

NUTRITIOUS

FOOD AND A HEALTHY DIET

TOOLKIT FOR YOUTH



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Mangroves for the Future
INVESTING IN COASTAL ECOSYSTEMS
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LIVE & LEARN
Environmental Education



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The content is designed to be used in B. Atoll, Maldives.



CONTENTS

INTRODUCTION	2
CONTEXT	3
THEORY U	4
ICE BREAKER	5
MAKING SMART FOOD CHOICES	6
MAJOR NUTRIENTS SOURCES & FUNCTIONS	7
PREPARING A MEAL	8
NUTRIENTS AND YOUTH	9
CASE STUDIES	10
IMPORTANCE OF PLANTS	15
PLANNING FOR GARDENING	16
GARDENING	17
GARDENING	18
FACT SHEETS: KEY NUTRIENTS	19
FACT SHEETS	20
SKIPPING MEALS	20
FACT SHEETS ANAEMIA	21
FACT SHEETS: SKIPPING BREAKFAST	22
FACT SHEETS: IMPORTANCE OF PLANTS	23
FACT SHEETS	24
GARDENING	24



INTRODUCTION

This toolkit has been developed as part of the project 'Promoting community resilience to Climate Change, by the introduction and dissemination of conservation agriculture, through Island Women's Development Committees, in five islands in Baa Atoll in the North Province of Maldives'. The Project is funded by IUCN/MFF is partnered with the Ministry of Fisheries and Agriculture, the Environmental Protection Agency and the Atoll Ecosystem Conservation Project under the Ministry of Housing and Environment. The Project's aim is to initiate practical action and ensure future action is planned by Island, Atoll and Provincial stakeholders and in particular by island women, to strengthen community resilience to climate change in five islands in Baa Atoll by December 2012.

This toolkit has been designed based on the widely accepted premise that global climate change represents both the most immediate and most significant threat to coastal resource management in the Maldives. While it is true to say that concern and understanding about the causes and consequences of global climate change are now well established at the national level within the Maldives, at the community level there is much less awareness. It is widely agreed that greater understanding of the threats posed by climate change to individual islands, and the actions that could be taken to strengthen community resilience to its impacts is required.

CONTEXT

A study was undertaken by Live & Learn Environmental Education in the five communities (Kudarikilu, Kamadhoo Kihaadhoo, Dhравandhoo and Maalhos) in Baa Atoll to document the perceptions of the secondary school students and the community on nutritious food available on the island. A total of 134 students from the secondary grades (grade 8, 9 and 10) from the five communities participated in the project. were provided with a food diary to be filled prior to the team's visits. A week prior to the research team's visit, the students were sent 'food diaries' and asked to fill out the diary by noting what they eat for breakfast, lunch and dinner and in-between snacks.

RESEARCH OVERVIEW

Students and the community members point out that vegetables and fruits are very rare in their diets. The reasons are fruits and vegetables are not available from the island and the imported fruits and vegetables are expensive. However fish is the common meal for all the households, because fish is accessible and liked. The students' and community's knowledge on nutritional value of locally available foods was very low and the perceptions of the students were that the traditional diet of the Maldivians is a balanced diet. The findings of the food diaries were compiled and highlighted that the most common foods served in the households are: fish soup, and Rihaakuru with rice and roshi. The RAP participants highlighted that the elderly and babies require the foods from the different food groups which are not available in the islands, either produced in the island or available in the shops from the imported foods.

TOOLKIT AIM

This toolkit is designed to create more awareness among the community members on the nutritious food available and grown in their own communities. The toolkit will be used to train the health personnel and the school health assistants in all the five communities using the 'train the trainers' approach. A master trainer will train the necessary personnel. The trained personnel will conduct trainings at the community level.

THEORY U

Adapted from Otto Scharmer's, "Theory of U - Leading from the Future as It Emerges"

Theory U is derived and adapted to suit this particular nutrition tool kit. Theory U has direct relevance to strategies of managing change, and hence is relevant to this particular topic. Nutrition and healthy diets are all about changing long established food cultures and mind sets. The journey of Theory U takes us through "... an inner gate that requires us to drop everything that isn't essential. This process of letting- go (of our old ego and self) and letting-come (our highest future possibility: our Self) establishes a subtle connection to a deeper source of knowing" (Strategies for Managing Change, at <http://www.strategies-for-managingchange.com/theory-u.html>). We thus create our future self which is by all means more beneficial and let go of the long held habits and patterns of thinking.

Open Mind - is opening our eyes to realities, making judgments based on past experiences, reflecting and looking into the possibilities of change.

Open Heart - Is developing the capacity to appreciate and view other ideas. Appreciation and love is viewed as an emotion that enhances our intelligence.

Open Will - provides the determination to act and let go of old identities and emerge as a new and more informed self.



ICE BREAKER

ACTIVITY 1

Time: 1 hour

Materials: Name tag

Learning Outcomes:

- Get to know each other
- Identify methods of food preparation
- Learn teamwork concepts to use in other activities



INSTRUCTIONS:

1. Request each participant to wear a name tag.
2. Organise participants into small groups of 3 - 4.
3. Ask each participant to choose a food, that has some significance to him/her (a food that is well liked, disliked, or is a special dish prepared by his or her mother, a food that reminds him/her of a significant event, etc) Ask participants not to reveal it to the others.
4. Instruct participants in their groups to figure out, one at a time, what the food is by asking a series of questions. Individuals can only respond 'Yes' or 'No'.
5. The members of the group can ask questions from each of its members until they can identify what the food is and what relevance it has to him or her. Examples of questions can be - Is it eaten raw? Is it eaten cooked? Is it a vegetable? Is it green? etc.
6. Once the food is identified, find out from the participant the significance of the particular food to him/her.
7. The first team to have all its participants identify their foods wins the game
8. When all groups are finished, let each participant take turns to introduce him/her to the whole group, the food he/she identified, its special significance to him/her, and if any special method by which he/she prepares the food.

MAKING SMART FOOD CHOICES

ACTIVITY 2

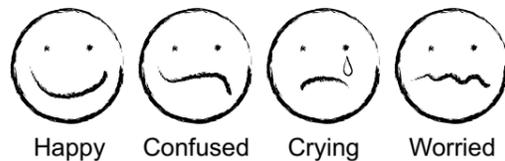
Time: 1 hour

Materials: Large sheets of paper and markers.

Power point presentation of food groups (part of the toolkit)

INSTRUCTIONS:

1. Divide participants into small groups of 3-4 and provide them with a large piece of paper.
2. Get each member to note down foods in his average daily menu individually (inclusive of snacks).
3. Once done, get participants to draw a circle and do a rough estimate of the proportion of the food in the daily menu. An example is given. The names of the food groups can be noted near the respective arrows.
 - Grains (cereals, oats, rice, flour etc.)
 - Vegetables
 - Fruits
 - Milk and other milk and dairy products (eggs, butter, yogurt, etc.)
 - Meat and beans and fish
4. Now discuss the food groups with the participants. The power point presentation can be used as an aid. Fact sheet on key nutrients is for further information.
5. Provide participants with the My Plate Icon (ChooseMyPlate.gov) which is also included with the power point presentation.
6. Get participants to compare their daily menu analysis with the standards in MyPlate. Note: MyPlate Icon is a product of United States Department of Agriculture (At <http://www.cnpp.usda.gov/Publications/MyPlate/GettingStartedWithMyPlate.pdf>). Is used in this Tool Kit only for comparison and teaching purpose and hence is NOT permitted to be adapted or any alterations made to colour or design.
7. Discuss how the MyPlate standards apply to the Maldives. Ask participants what problems (if any) they would encounter in maintaining these dietary standards.
8. Get participants to express their feelings regarding their existing food habits using the emoticons given below.



MAJOR NUTRIENTS SOURCES & FUNCTIONS

ACTIVITY 3

Learning Outcomes:

- Define the term 'nutrition'
- Identify the sources and functions of the major nutrients
- Reflect on the availability of different food varieties in the island and best alternatives for a balanced diet
- Prepare a health food recipe and judge recipes for their nutritional values

Time: 2 1/2 hrs

Materials: Flip Chart

Power point presentation of food groups (part of the toolkit)

INSTRUCTIONS:

1. Question participants on what they understand of the term 'nutrient'. Ask them what significance they give to nutrients, and to rate their significance level on a 10 point scale.
2. Try and get the definition of nutrition as substances found in food which the body requires for growth and maintenance of our body. Write down the definition on the flip chart for everyone to see.
3. Get the participants to brainstorm on the different nutrients and functions – carbohydrates, proteins, fats, vitamins, minerals and water. Write down the discussions on the flip chart. Provide the participants with the fact sheet on major nutrients and discuss.
4. Form small groups of 4 – 5 and ask them to discuss the different food available, that can provide the above mentioned nutrients.
5. Get each group to write/plan any health food recipe. It can be an entirely new recipe or one that already exists but have been modified to meet nutritional standards. The nutritional benefits also need to be included with the recipe.
6. Each group can be asked to present the recipe and explain the nutritional benefits. The other groups will judge the nutritional appropriateness of the recipe/s and give marks out of 20. Besides the ingredients and nutritional values, participants should be advised to check that the method of preparation does not result in loss of nutritional values. Participants should be requested to provide helpful suggestions for improvement of the presented recipes.
7. Get each group to plan a full meal inclusive of the previous recipe. It has to be a well-balanced diet. Ask participants to be prepared to cook/prepare the meal in the coming day.

PREPARING A MEAL

ACTIVITY 4

Time:6 hours

Materials:materials for cooking,stove for each group and raw materials (for menus) and utensils.

INSTRUCTIONS:

1. Get selected members from the public to come in as observers.
 2. Get participants in the selected groups to work out the nutritional value of the meal. Ask them to write down full recipes for the meal with accompanying benefits.
 3. Prepare/cook meals. Do it as a cooking demonstration so that observers can follow the recipes and materials used.
 4. If possible video or at least take photos of the sessions.
 5. Compile the meals of each group to form a recipe book containing balanced meal recipes. Include photos from the session in the book.
- BEST MEALS EVER
 - How to feed your family
 - A healthy well balanced diet

NUTRIENTS AND YOUTH

ACTIVITY 5

Time:2 hours

Materials: Flip chart

INSTRUCTIONS:

1. Group participants to 4-5 in a group. Ask participants to brainstorm the different characteristics and needs of babies, young children, youth, adults and the elderly.
2. Once this work is completed, ask the participant groups to discuss the nutritional needs of the different age groups and the differences in food needs between the groups.
3. Ask the participants about the nutritional needs of youth and why.
4. Lead the discussion on the following aspects, making note of the important points on the flip chart.
 - The nutritional needs of youth are influenced by puberty and related growth spurts.
 - Proteins are important for the growth of soft tissue (organ and muscle tissue) that occurs during youth years.
 - Fats although harmful in large quantities have their function in providing energy and transporting fat-soluble vitamins in the body. The active nature of youth requires energy and vitamins. Hence, selective good sources of essential quantities of fats are required.
 - Water helps regulate body temperature and is essential for transporting nutrients in the blood and aids processes such as respiration.
 - Carbohydrates are an essential source of fuel for exercising muscles. Complex carbohydrates are essential for energy and brain function. Physically active young people (such as those involved in rigorous sports) require 12– 15% more calories than those who are inactive. Calorie and carbohydrate requirement should depend on the type, intensity, duration and frequency of exercise. Complex carbohydrates such as whole grain bread, whole grain pasta, brown rice and oats provided the needed carbohydrate requirement for an active life without doing much harm.
 - The attainment of peak bone mass (increase of bone density and strength) occurs during youth (between the ages of 20 years and 30 years). Sources of calcium such as milk, cheese and yogurt are easily absorbed sources of calcium.

NUTRIENTS AND YOUTH

- Certain physical changes during youth, such as the growth spurt, increase in muscle mass, and the start of menstruation (in females) require iron. Red meat, green leafy vegetables, whole grain cereals are rich sources of iron.
- Vitamin A is essential for normal cell development. The new cell growth that occurs during youth requires Vitamin A rich sources of food such as dark green and yellow vegetables and yellow fruits and animal sources such as liver, milk, butter, cheese and eggs.
- Vitamin D is essential for the absorption of calcium and phosphorus for the development of strong bones and teeth. Vitamin D is found in milk (fortified), cheese, eggs, liver, salmon, and fortified margarine. Besides the above, the skin can synthesize Vitamin D if there is regular exposure to enough sunlight.
- Vitamin C is important for maintaining a healthy life style and keeping free from disease. Vitamin C is mainly found in citrus fruits, and certain vegetables such as cauliflower, broccoli and parsley. Local sources of vitamin C include lime, guava, orange, papaya, tomato, cabbage, watermelon, mango, passionfruit, green peppers and other green vegetables.
- The B group Vitamins performs a number of functions starting from metabolism of carbohydrates, proteins and fats to maintaining healthy skin, enhancing the function of the immune and nervous system and the promotion of cell growth and division.
- 5. Request participants to reflect on the information presented. Ask them how they could contribute to the supply of nutrient rich foods. Propose the idea of farming and the crops that can be grown. Suggest that each participant chooses to grow one source of nutritious food (even if it be just one plant).



CASE STUDIES

ACTIVITY 6

Learning Outcomes:

- Reflect on issues relating to food habits and food choices
- Develop personal determination on food habits and food choices

Time: 45 minutes

Materials: Case Study 1

Instructions: Share the Case Study and ask questions

CASE STUDY 1 – UNHEALTHY FOOD CHOICES

Many young people are guided by their peers and an easy lifestyle. A recent survey showed that their food habits were guided by what is available, and they put no thoughts on the nutritional value of these foods.

Here are some of their thoughts:

"Why worry. I just eat what is in the house or what is prepared for me".

"I have my studies and my own social time. I don't have the time to prepare anything healthy".

"I like to eat what tastes good. I like eating snacks, fast foods and drinks. Everyone takes these. So why shouldn't I?"

Share the Case Study with the participants. Get the participants to reflect on the Case Study. Ask them the following questions.

- Are any of these familiar to you?
- What is your opinion on this Case Study?
- Based on the information gathered from the previous activities how would you address these issues?

Get each participant to write out their personal determination as a reaction to the Case Study.



CASE STUDIES

ACTIVITY 7

Learning Outcomes:

- Identify the prevalence of obesity and its causes
- Brainstorm methods by which the causes of obesity can be addressed

Time: 45 minutes

Materials: Case Study 2

INSTRUCTIONS:

Share the case study and ask questions.

CASE STUDY 2 – FOOD BEHAVIOURS: ADDRESSING OBESITY

World Bank (Nutrition at a Glance: Maldives) reports on the nutrition status of Maldives as performing better than many of its neighbours in the region. However, they report a 'double burden' of under-nutrition and obesity. While efforts are made to cut down half the underweight rate by 2015, there is a noted increase in obesity. 44% of those who are 15 years and above are found to be overweight or obese. World Bank explains this rise in obesity as resulting from rapid urbanization and the adoption of western diets. Refined carbohydrates and saturated fats and sugars plus a more passive lifestyle are identified as leading to increase in overweight and chronic diseases. The issue of increasing obesity needs to be addressed to reduce the risk of heart disease, type 2 diabetes and some forms of cancers.

- Share the case study with participants.
- Ask if and how the issue of obesity presented in the case study is relevant to their island/community
- Discuss methods by which the issue of obesity can be addressed (focus on changing unhealthy food habits and passive life styles.
- Ask participants to decide on at least one change in their food habits and life styles to remain fit and healthy.



CASE STUDIES

ACTIVITY 8

Learning Outcomes:

- Reflect on the Case Study and its prevalence in the island/community
- Identify the importance of young people having at least three healthy meals a day including breakfast

Time: 1 hr. 15 minutes

Materials: Case Study 3, Fact Sheet (Skipping Meals & Breakfast Most Important Meal of the Day) copies

INSTRUCTIONS:

Share the Case Study, discuss and ask questions

CASE STUDY 3 – IMPACT OF SKIPPING MEALS

Teachers have noted many students who are inattentive, moody, are not able to solve problems and have poor memory. Many of them have been found to be those who skip breakfast. Not only are young people in the habit of skipping breakfast, but they skip other meals as well. The reasons for skipping meals include social activities and lack of time, not feeling hungry, personal convenience and a desire to lose weight. These youth encounter problems of weakness, anaemia and gastric problems. If any reduction in weight is noted, it is marred by a barrage of health problems. The concern is such food behaviours can create a future generation burdened with multiple health problems.

SHARE THE CASE STUDY WITH PARTICIPANTS

- Find out how many of the participants have a minimum of three meals including breakfast, and a healthy snack between meals. Find out from the participants how prevalent the problem is in their island/community.
- Let participants share their knowledge and experiences of their friends and colleagues, and how it impacts their health.
- Provide them with a copy of the Fact Sheet and give them time to read. Briefly discuss the contents. Get participants to identify how they can provide the information to other youth and help them with more successful methods for dieting.

MESSAGE FOR YOUTH

When you deprive yourself of food, instead of learning to eat the food you love in moderation, you crave for food. The result is you go hungry and give in to your cravings and blow the whole diet. Losing weight is achievable through healthy eating and exercising regularly (a minimum of 30 minutes at least three times per week).

CASE STUDIES

ACTIVITY 9

Learning Outcomes:

- Identify the health issues linked to soft drinks and energy drinks
- Plan ways to compete with the advertisement of these products to minimize the consumption of these drinks and related health issues

Time: 2 hrs

Materials: Case Study 4, Fact Sheet (Soft drinks and energy drinks)

Instructions: Share the case study, discuss and ask questions

CASE STUDY 4 – SOFT DRINKS AND ENERGY DRINKS

Corner shops are always full of youth buying soft drinks and energy drinks. Many feel really full after the drink and don't have any appetite for food. However, many of the health issues youth encounter are caused by these drinks. The high content of sugars, the citric, phosphoric and malic acids, the artificial flavouring, and the caffeine contribute to many health problems.

SHARE THE CASE STUDY WITH PARTICIPANTS.

- Find out the views of participants regarding the health impacts of soft drinks and energy drinks.
- Provide them with the Fact Sheet and give them time to read. How have their opinions changed? Question the prevalence of the health issues identified in the Fact Sheet amongst youth in the island or community.
- Get ideas from the participants as to how to compete with the advertisement of these products.



CASE STUDIES

ACTIVITY 10

Learning Outcomes:

- Identify the significance of iron for our bodies
- Identify the particular significance of iron during teenage years
- Plan for adequate intake of iron through iron rich food.

Time: 2 hrs

Materials: Case Study 5, Fact Sheet (Anaemia), testing of haemoglobin for participants using finger prick and handheld colour comparison device (seek help from health clinics)

INSTRUCTIONS:

Share the Case Study, discuss and ask questions

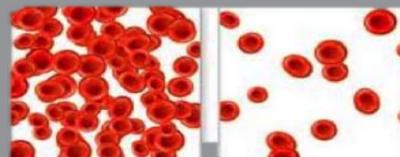
CASE STUDY 5 – ANAEMIA

Dr.Azlifa is a physician. She just returned from abroad after completing her studies in the medical field. She is deeply concerned with the number of young people who have anaemia caused by iron deficiency. While there are concerns over thalassemia which is inherited, those who are not thalassemia cases are still found to suffer from anaemia. It is more common in females than men. Dr.Azlifa is determined to find the true cause of anaemia; and to address this.

SHARE THE CASE STUDY WITH PARTICIPANTS.

- Discuss the issue of anaemia and its prevalence amongst youth in their specific communities.
- Differentiate between inherited forms of anaemia such as thalassemia and nutritional anaemia.
- Share the fact sheet on anaemia and discuss how anaemia in youth can be addressed.

Normal amounts of
red blood cells



Anaemic amounts
of red blood cells

IMPORTANCE OF PLANTS

ACTIVITY 11

Learning Outcomes:

- Identify the beauty and importance of plants

Time: 4 hrs

Materials: Poem of The Tree, Dialogue of a Man and a Tree and Fact Sheet- Importance of Plants (These are attached with the toolkit)

INSTRUCTIONS:

1. Share the poem of The Tree with the participants
2. If possible show them the Youtube version of The Tree at: <http://www.youtube.com/watch?v=zgHVqVDmLWA&feature=related>.
3. Discuss with participants what could have been the poet's feelings when he wrote the poem. Ask the participants whether their feelings are the same. If different, find out how their feelings differ.
4. Now share the Dialogue of a Man and a Tree.
5. Discuss how this dialogue enlightens the strengths of the tree, and how the man appreciates it. Ask participants to prepare a drawing, poem, cartoon or story that shows their individual perspectives and appreciation of trees.
6. Provide the participants with the fact sheet of the importance or benefits of plants. Give them time to read and discuss (in groups of 4-5). Lead a whole class discussion on it.
7. Discuss the food chain (provided with the toolkit) with the participants.

PLANNING FOR GARDENING

ACTIVITY 12

Learning Outcomes:

- Identify the vegetables and fruit that can be planted and will grow in hot weather
- Make plans for gardening

Time: 2 hrs

Materials: Fact sheet
(Gardening)



INSTRUCTIONS:

1. Divide participants into groups of 4 – 5. Get them to list down plants and vegetables that are commonly grown in the island and those that are rare or hardly found.
2. Get the participants to select the types of vegetables and fruit that they would prefer to plant (having in mind the varieties that grow in the tropics).
3. Discuss how to get seeds or seedlings, and whether land is available either in school, any community area, or front garden or backyard of the participants' houses. Discuss all possibilities. If land is not available suggest the idea of container vegetable gardening.
4. Get them to read the Fact Sheet and make plans for gardening in the next session.
5. Identify materials required, and find out ways by which they can be obtained.

GARDENING

ACTIVITY 13

Learning Outcomes:

- Prepare the beds/or containers for planting and plant the seeds or seedlings
- Plan for care of plants
- Make plans and determination to continue gardening

Time: 4 hrs.

Materials: Gardening materials

INSTRUCTIONS:

1. Get the participants to prepare the beds or containers for planting; and plant theseeds or seedlings.
2. Once the work is done, get them to prepare a plan for monitoring and looking after the seedlings and plants. Identify aspects such as watering, transplanting (if necessary), fertilizing and watching out for and treating of pests.
3. Besides the focus on the yield or harvest, get participants to admire the beauty of the tree. Try to promote the particular plant/s (vegetable or fruit) in the community. Get the participants to demonstrate how proud they are of their efforts.
4. Get participants to make plans either as groups or individuals to be involved in gardening.



GARDENING

5. PROVIDE THE FOLLOWING NEWS TO THE PARTICIPANTS.

'GROW, EAT, GLOW'

The Philippine Daily Inquirer (September 5, 2011) reports that the staff of Department of Education now shop for their vegetables from the Department's own front garden. From an assortment of tomatoes, chillies, cabbages, cucumber and eggplants, every Friday (market day) staff can avail themselves of the vegetables for 10 Pesos lower than the market price. The gardening is a project initiated by the present Education Secretary. The staff worked together in planting and watching over crops, and a team is organized to oversee the harvest cycle (inclusive of the yield to sale and acquiring of seeds to replant the plots). In order to give it an aesthetic touch Education Secretary requested for a three layered garden. Hence, landscaping with vegetables is also possible.

A trust account of the vegetable sales is established, for the purchase of new seeds, fertilisers and other gardening needs. The intention of the Department of Education is to model the practice of gardening and encourage schools to plant vegetables as a learning activity and also as a means of livelihood for communities.

IF THEY CAN DO IT, WHY CAN'T WE?

The greatest service which can be rendered by any country is to add a useful plant to its culture.

- Thomas Jefferson

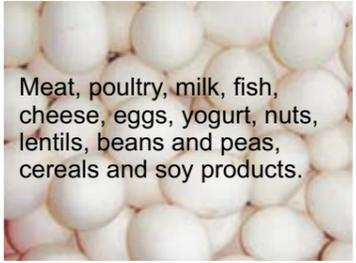
A garden, is a finite place, in which a gardener (or several gardeners) has created, working with or against nature, a plot whose intention it is to provide pleasure; possibly in the form of beauty, possibly in the form of cabbages - and possibly, beautiful cabbages.

- Abby Adams, The Gardener's Gripe Book

He who plants a tree
Plants a hope.

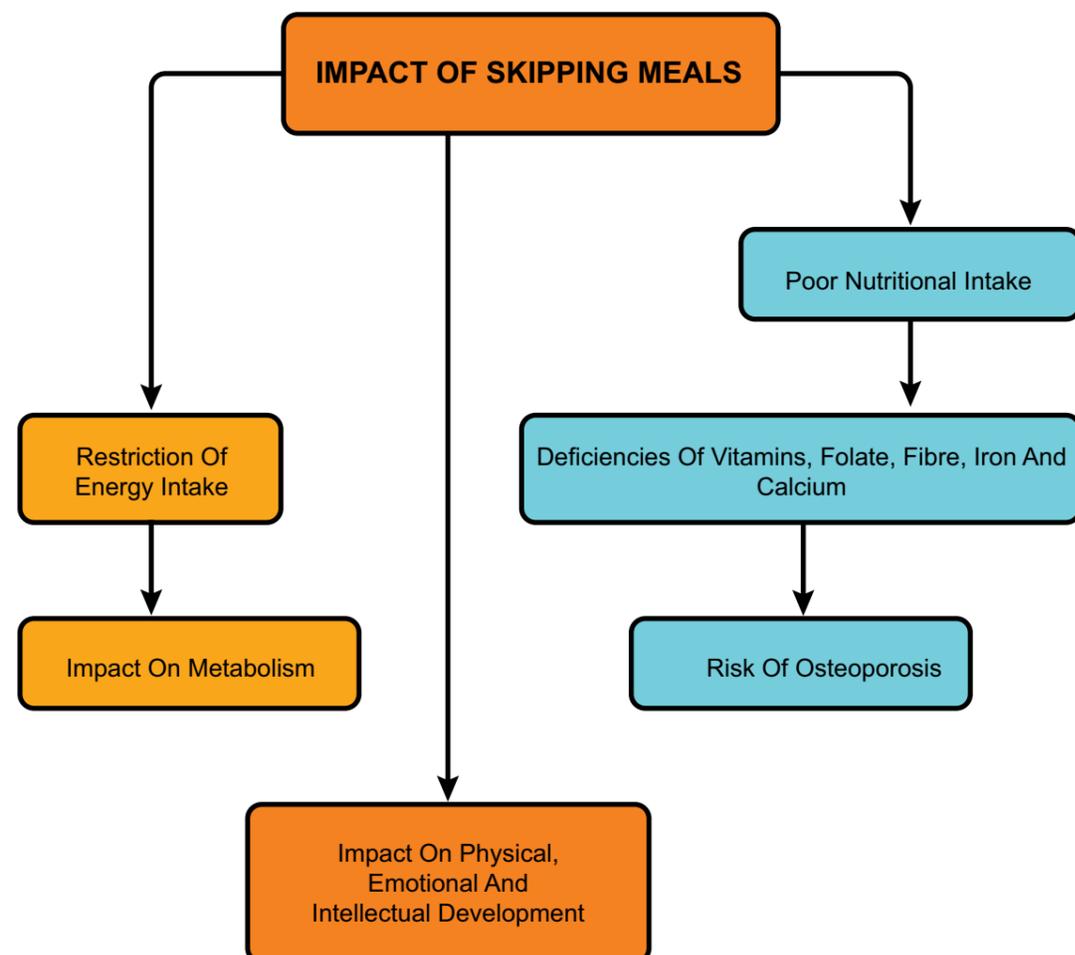
~Lucy Larcom, "Plant a Tree"

FACT SHEET: KEY NUTRIENTS

NUTRIENTS	FUNCTIONS	SOURCES
PROTEINS 	BUILDING & REPAIRING OF BODY TISSUES. <ul style="list-style-type: none"> Regulation of body processes. Formation of enzymes and hormones. Aid formation of antibodies to help fight infection. Major source of energy. 	PRODUCTS  <p>Meat, poultry, milk, fish, cheese, eggs, yogurt, nuts, lentils, beans and peas, cereals and soy products.</p>
CARBOHYDRATES 	Major source of energy With proteins- <ul style="list-style-type: none"> Used in the formation of antibodies Formation and maintenance of cartilage and bones 	 <p>Cereals (bread, pasta, rice etc.), sugars, vegetables.</p>
FATS 	Source of energy. <ul style="list-style-type: none"> Helps the absorption of fat soluble vitamins. Provide insulation under the skin to protect from cold and heat. Storage for excess nutrients to be used later. 	<p>Red meat, dairy products such as milk, cheese and eggs, macadamias, almonds, margarine, oils.</p> 
WATER 	<ul style="list-style-type: none"> Transportation of essential nutrients and oxygen. Regulates body temperature. 	<p>Besides tap water and bottled water- it is also found in some fruits and vegetables.</p> 
VITAMINS & MINERALS 	<ul style="list-style-type: none"> Minerals are the building blocks which make up the muscles, tissues and bones. Vitamins regulate body metabolism and regulate normal growth and functioning. 	 <p>Vegetables, fruits, liver, milk, cheese, eggs, legumes, nuts, whole-grains etc.</p>

FACT SHEET: SKIPPING MEALS

Good eating habits are vital for the physical growth and development of youth. Nutritional factors and good health are strongly linked; and there is increasing evidence of the relationship between youth nutrition and diseases in adulthood. Some of these diseases include hypertension, type 2 diabetes and cardiovascular diseases.



FACT SHEET: ANAEMIA

WHAT IS ANAEMIA?

Anaemia is an iron deficiency. It is one of the most common nutritional deficiencies in developing countries and in the Maldives.

WHAT IS THE CAUSE OF ANAEMIA IN YOUTH?

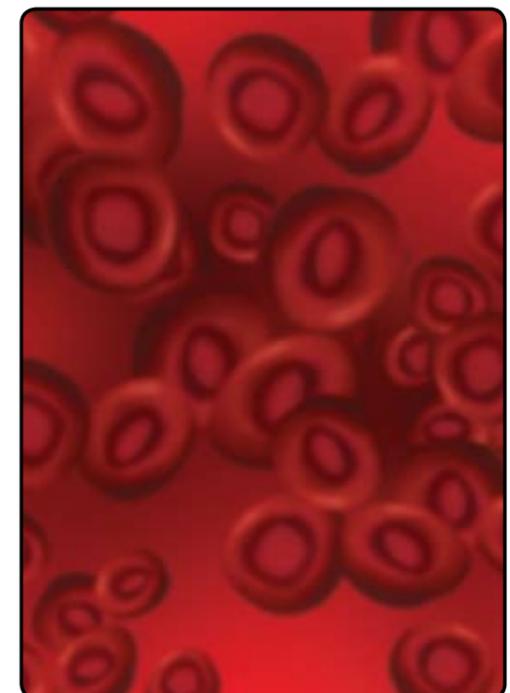
Rapid growth, which is typical of adolescence, combined with a fast lifestyle and poor dietary habits results in iron deficiency anaemia. There is a sharp increase of iron requirement during the growth spurt. Girls have to be more careful as they lose iron during menstruation and have to take extra care to replace the iron loss. Another cause of iron deficiency in developing countries because of infectious diseases and parasitic infections that can cause iron loss.

WHAT ARE THE SOURCES OF IRON?

The main dietary source of iron is red meat such as beef. Liver is another source rich in iron. Non-meat sources such as fortified cereals, dried fruits such as raisins and dates, whole wheat bread, soya beans, cashew nuts and almonds; and green leafy vegetables are also rich in iron. The difference between the non-meat sources of iron and meat sources of iron is that the body does not absorb the iron from nonmeat sources as easily as that of meat sources of iron. However, the absorption of iron can be enhanced by combining it with a source rich in Vitamin C (such as citrus fruits, blackcurrants, and green leafy vegetables). A substance called tannin found in tea slows down the absorption of iron; hence it is always better to drink a glass of orange juice (rather than tea) after eating iron fortified cereals or any non-meat sources of iron.

SOME SYMPTOMS OF ANAEMIA ARE-

- Fatigue or excessive tiredness
- Loss of appetite
- Low blood pressure
- Abdominal pain
- Craving for non-nutritional foods
- Insomnia
- Pale body appearance
- Infections
- Headache
- Low immune system



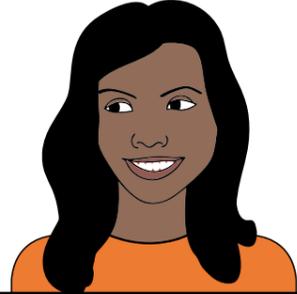
FACT SHEET: SKIPPING BREAKFAST

Breakfast is considered the most essential meal of the day. However breakfast is noted as the most frequently missed meal especially by youth. Those who have breakfast consume essential nutrients, fibre and vitamins and minerals. Nutrients missed by skipping breakfast are difficult to replace during the day.

Maintain a healthy weight

Improve alertness, concentration,
mental performance and memory

Improve a person's mood



FACT SHEET: SOFT DRINKS AND ENERGY DRINKS

Soft drinks contain no nutrients whatsoever. It is made up of carbonated water, glucose-fructose and/or sugar, caramel colour, phosphoric acid, caffeine, citric acid and flavouring. The two main ingredients are carbonated water (94%) and sugar (7-12%). Soft drinks have no nutritional benefits, and drinking them once in a while may not cause any harm to the average person. However, it can cause problems to those with chemical sensitivities and gastric problems. When soft drinks are consumed on a daily basis and in large quantities the amounts of sugar and chemicals ingested can cause behavioural and health problems. Energy drinks are different from soft drinks and contain large amounts of caffeine. Besides caffeine, energy drinks contain high amounts of some forms of sugar. Some energy drinks contain some vitamins (Vitamin B groups), amino acids and herbal supplements and guarana (a caffeine containing extract).

Consumption of too much sugar causes health problems such as dental problems, overweight and obesity, and type 2 diabetes. Sugar also leads to an increase to urinary excretion of essential minerals. Citric, phosphoric and malic acids are found in most soft drinks. The phosphoric acid affects calcium contents in bones and teeth and can contribute to osteoporosis in adulthood. Acids can also damage the linings of the stomach and can erode tooth enamel.

Artificial drinks added to soft drinks to give flavour can cause allergies. Although caffeine is used as a stimulant and energy booster, even small doses of caffeine include side effects can include symptoms such as tremors, sleep disturbances and gastrointestinal upsets. Heart rate increase and high blood pressure are reported symptoms.

FACT SHEETS: IMPORTANCE OF PLANTS

Plants are producers. Unlike animals plants are able to produce their own food. Plants utilize energy and minerals from the non-living environment (air, water and sunlight) to make their own food. Plants play a key role on life on earth. They provide oxygen for most living things on earth. Plants also help reduce carbon dioxide in the air. Large amounts of carbon dioxide in the air can result in retaining heat in the atmosphere and cause the 'greenhouse effect'. The present 'greenhouse' effect is caused by the increased burning of fossil fuels and the reduction of the number and variety of plants.

- Our life on earth depends on plants. We cannot produce our own food. We depend directly or indirectly on plants for our food. We are consumers in the food chain. The sources of food from animals are also linked to plants. Many animals feed on plants.
- Wheat and rice (our staple foods) come from plants.
- Fruits rich in carbohydrates, vitamins and fibre come from plants.
- Vitamins and minerals required for healthy maintenance of our body comes from plants.
- Nuts which provide us healthy calories and are rich in minerals are a source of vegetable fat.
- Many of our drinks like coffee, tea and barley are also obtained from plants.
- Plants play a major role in disease prevention. Many plants are considered medicinal plants. Garlic is considered one of the best natural antibiotics.
- Plants not only produce food, but add beauty to bring happiness and peace to our lives.
- Mini-gardens as a method of growing vegetables are becoming important.



FACT SHEET: GARDENING

Where availability of land is a problem, container gardening is a choice. In cases of salinity and the need for raised gardens because of easy flooding and tides, container gardening is much better.

Containers can range from plant pots, big wooden boxes, buckets, pails, empty wall colour containers, plastic bags, big water bottles, large food cans, or any other containers that you find in your own environment.

The size of the container can be decided depending on how big the tree is. Whatever kind of container used, it should have holes in the bottom or base to drain excess water.

Containers require more frequent watering than plants in the ground. When the roots expand and grow the plant will need more water. Instead of waiting to see the plants wilt, it is wise to judge and check the need for water.

Some vegetable and plant varieties that can be grown in the tropics and are suitable for containers are brinjals, carrots, cucumbers, beans, pumpkins, peppers and chillies, onions, radishes, tomatoes, sweet potatoes, kan-kong, spinach (boaveli), cassava (yams) and a number of green leafy vegetables.

If you have enough space and prefer to plant it on the ground you can do so. If you have a tiny garden there is no need to crowd everything in one specific place. You can grow leafy vegetables as edging along borders and create your own work of art.

If there is more space, bigger plots can be taken and the plots split into paths with space in between so that you don't have to walk on cultivated soil and damage the plants.



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