

## Of Blue-blood babies and green veggies

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A baby was rushed to hospital last week, blue and pale, suffering breathing difficulty. On arrival, this 8 month old was diagnosed as suffering from methaemoglobinemia. Due to the congee he had eaten that day, and the night before, they discovered an alarming high concentration of nitrates was found in his urine.

As it turned out, the culprit was the summer green commonly found in local markets: amaranth (*yeen choi*). This vegetable is one often recommended by environmentally-conscious people, because it is often grown locally, extremely nutritious, requires comparatively little insecticides and fungicides, and is delicious. Why then, is there trouble even with such a eco-friendly vegetable?

**How a green choice triggered red lights**

What happened with the baby was the second case of vegetable nitrate poisoning. Two years ago a similar case happened, when women in her 50s was hospitalized after eating 1 catty (some 600 grams) of wild amaranth (*ma sze yeen*). Her blood too, turned blue because the oxygen carrying capacity of her blood dropped drastically.

What are nitrates? Nitrates are a compound made of nitrogen and oxygen atoms. They occur naturally in vegetables, particularly in the leaf and stems, and are particularly important to the plant's health. Because of this, sometimes farmers will put nitrate-based fertilizers in the hope that their plants will grow better.

By itself, nitrates are safe for humans, but sometimes this compound can react with other particles, causing methaemoglobinemia and even cancer.

Does this mean we shouldn't eat vegetables? Of course not!

What this means is that we should vary the types of vegetables we eat, and not to eat too much of the same thing. The US Scientific Committee on Food and even the World Health Organisation Expert Committee on Food Additives suggested that a 60 kg adult shouldn't eat more than 222 mg nitrate per day. Incidentally, nitrate is also used as a preservative for many processed meats.

## **What Can the Green Consumer Do?**

Responding to local concern regarding safe consumption of amaranth, Produce Green, leading organic farm in Hong Kong, issued the following guidelines:

- 1. Choose your greens wisely.** Some veggies absorb and keep more nitrates than others, namely most green leaf ones (and in particular lettuce, spinach, *pak choi* and *choi sum*, Chinese celery, Chinese mustard and water spinach), Chinese radish and beetroots. To avoid that chemical, choose cauliflower, sweet potato, potato, taro, cucumber and tomato. Prefer mature plants to young shoots, as the latter carry higher concentration.
- 2. Buy organic!** Plants fed on chemical fertilizers accumulate nitrates more readily.
- 3. Avoid products grown in greenhouses, plastic tunnels and**

**shading sheds.** They would absorb more nitrates.

4. **Boil thoroughly whenever in doubt.** This will lower the concentration of the chemical.
5. **Respect biodiversity.** Never eat large amount of the same veggie (over 400 grams) at one go. Eat different parts of various plants (i.e. leaves and stems and roots and fruits, etc.).
6. **Minimize nitrates intake from other foods.** They are not doing any good to your health anyway: luncheon meat, sausages, bacon, barbecued pork and chicken, smoked meat and fish.
7. **Fortified the body with more vitamin C.** They prevent nitrates from turning into the carcinogenic nitrosamines.

While it is important to eat wisely and consciously, it is also important to keep these food scares in perspective. Fear and stress would trigger as many nasty chemicals in our body and lower our immune system. The media like to prey on our fears.

When I get bogged down by the details of which food is currently considered dangerous, I keep some basic principles in mind: Eat natural, eat organic when possible, eat a variety of foods, and enjoy my. Preparing food and eating with joy and gratitude bless us with the best defenses for our immune system.

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