on her health: risk of addiction, obesity, liver disease, etc.
- Bakary has regular physical activity; this is more beneficial for his health than the model adopted by Achu. Achu's physical activity is not useless, because it is better to have a little physical activity than not to have it at all.

- R7
- Ngo Kamla's efforts should be encouraged because she dared to deprive herself of unhealthy foods associated with a little physical activity. She should continue on this path, coupled with a balanced diet and regular physical exercise.
- R8
- Answer 8.1: Yes, I can help him.
- **Answer 8.2:** He should choose fruit salad which provides water, sugar and dietary fibres instead of the Mocha which will give fast carbohydrates and fats.
- Answer 8.3: Fruit juice is better because it is natural, and is less sweet than soda.
- **Answer 8.4:** Pineapple juice contains almost zero dietary fibres, which facilitate bowel movement. Tchinda should take a slice of pineapple fruit instead of pineapple juice.
- I will tell to Yanda that it is a good idea to have switched to a vegetarian lifestyle because by removing meat from her diet, it considerably reduces the intake of saturated fatty acids which can be bad for health. Unfortunately, she also decreases her intake of essential fatty acids. To compensate for this, I will suggest that she takes a diversified diet, with several varieties of pulses, vegetables and proteins of animal origin other than meat and fish (dairy products and eggs).
- Effila's lifestyle is not beneficial for his health because candies affect our teeth. Also, when associated with physical inactivity, they inevitably lead to obesity and associated diseases such as diabetes, diseases of the heart and blood vessels and some cancers.



A1: What does my meal contain?

























A2: How do I cook my meal?



A7: How should I read food labels?





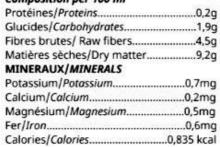








Composants pour 100 ml Composition per 100 ml





A6: How to package food?







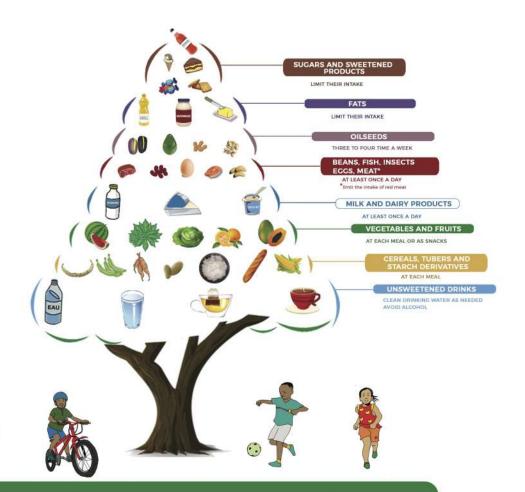






A3: Which quantities of food should I eat?







I CARRY OUT AT LEAST ONE HOUR OF PHYSICAL ACTIVITY A DAY



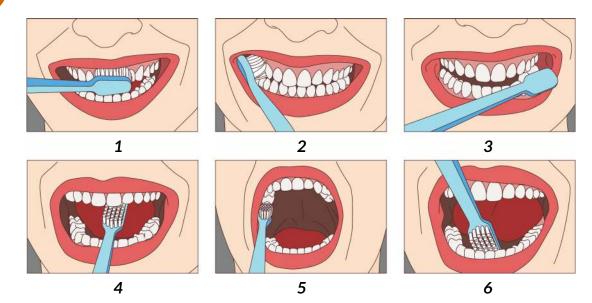




A4: How to hand wash?









Professor Eugène SOBNGWI. MD, PhD, FAAS, FCAS

Eugène SOBNGWI is a Professor of University - Physician in Endocrinology-Diabetology and Metabolic Diseases at the University of Yaoundé 1, Faculty of Medicine and Biomedical Sciences. Member of the Cameroon Academy of Sciences, he is also a member of the African Academy of Sciences and many International learned Societies. Vice-president of the International Diabetes Federation from 2017 to 2019, he is the author of more than 200 scientific publications. Professor Sobngwi heads the Laboratory of Metabolic and Molecular Medicine at the Biotechnology Centre of the University of Yaoundé 1 and is Medical Advisor at the Central Hospital of Yaoundé.

© 2021 RSD Institute – Yaounde, Cameroon.

All rights reserved.





MINSANTE





