



Happy fish cookbook

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Happy fish cookbook

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1. Introduction

This cookbook was developed by Healthy and Happy Families in collaboration with FedWell Foods and WorldFish under the Nutrient-Rich Small Fish Production, Processing and Marketing in Zambia and Myanmar project, funded by the Institute of Food Technologists. The recipes in this cookbook are designed to be child-friendly and suitable for family members. In developing the recipes, we used as much dried small fish powder as possible to increase the amounts of protein, iron and other nutrients in each dish. At the same time, the goal was to produce recipes that are delicious, appealing, flavorful and acceptable, and had a consistent texture. Most importantly, we used locally available foods and chose dishes that are easy to prepare and commonly eaten by families of pregnant/breastfeeding women and young children. We did not include food items traditionally and culturally thought to be “taboo” in Myanmar during pregnancy and breastfeeding.

Since the Myanmar diet tends to be high in salt and fat, these recipes have only moderate amounts of each. None of them contain monosodium glutamate. Instead, many use spices and herbs to enhance the natural flavors of the foods. We used only a minimal amount of sodium-containing products, such as fish sauce, in order to show families that foods can be delicious even with less salt. The amount of fat in the dishes is also lower.

In addition to the recipes, this booklet comes with key nutrition messages taken from the Myanmar Food Based Dietary Guidelines, which were developed by the Food and Agriculture Organization and UNICEF.

1.1. Nutrition for pregnant/breastfeeding women and children under 5

If parents and families want healthy, strong, happy, smart children, then nutrition for both mother and child must begin from the time of conception until the child’s second birthday. Nutrition is especially important for pregnant/breastfeeding women and children under 5 years old, as they have the highest nutritional needs. During pregnancy, women need extra nutrients to support the changes in their body and for their baby to grow and develop, while breastfeeding women need extra calories, protein and nutrients to make enough milk for their growing baby. Infants and children grow and develop so quickly that they require enough nutritious food to gain weight and grow taller and to avoid developing nutritional diseases that can cause irreversible effects or result in learning difficulties. All children need to get enough protein, calories and nutrients in their diet in order to grow and develop, whether in the womb or as infants and young children. Children also need to learn good food habits so that they continue to grow and develop healthy lifestyles.

1.2. Nutrients in dried small fish powder

Dried small fish powder is high in quality protein and is easily absorbed and used by the body. The protein in it can build new cells and repair them for growth and muscle development, and it provides energy for bodily functions and physical activity. It also allows the body to develop strong immunity to fight illnesses and infections, and helps in healing wounds and making enzymes and hormones for growth and development, as well as in balancing bodily fluids.

Dried small fish powder contains many other nutrients as well, including calcium, iron, zinc, vitamin A, vitamin B12, essential fatty acids, phosphorus and potassium. All infants and children need these nutrients for physical growth, strong bones and teeth and for optimal brain development. Fish powder is also high in iron, which is very beneficial for women of reproductive age.

In addition to these benefits, eating fish helps the body absorb and use nutrients in other foods. If you eat eggplant or tomato curry with fish powder, your body will absorb more of the nutrients in these foods. If you eat fried roselle or spinach salad, adding fish powder improves both the flavor and the amount of protein, vitamins and minerals in the dish. And adding fish powder to the beans and peanut chips in the sticky rice and peanut ball with jaggery syrup (*aung bala kyaw*) recipe increases the protein quality of the chips and are good homemade snacks for children.

It is easy to add dried small fish powder to many foods, including curries, soups, stews, fried items, vegetables and salads. It is also a convenient, affordable and shelf-stable food item that can easily improve the nutritional quality of homemade meals. It is easy for families to make, using small indigenous fish species, and the protein it contains is needed each day by pregnant/breastfeeding women as well as children under 5 for proper growth, health and overall well-being.

	Pregnant/breastfeeding women and the fetus	Infants/children
Iron	<ul style="list-style-type: none"> • Needed for brain development of the fetus • Promotes better pregnancies and deliveries 	<ul style="list-style-type: none"> • Needed for brain development • Enhances learning • Helps maintain proper growth, appetite and energy
Essential fatty-acids (omega-3)	<ul style="list-style-type: none"> • Helps prevent preeclampsia, preterm births, and low birth weight among infants • Can prevent heart problems, strokes and cancer later in life 	<ul style="list-style-type: none"> • Improves brain development, learning abilities and vision
Vitamin B12	<ul style="list-style-type: none"> • Helps prevent brain/spinal cord defects 	<ul style="list-style-type: none"> • Supports the nervous system and brain functions
Vitamin D	<ul style="list-style-type: none"> • Helps prevent preeclampsia, premature births, and low birth weight among pregnant women • Helps avoid osteoporosis or osteomalacia 	<ul style="list-style-type: none"> • Builds strong bones, teeth and muscles
Vitamin A	<ul style="list-style-type: none"> • Helps develop the organs and nervous system in the fetus • Boosts the immune system in women and prevents blindness 	<ul style="list-style-type: none"> • Helps prevent blindness, fight infection and promote growth
Calcium	<ul style="list-style-type: none"> • Helps prevent preeclampsia and preterm births • Improves bone health 	<ul style="list-style-type: none"> • Builds strong bones and teeth in children • Improves bone health
Zinc	<ul style="list-style-type: none"> • Helps prevent abortion, stillbirths and malformations 	<ul style="list-style-type: none"> • Helps prevent stunting and diarrhea • Strengthens the immune system
Iodine	<ul style="list-style-type: none"> • Helps prevent stillbirths • Needed for brain development of the fetus 	<ul style="list-style-type: none"> • Needed for brain development and learning

Table 1. These nutrients are beneficial for pregnant/breastfeeding women and infants/children.

Minerals

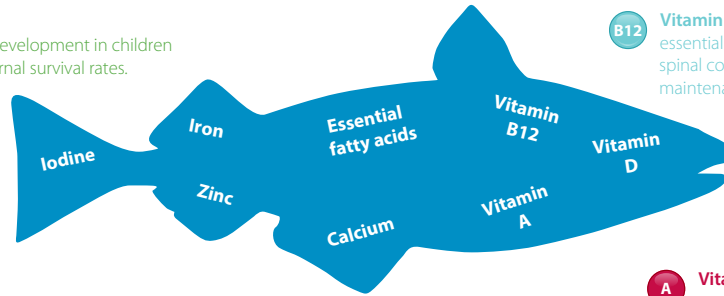
Fe Iron
essential for brain development in children and increases maternal survival rates.

I Iodine
essential for brain development in fetuses and young children and helps prevent stillbirth.

Zn Zinc
crucial for childhood survival, reduces stunting in children and fights diarrhea.

Essential fatty acids

help prevent preeclampsia, preterm delivery, low birth weight, and supports cognitive development and better vision in children.



Ca Calcium
helps prevent preeclampsia and preterm delivery, and is essential for strong bones and teeth.

Vitamins

B12 Vitamin B12
essential for a healthy pregnancy, helps prevent brain and spinal cord birth defects, and supports healthy maintenance of the nervous system and brain in children.

D Vitamin D
essential for the development of strong, healthy bones, teeth and muscles in children and helps prevent preeclampsia, preterm delivery and low birth weight.

A Vitamin A
essential for childhood survival, prevents blindness, helps fight infections and promotes healthy growth.

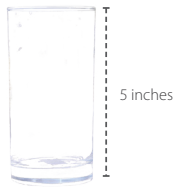
Source: WorldFish.

Figure 1. Nutrients in Fish.

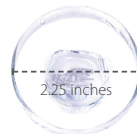
1.3. Measurements

Use the following measurements for the recipes:

- 1 tall glass is 240 ml
- 1 bowl can hold 240 ml when full and 120 ml when half-full
- 1 tablespoon is 15 ml
- 1 teaspoon is 5 ml



Glass (height)



Glass (diameter)



Bowl (height)



Bowl (diameter)



Teaspoon



Tablespoon

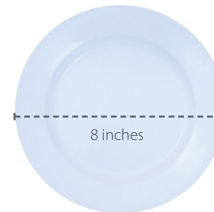
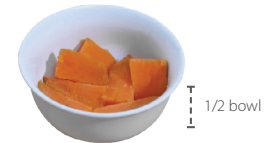


Plate (diameter)



Sweet potato, steamed

Source: FAO.

Figure 2. Reference utensils for measurement.

2. Happy fish recipes

2.1. Dishes to eat with rice

Eggplant curry

Ingredients

- 3 medium-size eggplants
- 2 tablespoons of dried small fish powder
- 5 large cloves of garlic
- 2 medium-size onions
- 1 teaspoon of chili powder
- 1/4 teaspoon of turmeric powder
- 3 tablespoons of cooking oil
- 1/2 teaspoon of iodized salt
- 1 glass (240 ml) of water

Instructions

1. Wash the eggplant, then cut into 4 pieces.
2. Pound the garlic and onion.
3. In a large bowl, mix the garlic and onion with the eggplant, chili powder, fish powder, turmeric powder, oil and salt.
4. Put the mixture into a pan and cook for few minutes on medium heat until the eggplant is slightly tender. After 2 minutes, add water as required until the eggplant is soft and well cooked.
5. Add oil and salt to taste (optional).

Serves 4 people

Costs about MMK 1000

Eaten across the whole country



Tomato curry

Ingredients

- 7 medium-size tomatoes
- 4 tablespoons of dried small fish powder
- 1 medium-size onion
- 3 large cloves of garlic
- 1 teaspoon of chili powder
- 2 green chilies
- 3 sprigs of coriander leaves
- ½ teaspoon of iodized salt
- ¼ teaspoon of turmeric powder
- 4 tablespoons of cooking oil
- 100 ml of water

Instructions

1. Wash the tomatoes, then cut into pieces.
2. Pound the garlic and onion. Heat the oil on medium heat and mix the garlic, onion, turmeric powder and chili powder.
3. When the ingredients turn yellow and become soft, put the cut tomatoes into the pan and cook until they are soft. Add water (if needed) to soften the tomatoes while cooking.
4. Add the fish powder and salt. Stir properly until the tomatoes are cooked and the curry becomes oily.
5. Add the coriander leaves on top of the curry.

Serves 3 people

Costs about MMK 1650

Eaten across the whole country



Fried noni leaves

Ingredients

- 2 bowls of noni leaves, minced
- 4 tablespoons of dried small fish powder
- 1 small onion
- 3 large cloves of garlic
- ½ teaspoon of chili powder
- ¼ teaspoon of turmeric powder
- 3 tablespoons of cooking oil
- 6 tablespoons of water
- ¼ teaspoon of iodized salt

Instructions

1. Wash the noni leaves and mince them.
2. Pound the garlic and onion.
3. Heat the oil in a pan and mix the garlic and onion with the turmeric powder and chili powder.
4. Add the minced noni leaves and fish powder.
5. Add 6 tablespoons of water to soften the leaves and stir until they become soft.
6. Serve immediately.
7. Add salt to taste (optional).

Serves 2 people

Costs about MMK 1400

Eaten across the whole country



Photo credit: Healthy and Happy Families

Fried mashed potato

Ingredients

- 1 large potato
- 1 medium-size egg
- 1 tablespoon of fish powder
- 8 tablespoons of cooking oil
- ¼ teaspoon of iodized salt

Instructions

1. Boil the potato and then mash it.
2. Mix the mashed potato with the egg and fish powder and then knead the mixture properly.
3. Add a tiny amount of salt (optional).
4. Heat the oil on medium heat.
5. Make the mixture flat or round, as desired.
6. Fry the pieces in the heated oil until they turn golden.
7. Serve immediately.

Serves 3 people

Costs about MMK 1300

Eaten across the whole country



Steamed dried small fish powder with an egg

Ingredients

- 2 whole medium-size eggs
- 2 tablespoons of dried small fish powder
- 4 tablespoons of carrots, grated
- 4 tablespoons of cabbage, grated
- 1 teaspoon of cooking oil
- ½ teaspoon of iodized salt

Instructions

1. Whisk the eggs well in a bowl.
2. In the same bowl, mix the grated carrot and cabbage with the fish powder and the beaten eggs and stir the mixture well.
3. Add the oil into the bowl and cover.
4. Put some water in a pot or pan, add the bowl with the mixture and then cover.
5. Heat on medium to high heat and steam for 20 minutes. Do not overcook.
6. Serve immediately.

Serves 2 people

Costs about MMK 1200

Eaten across the whole country



Moringa fruit and mixed vegetable soup

Ingredients

- 1 bowl of moringa fruit, peeled and cut into 2" long pieces
- 1.5 bowl of bottle gourd, sliced into 2" x 0.5" sizes
- ½ bowl of flat beans
- 4 tablespoons of dried small fish powder
- 1 medium-sized onion
- 3 large cloves of garlic
- 1 tablespoon of cooking oil
- 1 tablespoon of tamarind paste
- ½ teaspoon of iodized salt
- 2 glasses of water

Instructions

1. Wash the moringa fruit and bottle gourd and cut into pieces.
2. Pound the garlic and onion.
3. Add the moringa fruit, bottle gourd and flat beans to the garlic and onion and mix it all together.
4. Add the salt, dried small fish powder, oil and water, and cook the mixture on medium heat until the vegetables become soft.
5. Add salt and tamarind paste to taste (optional).
6. Add more water, if needed.

Serves 4 people

Cost about MMK 1750

Eaten in the Dry Zone, Ayeyarwady, Bago, Yangon, Mon, Kayin and Tanintharyi



Photo credit: Healthy and Happy Families

Vegetable tempura

Ingredients

- 1½ tablespoons of tempura powder
- 3 tablespoons of dried small fish powder
- 1 bowl of vegetables (choose from gourd, okra, long beans, carrot, pumpkin, sweet potato, broccoli, onion)
- 8 tablespoons of cooking oil
- ¼ glass of water

Instructions

1. Wash the vegetables and cut into finger-size pieces.
2. Mix the tempura powder, fish powder and water in a bowl to make the tempura batter.
3. Pour the oil into a pan and heat on medium heat.
4. Dip the vegetables in the batter and place in the hot oil.
5. Fry the tempura pieces until they turn golden.
6. Serve immediately, with your preferred sauce.

Serves 3 people

Cost about MMK 1750

Eaten across the whole country



Photo credit: Healthy and Happy Families

Dried small fish powder with onion (*Nga chauk htaung*)

Ingredients

- 7 small onions
- 4 tablespoons of dried small fish powder
- 4 tablespoons of cooking oil
- ¼ teaspoon of iodized salt
- ¼ teaspoon of turmeric powder
- dried chili (optional)

Instructions

1. Slice the onions and dry them in the sun for 1 day.
2. When ready to cook, put the oil in a pan and heat on medium heat.
3. Add the sundried onions and stir slowly until they turn a little golden.
4. Add the fish powder and continue frying until all the ingredients turn golden.
5. Add crushed dried chili to make it spicy (optional).

Serves 3 people

Cost about MMK 1200

Eaten in the Dry Zone, Yangon, Ayeyarwady, Bago and Mon



Fried roselle leaves

Ingredients

- 1.5 bowls of roselle leaves
- 4 tablespoons of dried small fish powder
- 1 medium-size onion
- 4 large cloves of garlic
- ¼ teaspoon of turmeric powder
- 2 medium-size green chilies
- ½ teaspoon of chili powder
- 4 tablespoons of cooking oil

Instructions

1. Dry the roselle leaves in the sun for 1 day.
2. Pound the garlic and onion.
3. Heat the oil in a pan, then add the garlic, onion, chili powder and stir.
4. Add the roselle leaves and dried small fish powder and cook until soft.
5. When the leaves become soft, add the green chilies and serve.
6. Add salt to taste (optional).

Serves 2 people

Cost about MMK 1500

Eaten across the whole country



Photo credit: Healthy and Happy Families

Moringa and bottle gourd soup

Ingredients

- 8 tablespoons or ½ bowl of moringa leaves
- 8 tablespoons or ½ bowl of bottle gourd leaves
- 4 tablespoons of dried small fish powder
- 5 cloves of garlic
- 1 teaspoon of cooking oil
- ¼ teaspoon of iodized salt
- 2 glasses of water

Instructions

1. Wash the vegetables, then separate the leaves and stems and remove any hard stems.
2. Pound the garlic.
3. Boil the water, then add the garlic, dried small fish powder and oil. Wait for few minutes until it returns to a boil.
4. Add all the leafy vegetables and cook until soft.
5. Add salt to taste (optional).

Serves 3 people

Costs about MMK 1200

Eaten across the whole country



Fish balls

Ingredients

- 16 tablespoons of flour
- 1 medium-size egg
- 3 tablespoons of dried small fish powder
- ½ teaspoon of iodized salt
- 8 tablespoons of cooking oil
- 60–90 ml of water

Instructions

1. Mix the flour, egg, salt and dried small fish powder in a bowl.
2. Add 1 tablespoon of water and make into a dough.
3. Keep adding 1 tablespoon of water at a time and knead the dough until it is suitable for making soft balls. Knead with your hands on a floured surface.
4. When almost firm, make soft balls and start rolling them onto a thin sheet (2–3 mm) with a rolling pin or bottle.
5. Cut into desired shapes (optional).
6. Heat the oil in a frying pan on medium heat.
7. When the oil is hot, add the shaped dough pieces.
8. Remove from the pan when they turn light brown.
9. Serve immediately, with your preferred sauce (optional).
10. Add more salt to taste (optional).

Serves 3 people

Costs about MMK 1700

Originally from an Indonesian recipe



Jackfruit curry

Ingredients

- 3 bowls of unripe jackfruit, cut into chunks
- 3 tablespoons of dried small fish powder
- 2 medium-size onions, diced
- 5 cloves of garlic, diced
- 6 tablespoons of basil leaves (add more, if desired)
- ½ teaspoon of turmeric powder
- 5 coriander roots, sliced
- 1 tablespoon of ginger, thinly sliced
- ½ bowl of tomatoes, sliced
- 4 green chilies
- 2 tablespoons of lemongrass
- 1 tablespoon of cooking oil
- 8 bowls of water

Instructions

1. Slice and dice all the vegetables.
2. Bring 4 bowls of water to a boil in a pot and add ¼ teaspoon of salt. This will prevent the jackfruit from getting dark.
3. Boil the jackfruit until it becomes soft and then remove it from the water.
4. Put the oil in a pot. Add the turmeric powder, garlic, coriander root, ginger, tomatoes, green chilies and lemongrass. Stir and cook for about 2 minutes so the flavors blend well.
5. Add the jackfruit. When the jackfruit softens a little, add the other 4 bowls of boiled water.
6. Bring to a boil and cook for about 15–20 minutes until the jackfruit becomes tender.
7. Add the basil and cook for 5 more minutes.

Serves 4 people

Costs about MMK 1400

Eaten in Ayeyarwady, Bago, Yangon, Mon, Kayin and Tanintharyi



Bean fish peanut chips

Ingredients

- 4 tablespoons of dried small fish powder
- 1 egg yolk
- 8 tablespoons of peanuts, cut into small pieces
- 8 tablespoons of rice powder
- 8 tablespoons of bean powder
- 5 cloves of garlic, diced
- 2 tablespoons of coriander leaves, diced
- 3 lime leaves, sliced into very thin pieces
- 1 bowl of coconut milk
- 16 tablespoons of cooking oil

Instructions

1. Mix all the ingredients, except the oil, in a large bowl until it becomes a batter.
2. Heat the oil in a pan on medium heat.
3. Spoon the batter into the hot oil and cook until the chips turn golden.
4. The chips are ready to serve.
5. Eat with rice or as a snack.

Serves 6 people

Costs about MMK 4000

Originally from an Indonesian Recipe



Photo credit: Healthy and Happy Families

Spinach or leafy green salad (Thai style)

Ingredients

- 2 bunches of spinach (or replace with any leafy green vegetable, such as water spinach, pea leaf, moringa)
- 2 tablespoons of dried small fish powder
- 2 tablespoons of fried garlic
- 2 tablespoons of roasted sesame
- 4 small green chilies
- 2 small limes
- ½ tablespoon of fish sauce
- 2 tablespoons of palm sugar syrup

Instructions

1. Wash the spinach thoroughly, and remove the hard stems.
2. Boil or blanch the spinach for 1 to 2 minutes, then squeeze out the water and place in a bowl. (Other leafy vegetables such as cilantro and pennywort leaf can be used without boiling.)
3. Pound the green chilies.
4. In a bowl, add the lime juice, fish sauce and palm sugar to make the salad dressing.
5. Sprinkle in the dried small fish powder and mix it all together.
6. When well mixed, top with the fried garlic and roasted sesame seeds. You can also use crushed peanuts.
7. Adjust to taste. The palm sugar binds the flavors together in this delicious dish.

Serves 2 people

Costs about MMK 1400

**Eaten in Shan, Mon, Kayin and Tanintharyi
(originally a Thai recipe)**



Mola with tomato

Ingredients

- 200 g of mola, with the heads removed (or replace with any small fish, even anchovies)
- 1 tablespoon of dried small fish powder
- 4–5 medium-size tomatoes, sliced
- 5 large cloves of garlic
- 2 medium-size onions
- 1 teaspoon of chili powder
- 1 teaspoon of turmeric powder
- 3 tablespoons cooking oil
- ½ teaspoon of iodized salt
- 1 glass (240 ml) of water

Instructions

1. Wash the mola and set aside.
2. Wash the tomato and cut into slices.
3. Pound the garlic and onions.
4. Mix the garlic, onions, mola, tomatoes, chili powder, fish powder, turmeric powder, oil and salt in a pan.
5. Cover the pan with a lid and cook the mixture for a few minutes on medium heat until the tomatoes become soft and tender.
6. After 2–3 minutes, add water as required until the tomato and mola become soft and well cooked.
7. Add oil and salt to taste (optional).

Serves 3 people

Costs about MMK 3700

Eaten in the Dry Zone, Ayeyarwady, Bago and Yangon



Dried anchovies with green mango

Ingredients

- 1 bowl of dried large anchovies
- 1 tablespoon of dried small fish powder
- 4–5 large green mangoes (or replace with other seasonal sour fruits, like tamarind)
- 5 large cloves of garlic
- 2 medium-size onions
- 1 teaspoon of chili powder
- 1 teaspoon of turmeric powder
- 3 tablespoons of cooking oil
- ½ teaspoon of iodized salt
- 1 glass (240 ml) of water

Instructions

1. Wash the anchovies and set aside.
2. Wash the green mangoes, cut into quarters and remove the seeds.
3. Pound the garlic and onion.
4. Mix the garlic and onion with the green mangoes, chili powder, fish powder, turmeric powder, oil and salt together.
5. Put into a pan and cover with a lid. Cook the mixture on medium heat for a few minutes and add water as needed until the green mangoes become soft and tender and turn gray, and the anchovies become soft and well cooked.
6. Add oil and salt to taste (optional).

Serves 2 people

Costs about MMK 1500

Eaten in Rakhine, Ayeyarwady, Bago and Mon



Dried spicy anchovy crisps

Ingredients

- 2 bowls of dried anchovies, small
- 1 bowl of peanuts
- 10 large cloves of garlic
- 5 medium-size onions
- 1 tablespoon of crushed dried red chili
- 5 tablespoons of cooking oil
- ½ teaspoon of iodized salt

Instructions

1. Wash the dried anchovies and peanuts to remove dust and particles and then set aside. Do not soak.
2. Cut the garlic and onion into 2 mm thick slices.
3. Pour the cooking oil into a pan and heat it.
4. Fry the sliced garlic and onions until they turn golden and become crispy, then remove from the pan.
5. Fry the peanuts until they become crispy, then remove from the pan.
6. Fry the anchovies until they turn golden brown and become crispy.
7. Add the fried garlic, onion and peanuts into the pan and stir for 2 minutes.
8. Add the crushed dried red chili into the pan and stir for 1–2 minutes.
9. Remove from the pan and allow the mixture to cool. If the dish cannot be eaten fully at one meal, store it in an airtight container for the next meal.
10. Add oil and salt to taste (optional).

Serves 4 people

Costs about MMK 3400

Eaten across the whole country



2.2. Breakfast dishes

Dried small fish powder fried rice

Ingredients

- 2 bowls of cooked white or brown rice (can be leftover rice)
- 8 tablespoons of steamed pigeon peas
- 1 whole egg, half-fried
- 2 tablespoons of dried small fish powder
- 1 small onion, diced
- 3 cloves of garlic, diced
- 1 tablespoon of ginger, diced
- 1 teaspoon of iodized salt
- 1 tablespoon of cooking oil
- ½ lime, sliced (optional)

Instructions

1. Heat the oil in a pan. When hot, add the garlic and ginger and stir until the garlic becomes soft.
2. Add the steamed pigeon peas and stir.
3. Add the rice and mix. Make sure the rice does not have any lumps in it.
4. Add the dried small fish powder and salt, and fry the mixture until the ingredients are blended together. Add more fish powder, if desired.
5. Serve with a half-fried egg and sliced lime (optional).
6. Other vegetables can be added to the recipe, including green beans and carrots.

Serves 2 people

Costs about MMK 1700

Eaten across the whole country



Mixed rice and mashed potato

Ingredients

- 1 large potato, about 90 g
- 1 bowl of cooked rice
- 2 tablespoons of dried small fish powder
- ¼ teaspoon of turmeric powder
- 5 large cloves of garlic, sliced or crushed
- ½ tablespoon of roasted sesame
- 1 teaspoon of tamarind paste
- 3 tablespoons of cooking oil
- ½ tomato, sliced (optional)
- 3 sprigs of coriander leaves (optional)
- 1 teaspoon of chilies, fried (optional)

Instructions

1. Fry the garlic in oil until it turns golden brown, then add turmeric.
2. Boil the potato and then mash it.
3. Pound the roasted sesame.
4. Mix the mashed potato, rice, roasted sesame and dried small fish powder in a bowl. Add the tamarind paste, mix it with the fried garlic and stir.
5. Add the rest of the ingredients and serve.
6. Add fried chilies, coriander leaves and tomato (optional).

Serves 1 person

Costs about MMK 1600

Eaten in Shan, Mandalay and Yangon



Rice noodle salad (*Mont te salad*)

Ingredients

- 1 bowl of thin rice noodles (*mont te*)
- 2 tablespoons of dried small fish powder
- 1 teaspoon of tamarind paste
- 2 sprigs of coriander leaves
- 4 large cloves of garlic
- 3 green chilies
- ¼ teaspoon of iodized salt
- 4 tablespoons of water
- 5 ml of fish sauce (optional)

Instructions

1. Heat or roast the garlic and chili in a pan over medium heat for 2–3 minutes.
2. Remove from the pan, add the dried small fish powder and pound the ingredients together.
3. Boil the water in a pot or pan, add the pounded ingredients and cook the food until it becomes thick as a paste.
4. Mix the paste and rice noodles to make a salad.
5. Add tamarind paste, salt and fish sauce to taste (optional).

Serves 1 person

Costs about MMK 650

Eaten in Rakhine (origin) and across the whole country



Oily sticky rice

Ingredients

- 2 bowls of sticky rice
- 4 tablespoons of dried small fish powder
- ½ teaspoon of turmeric powder
- 4 tablespoons of roasted sesame
- 8 tablespoons of cooking oil
- ½ teaspoon of iodized salt
- 2 glasses of drinking water

Instructions

1. Rinse the sticky rice no more than twice and then soak in a glass of clean water overnight.
2. Put the oil in a pan and heat on medium heat.
3. Add the turmeric powder and stir.
4. Add the soaked sticky rice.
5. Add salt and stir the ingredients together thoroughly.
6. Pour 1 glass of water and cover the pan with a lid.
7. Cook until the rice becomes soft. Add a little more water if the rice is not fully cooked.
8. If you prefer the rice crispy, increase the heat and keep the pan on the stove for about 3 more minutes after the rice is well cooked. Place onto a plate.
9. Mix the roasted sesame seeds and dried small fish powder and pound it all together. Sprinkle on top of the oiled rice.

Serves 4 people

Costs about MMK 2000

Eaten in the Dry Zone, Ayeyarwady, Bago and Yangon



Photo credit: Healthy and Happy Families

2.3. Snacks

Flat sticky rice pancake with jaggery syrup (*Mont kat kyae kite*)

Ingredients

- 1 bowl of sweet potatoes, whole or cut into pieces
- 1 bowl of jaggery
- 16 tablespoons of sticky rice powder
- 4 tablespoons of rice powder
- 2 tablespoons of dried small fish powder
- 4 tablespoons of cooking oil
- 4 tablespoons of water

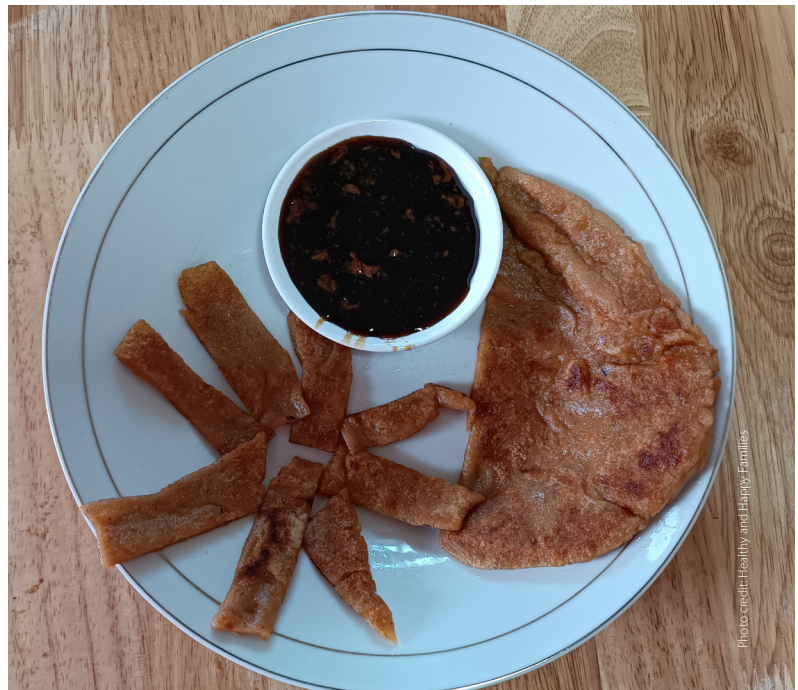
Instructions

1. Boil the jaggery with some water until it becomes thick like a syrup. Use a filter to remove any particles and then cool it down.
2. Boil the sweet potatoes separately and mash them.
3. Mix the rice powder, sticky rice powder, fish powder and mashed sweet potato in 4 tablespoons of water all together. Knead thoroughly until the mixture turns into a dough.
4. Make small flat pieces out of the dough (about 15 cm radius and 3 mm thickness). Adjust the size of the pieces to the size of the pan.
5. Pour a small amount of oil into the pan, spread thoroughly and heat on medium.
6. When the oil becomes hot, add the pieces of dough and flip them until they all turn golden.
7. Place the pieces onto a plate.
8. Cut the bread to your preferred size and serve with the jaggery syrup.

Serves 4 people

Costs about MMK 1700

Eaten in the Dry Zone (origin) and Bago



Sticky rice and peanut balls with jaggery syrup (Aung bala kyaw)

Ingredients

- 1 bowl of sweet potatoes
- 1 bowl of jaggery
- 16 tablespoons of sticky rice powder
- 4 tablespoons of rice powder
- 2 tablespoons of dried small fish powder
- 1 bowl of peanuts
- 4 tablespoons of drinking water
- 8 tablespoons of cooking oil

Instructions

1. Boil the jaggery until it becomes a syrup.
2. Boil the sweet potatoes separately and mash them.
3. Roast the peanuts on low heat and pound them.
4. Mix the sticky rice powder, rice powder, sweet potatoes, fish powder and pounded peanuts.
5. Add the water and mix it all into a dough. Knead the dough thoroughly and make small round flat pieces out of it.
6. Pour the oil into a pan and heat on medium.
7. When the oil becomes hot, put the pieces of dough into the oil and fry them until they turn golden.
8. Remove and serve with jaggery syrup.

Serves 5 people

Costs about MMK 2900

Eaten in the Dry Zone (origin) and Bago



Photo credit: Healthy and Happy Families

Rice and fish snack with coconut (Mont bine taunt)

Ingredients

- 1 bowl of rice powder
- 4 tablespoons of roasted sesame
- 4 tablespoons of dried small fish powder
- 4 tablespoons of coconut, grated
- $\frac{3}{4}$ glass of water
- $\frac{1}{2}$ teaspoon of iodized salt

Instructions

1. Mix the rice powder, water and salt together and knead into a soft dough.
2. Take small amounts of dough and roll each of them between your palms to make small 1" long pieces (3 mm in diameter).
3. Put the pieces in a pot and steam them for 10–15 minutes until they are well cooked.
4. Pound the sesame seed and mix it with the dried small fish powder.
5. Sprinkle the pieces with grated coconut and serve immediately.

Serves 3 people

Costs about MMK 1300

Eaten across the whole country



Fish ball snacks (*Mont nga sote*)

Ingredients

- 1 bowl of rice powder
- 1 tablespoon of sticky rice powder
- 4 tablespoons of sesame, pounded
- 4 tablespoons of coconut, grated
- 1 glass of water
- ½ teaspoon of iodized salt
- 4 tablespoons of dried small fish powder

Instructions

1. Mix the rice powder, sticky rice powder, fish powder and salt together, then add water to make a dough. Knead the mixture thoroughly.
2. Let the dough sit for 20 minutes, then make small balls from the dough.
3. Put the balls into a pot and steam for 20–25 minutes until they are well cooked.
4. Sprinkle the pounded sesame seeds, fish powder and grated coconut on top of the balls.
5. Serve immediately.

Serves 3 people

Costs about MMK 1300

Eaten in the Dry Zone (origin)



Photo credit: Healthy and Happy Families

3. Nutrition and lifestyle

3.1. Nutrition tips

Fruits and vegetables contain many vitamins, minerals and phytonutrients, as well as fiber. Although phytonutrients are not like vitamins and minerals, they are thought to have health benefits and prevent various diseases. Some experts believe that they might help prevent heart disease and cancer, support anti-aging and promote healthy organs and nerves. Different colored fruits and vegetables contain different types of phytonutrients, so eating a variety of them is beneficial for your overall health.

Here are some benefits of the nutrients in the foods used in our recipes:

- Jackfruit is high in vitamin C, which can prevent inflammation from chronic diseases and illnesses. It can also make your skin look young and smooth, and the fiber in it helps promote a healthy digestive tract for better absorption and digestion.
- Spinach also contains vitamin C, along with vitamin A, iron and calcium, all of which can help boost your immune system and brain function and protect your digestive tract.
- Tomatoes are so nutrient-rich they can improve your vision, promote beautiful skin and increase heart health and prevent cancer.
- Peanuts, nuts and seeds provide protein for strength, and fats and carbohydrates for energy. The healthy fats in these foods promote heart health and beautiful skin.
- Moringa leaves are very nutritious. They contain as much protein as lentils, have seven times more vitamin C than oranges, 10 times more vitamin A than carrots and 25 times more iron than spinach.
- Pumpkin has several benefits. It can boost your immune system, protect your eyesight, lower your risk of certain cancers and promote both heart and skin health.

Five very important vitamins and minerals for a nutritious diet are vitamin A, vitamin B1, vitamin D, iron and iodine. All are found in dried small fish powder, as well as the following foods:

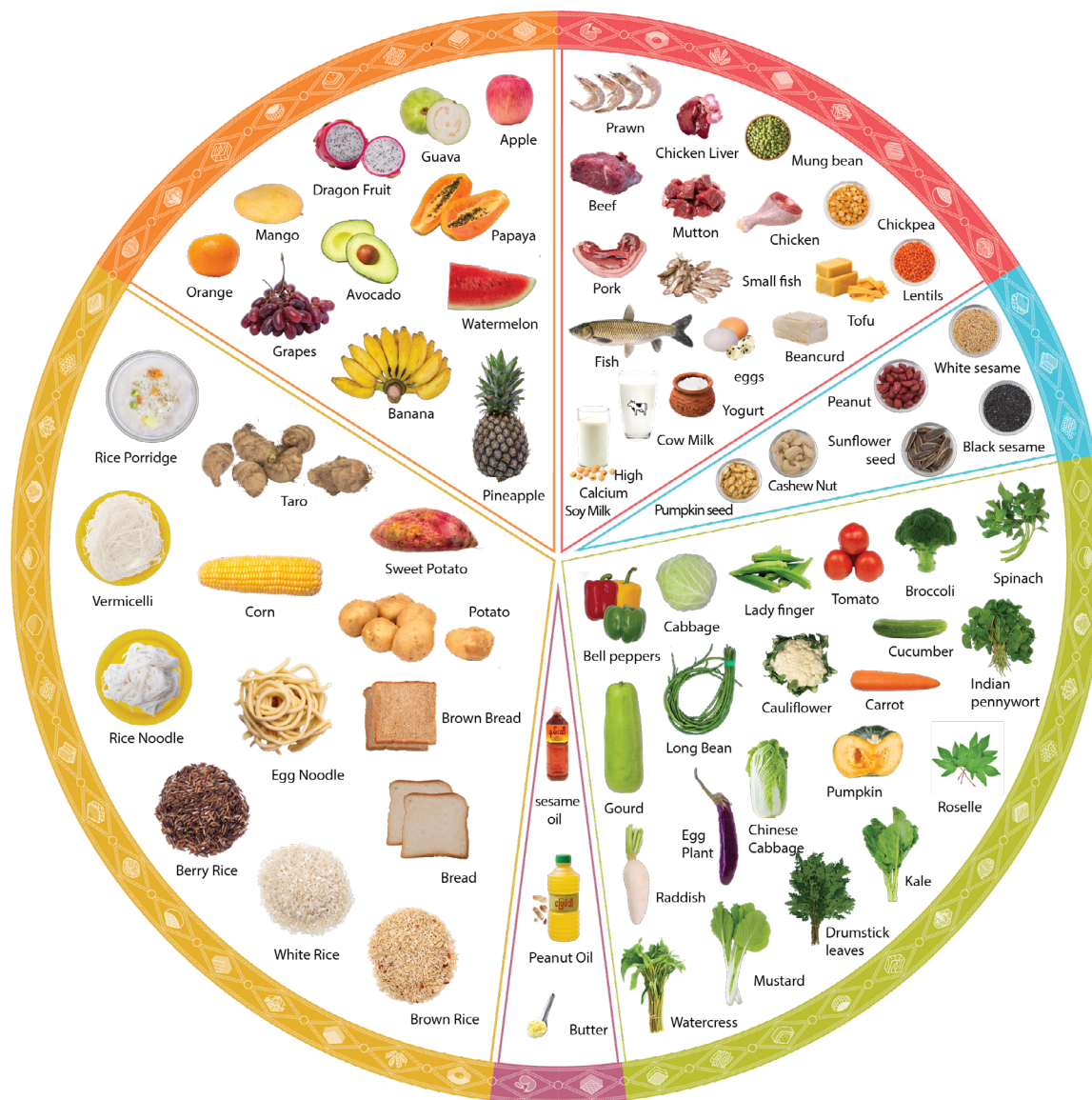
- Vitamin A is in yellow, orange and red fruits and vegetables, green leafy vegetables, milk, eggs and liver.
- Vitamin B1 is found in brown rice, legumes, nuts, seeds, poultry and fish, but only in very low levels in white rice. Whenever possible, choose whole grain breads or wheat products, as these are higher in nutrients and fiber and more nutritious. Brown rice and brown/black glutinous rice are healthier choices.
- Vitamin D is found in fish, milk products and liver. The easiest way to absorb vitamin D, however, is to get 15–20 minutes of sunshine each day.
- Iron is found in meat, poultry, fish, eggs, lentils, dried beans and dark leafy vegetables. Iron from animal sources is easiest for the body to absorb.
- Fish, seafood and seaweed are all excellent sources of iodine. Use iodized salt at home.

Food group	Foods	Nutrients	Benefits
Cereals and grains (try to eat whole grains)	Rice, rice products, noodles, bread, wheat products, potato, sweet potato, taro, cassava, yam, other root vegetables and tubers	Carbohydrate Vitamins Minerals Fiber	<ul style="list-style-type: none"> • Boosts energy • Increases growth and development • Improves physical activity • Helps prevent constipation
Animal Protein	Poultry, eggs, milk, fish, shrimp, seafood, beef, pork, goat, liver, milk, milk products	Protein Fats Vitamins Minerals Iron Zinc	<ul style="list-style-type: none"> • Highest quality protein available • Increases growth and development • Aids hormone production • Boosts the immune system • Strengthens blood • Most easily absorbed source of iron
Plant-based protein	Pulses, legumes, bean curd, bean products, nuts, seeds, chickpeas, cowpeas, mung beans, kidney beans, pigeon peas, soybeans, soy milk, tofu	Protein Fats Vitamins Minerals Iron Zinc Fiber	<ul style="list-style-type: none"> • Necessary for growth and development in children • Aids hormone production • Boosts the immune system • Strengthens blood • Improves digestion • Helps prevent constipation • Limits absorption of certain vitamins and minerals • Lower quality protein (except for soybeans) than animal protein • Include two or more plant proteins in a meal
Nuts and seeds (beware of choking hazard risks)	Sesame, sunflower, pumpkin, watermelon, poppy, cashews, peanuts, walnuts, almonds	Protein Fats Vitamin B Fiber Minerals Magnesium Potassium Calcium Iron Zinc Phytochemicals	<ul style="list-style-type: none"> • Provides energy • Contains fats for heart health • Helps prevent constipation

Food group	Foods	Nutrients	Benefits
Fruits	Banana, mango, grapes, papaya, guava, avocado, mangosteen, apple, orange, pineapple, dragon fruit, mandarin oranges	Vitamin C Folate Calcium Potassium Magnesium Dietary fiber	<ul style="list-style-type: none"> • Boosts the immune system • Strengthens bones and teeth • Promotes a healthy digestive tract • Helps prevents constipation
Vegetables	Long bean, spinach, carrot, pumpkin, water spinach, broccoli, cauliflower, tomato, cabbage, eggplant, chayote, asparagus, roselle, kale, mustard, chinese cabbage, radish Leaves of gourd, pea, noni, pennywort, drumstick	Vitamin C Vitamin A Folate Calcium Potassium Vitamin K Magnesium Fiber	<ul style="list-style-type: none"> • Boosts the immune system • Protects against disease • Strengthens bones and teeth • Promotes a healthy digestive tract • Helps prevent constipation • Low in sodium • Increases heart health • Promotes healthy skin
Milk and milk products	Milk, yogurt, cheese	Energy Protein Vitamin D Calcium Phosphorus	<ul style="list-style-type: none"> • Improves growth and development • Strengthens bones and teeth
Oils	Peanuts, sunflower, corn, soybeans, olives, butter		<ul style="list-style-type: none"> • Concentrated source of energy for growth and development • Improves physical activity • Keeps the body warm

Table 2. Best foods for pregnant/breastfeeding women and children under 5.

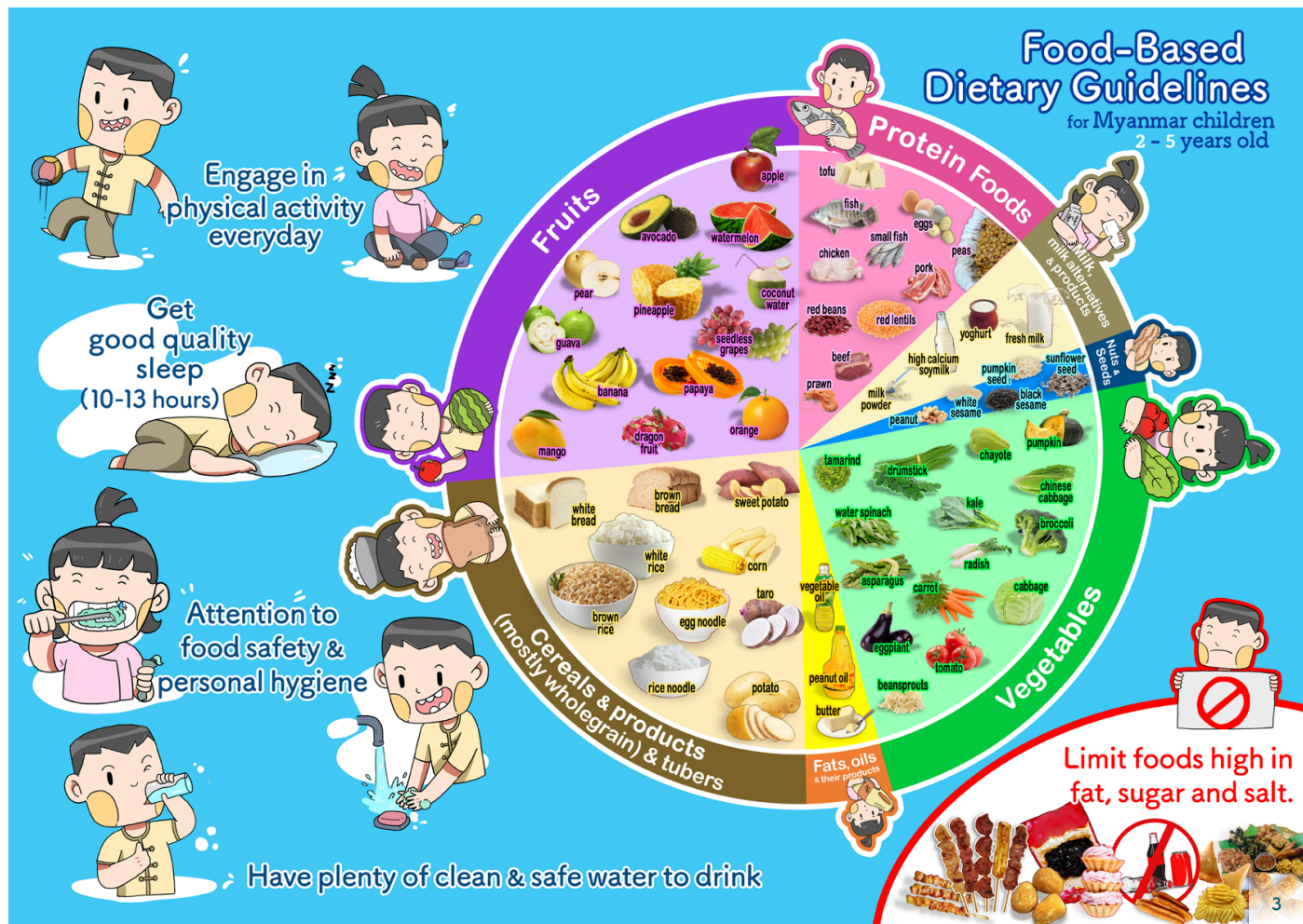
Food groups include grains (starches and tubers), fruits, vegetables, animal and plant-based protein, nuts/seeds and oils/fats.



Source: FAO Myanmar.

Figure 4. Recommended food plate composition for pregnant and breastfeeding women.

Food groups include cereals (grains and tubers), fruits, protein foods, milk/dairy, vegetables, nuts/seeds and oil/fats.



Source: UNICEF Myanmar.

Figure 5. Recommended food plate for children 2–5 years old.

3.2. Lifestyle tips for children under 5

Children should play at least 3 hours every day. Playing helps children learn to solve problems and improves their mental abilities. It also helps them develop strong muscles and bones, increases their coordination and improves their overall sense of well-being.

Tips for children include the following:

- Be more physically active.
- Sit less.
- Limit screen time and phone use to less than 1 hour a day.
- Drink plenty of clean, safe water. Limit sweet sugary drinks. Avoid sodas, tea, coffee, chocolate drinks and energy drinks.
- Eat food that is prepared hygienically. Limit the frequency of eating away from home.
- Get 10–13 hours every night. Children need a lot of sleep because their bodies are growing.
- Limit foods that are high in sugar, salt and fat. These foods are high in calories but low in nutrients and fiber and contain many preservatives and artificial chemicals. Children love these foods, but they do not help with growth, learning or overall good health. Limit readymade snacks and sweets. Fruits are the most nutritious sweet-tasting food for children.

3.3. Lifestyle tips for pregnant and breastfeeding women

Eating clean food and drinking safe water are important to protect you and your child's health. Foodborne illnesses from unclean food and water can result in illness and even death. Remember, for you and your children to be strong and to prevent diseases, learn and practice proper food safety and personal hygiene daily. Pregnant women are thought to have a lower immune system during pregnancy, so they need to be extra careful in choosing safe food and water. Breastfeeding women need to be careful as well, as illness can keep them from getting the necessary amounts of food for both them and their growing baby.

Tips for pregnant and breastfeeding women include the following:

- Wash, prepare and cook foods hygienically.
- Wash fruits and vegetables thoroughly.
- Cook all food thoroughly.
- Separate raw and cooked foods.
- Cover food.
- Eat foods within 2 hours of being cooked. Store food in refrigerator if left over. If you do not have a refrigerator, cover cooked food well and keep in a cool and dry place.
- Reheat food until it is very hot. Eat immediately.
- Drink purified or boiled clean and safe water.

There are also many other things you can do that will make you and your child be stronger, healthier and have a better sense of well-being.

- Start by eating a variety of foods each day, including cereals, tubers, protein foods, nuts, seeds, oils and a variety of colorful fruits and vegetables.
- Eat protein daily for both you and your baby.
- Use more herbs when cooking to limit your sugar and salt intake.
- Engage in physical activity each day, like walking. Being in fresh air improves well-being.
- Drink plenty of clean, safe water. Adequate intake of water helps prevent constipation.
- Pay attention to food safety and personal hygiene to prevent foodborne illnesses.

3.4. Hygiene tips

Maintaining good personal hygiene habits is important for a healthy lifestyle.

Both women and children should maintain the following practices:

- Wash your hands with soap and water before and after eating.
- Wash your hands whenever they become dirty or after playing.
- Wash your hands with soap after using the toilet.
- Brush your teeth twice a day.
- Cover your mouth when coughing.
- Keep your nails short and clean.

3.5. Foods to avoid

Eat less of these foods and less often:

- *Htamane* (a traditional snack made of oiled sticky rice with fried coconut, peanuts and sesame seeds)
- *Paratha*
- Vegetable fritters
- Sausages
- Chili oil
- Bean curd
- Oily curries

These foods are all high in salt and fats. Eating too much fat and salt can lead to being overweight or even obese, as well as other medical conditions, like high blood pressure, later in life.

Foods high in salt include monosodium glutamate, potato chips and other chips, fish paste, instant noodles, soy sauce, fish sauce and other seasoning sauces.

Moderate your salt intake to no more than a teaspoon a day for adults and even less for children. Eating too much salt during pregnancy can cause water retention and lead to other medical conditions. Foods high in salt cause stress in children's immature organ systems, which are still developing. Introducing children to foods high in salt not only sets bad habits for life, but high salt intake can cause noncommunicable diseases when they become adults.

Foods high in sugar include sugary drinks, fruit jams, *shwe yin aye*, coconut jelly, *shwe kyi*, jaggery, instant coffee (three-in-one), ice lolly, as well as readymade cakes, sweets, cookies and wafers.

Most people and children enjoy eating sweet foods, but these should come from natural fruits. Sweet foods made with sugar or jaggery are high in calories but low in nutrients, which are needed for growth and development. Eating foods high in sugar can lead to dental problems and are linked to the development of obesity, heart disease, diabetes and high blood pressure.

3.6. Other practices to avoid

Other practices that women should avoid when pregnant and breastfeeding include the following:

- **Alcoholic drinks:** Drinking alcohol in pregnancy can result in intellectual disabilities, delayed development, learning disabilities, poor memory and physical problems in the child. Drinking alcohol while breastfeeding can decrease milk production and make it more difficult for the infant to nurse effectively.
- **Tobacco, cigarettes, cigars and cheroots:** Using tobacco products during pregnancy can cause low birth weight, premature birth, birth defects or lung/respiratory problems.
- **Smoking while breastfeeding** can lower a woman's milk supply and therefore lower weight gain in the baby.
- **Using betel nut** is linked with abortion, preterm births and low birth weight.
- **Eating raw and undercooked foods** can cause foodborne illnesses.
- **Do not take herbal medicines**, as there are few quality controls and the ingredients are unknown. Some can be harmful to babies and infants. Only take medicines that are prescribed by a doctor.
- **Do not take any illegal drugs** when pregnant or breastfeeding. These drugs are harmful and can result in irreversible health effects in infants, and even death.

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About WorldFish

WorldFish is an international, not-for-profit research organization that works to reduce hunger and poverty by improving aquatic food systems, including fisheries and aquaculture. It collaborates with numerous international, regional and national partners to deliver transformational impacts to millions of people who depend on fish for food, nutrition and income in the developing world.

The WorldFish headquarters is in Penang, Malaysia, with regional offices across Africa, Asia and the Pacific. The organization is a member of CGIAR, the world's largest research partnership for a food secure future dedicated to reducing poverty, enhancing food and nutrition security and improving natural resources.

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