

# Straits Times, Mind your body, 5 December 2007

## Have your cake – and eat healthy too

**Shefali Srinivas** finds out how some students have developed food products with better nutritional value

**O**mega-3 fatty acids are good fats needed for heart health. Also known as polyunsaturated fatty acids, omega-3 fatty acids play a crucial role in brain function, heart health as well as normal growth and development.

But the body does not produce this essential fatty acid and absorbs it from foods rich in omega-3 fatty acids instead. Fish and nuts are good sources but wouldn't it be great if you could get it from ice-cream instead?

Students at the Republic Polytechnic have developed a mango ice cream with omega-3 fatty acid, among a variety of functional foods, as part of their applied science projects.

The idea that food is medicine is old but the concept of functional foods is

somewhat new and growing in popularity. Today's food technologies allow for designer or functional foods that exert health properties beyond the mere providing of nutrients.

Fermented milk drinks which promote the growth of healthy gut bacteria are an example of a very successful functional food currently found in supermarkets.

Dr Michelle Siow, the programme chair of pharmaceutical science at the School of Applied Science in Republic Polytechnic, says manufacturers want to enhance their offerings with the growing interest and demand for food products with increased nutritional value.

This is where her students come in. They have worked in groups or with industry players over the last six months to develop ice creams, cookies, brownies, drinks and wraps that claim to be

healthier than the regular stuff on offer.

They added a healthy twist to what is traditionally junk food – omega-3 fatty acid-enriched ice creams, cookies made with high-protein quinoa flour, brownies with cranberries, chocolates with ginkgo and ginseng, and wraps made of cereals, especially suitable for diabetics.

One product which has already made it to the retail market is the ice cream – now sold by Papitto Gelato at select locations.

Dr Siow expects more of her students' work to make it to retail stores next year.

The students had put in many hours at the food lab, making multiple attempts over six months to achieve the perfect taste, formulation and consistency required.

The results were showcased at Republic Polytechnic's Technology Day's Food for Health Seminar on November 23.

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# Tasty and healthy? Students' creations put to the test

Mind Your Body's Shefali Srinivas was at Republic Polytechnic's Technology Day to do a taste test on its functional foods. Her verdict:

## Quinoa cookies

These little cookies are made with a blend of quinoa and regular flours. Quinoa is a South American grain, rich in protein and amino acids. It is low in fat and imparts a nutty taste. The cookies were developed by Neo Shi Qi, 18, along with 20 of her teammates, part of a culinary interest group at the polytechnic.

I popped one into my mouth and found it light, crunchy and not too sweet. The flavour was rich and nutty.

I hope these make it to the market.

## Gingko with dark chocolate, ginseng with milk chocolate

Dark chocolate is already rich in antioxidants but Jun Guang, 19, and his team of five have upped its antioxidant quotient by adding gingko extract. The chocolate tasted smooth

but I couldn't quite detect any trace of gingko.

The ginseng milk chocolate had a more distinct taste with a slight chewiness. The sweetness of the milk chocolate offsets the bitterness of ginseng.

## Soy yogurt drinks

Mr Ching Ying Qing, 20, and his group of five decided to cater to people who have milk allergies or trouble digesting cow's milk. So, they set their sights on fermenting soy milk and adding real fruit for extra benefits. The result is an odd-tasting drink, albeit cholesterol-free. I tried both the mango and strawberry flavours and liked the strawberry one better.

## Ice cream

The group behind this delicious ice cream is led by 19-year-old Si Ying Chong. The hit of the evening was the mango ice cream with omega-3 fatty acids. Ms Si claims that a scoop of the ice cream provides half the daily required amount of the essential fatty

acid. There was some confusion when I asked what form of omega-3 was used in the ice cream. I was later told that they had used a plant source – ground flaxmeal, apparently.

Other interesting flavours were chocolate banana – with real bananas – and the very unusual shiitake-flavoured ice cream, which tasted surprisingly good. This group worked with Papiito Gelato, a company that is already selling this ice cream at select locations in Singapore.

Another feather in the cap for the ice cream's creators is the Healthier Choice Symbol from Singapore's Health Promotion Board.

## Cranberry brownies

Ahmad Fouad, 20, and his group possibly had the most popular food on offer for the evening – brownies with real cranberries. The sweetness of this popular pastry was enhanced by the tart taste of the berries.

Cranberries are known for their beneficial effects on the urinary tract system. And combining them with a

traditionally sinful dessert, like brownies, is a clever move.

I found the sweetness slightly overbearing after a couple of bites, but Mr Fouad assured me that the team used less sugar and fat than in a regular brownie recipe. For one thing, they replaced butter with canola oil, which contains less fat.

This group has worked with local company Foodedge Gourmet and hopes to market the brownies commercially next year.

## Cereal wraps

Vikneswari Sivalingam, 19, said that she and her group had a plan to make healthy snacks available to diabetics. So they made wraps from resistant starch – which is digested more slowly and causes a lower blood-sugar rise – derived from long-grain Thai rice and Canadian soy beans. The wraps come with herbs and stuffing.

I tasted the red bean and Nutella wrap, which tasted distinctly of chewy cardboard. But the cereal wrap with herbs and pizza toppings was softer and tastier.