

## Nutritional Tips to Minimise Lead Exposure from Foods and Drinks

Eating a healthy, varied diet will provide nutrients we need to stay healthy.

Good nutrition help minimise the amount of lead that is absorbed and stored in our body. Certain vitamins and minerals, especially calcium, iron and vitamin C, play a specific role in minimising lead absorption. Choosing a variety of foods within the table below improves calcium, iron and vitamin C intakes.

Nutrients	Food sources
<p><b>Iron</b></p> <p>Main function: Essential element for blood production</p>	<ul style="list-style-type: none"> <li>• Meats: beef, lamb, pork, poultry (chicken, duck, goose), fish and seafood</li> <li>• Liver</li> <li>• Eggs</li> <li>• Green leafy vegetables (choy sum, white cabbage, broccoli, spinach, water cress, Chinese kale)</li> <li>• Beans (chickpeas, lentils, kidney beans, soybeans)</li> <li>• Whole grain (brown rice, whole wheat bread)</li> <li>• Iron-fortified cereals, breakfast cereals</li> <li>• Dried fruits (dried figs, prunes, dried apricots, raisins)</li> <li>• Nuts and seeds (pumpkin seed, sesame, almond, cashew nut)</li> </ul>
<p><b>Calcium</b></p> <p>Main function: Bone health and growth</p>	<ul style="list-style-type: none"> <li>• Dairy products: milk, yogurt, cheese</li> <li>• Green leafy vegetables (choy sum, white cabbage, broccoli, spinach, water cress, Chinese kale)</li> <li>• Tofu, calcium-fortified soymilk</li> <li>• Sesame, sesame paste, almond, almond paste</li> </ul>
<p><b>Vitamin C</b></p> <p>Main function: Wound healing, improve iron absorption</p>	<ul style="list-style-type: none"> <li>• Fresh fruits and vegetables</li> <li>• e.g. strawberries, kiwifruit, orange, cantaloupe, tangerines</li> </ul>

### ***Practical tips:***

Children and adults may be exposed to lead by eating and drinking food or water containing lead, or from food containers that contain lead. Below are prevention tips to minimise lead exposure from food and drink:

1. **Avoid eating large amount of foods high in lead**

For example: Lime preserved egg, shellfish.

2. **Wash vegetables and fruit thoroughly**

Wash raw vegetables and fruit thoroughly to remove dust and soil that may contain lead, particularly leafy vegetables.

3. **Use lead-free water for cooking and drinking**

You can consider using bottled water for cooking and drinking.

4. **Maintain good nutrition status**

Obtain adequate calcium, iron, and vitamin C intake to minimise the amount of lead that is absorbed and stored in the body. For pregnant and lactating women with raised blood lead level ( $\geq 5$  micrograms/dL) a dietary calcium intake of 2,000 mg daily should be maintained, either through diet or in combination with supplementation.

Our daily energy and nutrients requirements are related to age, gender, body size, and level of physical activities, there is no a set of requirement fits all. Below are some nutrition tips for children aged between one to six, as well as for pregnant and lactating women. The nutrient table above could help you to choose varied high nutrients foods.

#### ***(1) Pregnant and Lactating Women***

You are suggested to find a source of safe drinking water; bottled water could be used to minimise risk of lead exposure. Here, 10 key points for healthy eating during pregnancy and breastfeeding:

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1. Eat a healthy, varied diet
2. Choose whole grain and eat plenty of fruits and vegetables
3. Eat protein-rich foods such as meat, fish, eggs and alternative in moderation
4. Choose fishes that are high in omega-3 fatty acids, and avoid those high in methylmercury
5. Consume foods that are rich in iodine, folate, calcium and iron
6. Reduce consuming high fat and high sugar foods and drinks
7. Pay attention to food safety
8. Stay active – at least 30 minutes of physical activity each day
9. Have sun exposure for your skin to make enough vitamin D
10. Take prenatal multivitamin/multimineral supplement containing iodine and iron, and calcium supplementation. Consult healthcare professionals for advice

For other general healthy eating information, please refer to the booklet 《Healthy Eating During Pregnancy and Breastfeeding》.

## **(2) 6-12 months old infant**

Introducing your baby to solid food when your baby is around six months ago. They will still be getting most of their nutrition from breast milk or formula, while new solid foods complementing their increasing nutritional needs (especially iron, zinc, iodine and omega-3 fatty acids). According to your baby's readiness and swallowing ability, you can gradually increasing food consistency, food combination, and portion.

**\*\*** Using bottled water to make up baby formula: As bottled water is not usually sterile, it will still need to be boiled, like tap water, before you prepare the feed. Always use boiled water at a temperature of at least 70°C, but remember to let the feed cool before you give it to your baby.

## **(3) 1-6 years old children**

It is important to make sure children at this age are eating well to get all the nutrients they need as well as getting into the habit of a healthy, varied diet. Table below contains suggested portion sizes for each food groups for reference:

Food group	Suggesting daily food portion			Examples of 1 Portion/ Exchange:
	1 -2 years old	2-4 years old	4-6 years old	
<b>Grains</b> Rice, noodle, bread, potato, sweet potato	5 – 10 portion (equivalent to 1-2 bowl of rice )	8 - 12 portion	12 - 15 portion	<ul style="list-style-type: none"> <li>• 1 tablespoon of rice</li> <li>• 1/2 bowl of cooked pasta</li> <li>• 1/2 slice of bread</li> </ul>
<b>Meat, Fish, Egg and alternatives</b> Pork, beef, lamb, poultry, fish, egg, beans	2 – 4 tablespoon	1 1/2 – 2 portion	2 - 3 portion	<ul style="list-style-type: none"> <li>• 1 egg</li> <li>• 1 teal of cooked meat (size of a table tennis ball)</li> <li>• 1 block of tofu</li> <li>• 3-4 prawns</li> </ul>
<b>Vegetables</b>	4 - 8 tablespoon	At least 1 1/2 portion	At least 2 portion	<ul style="list-style-type: none"> <li>• 1/2 bowl cooked vegetables</li> <li>• 1 bowl of raw vegetables/ salad</li> </ul>
<b>Fruits</b>	1/2 – 1 portion	At least 1 portion	At least 2 portion	<ul style="list-style-type: none"> <li>• 1 middle-sized fruit</li> <li>• 1/2 bowl of diced fruit</li> <li>• 2 small-sized fruit</li> </ul>
<b>Milk and alternatives</b> Milk, yogurt, cheese	360 – 480 mL	Approx. 2 portion	Approx. 2 portion	<ul style="list-style-type: none"> <li>• 1 glass of milk or calcium-fortified soymilk</li> <li>• 2 slices of cheese</li> <li>• 2/3 cup of yogurt</li> </ul>
<b>Fat/ oil</b>	No more than 6 portion			<ul style="list-style-type: none"> <li>• 1 teaspoon of cooking oil</li> </ul>