

# New Healthy Food Development

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## BACKGROUND

The aging population is undoubtedly a global problem. With uneven welfare distribution, it is difficult for the elderly in Hong Kong (HK) to lead a healthy life. One problem is limited snacking options for the elderly in the HK market. By improving the problem, it can help maintain their physical, psychological, and social well-being. It also improves the elderly's dietary habits, such as insufficient intake of fruits and vegetables. Therefore, the project proposes a fresh juice drink as a snack, which follows the elderly's intake requirements of special nutrients.

## OBJECTIVES

To investigate Hong Kong elderly's snack preferences.

To develop a healthy snack based on the results from the investigation.

## METHODOLOGY

The research is divided into two stages. In the first stage, 40 HK elderlies were invited to participate in a questionnaire survey on their snacking habits and preferences. In the second stage, a new healthy snack was developed based on the special nutritional requirements and the results from the first stage. A sensory evaluation was conducted with ten participants to ensure that the taste, texture, and appearance of the snack were suitable for the elderly. A tailor-made nutrition label and packaging were also designed to facilitate use by the elderly.

## FINDINGS I

The health survey showed that nearly all of the participants consumed less than 5 servings of fruits and vegetables per day, which is insufficient consumption (Centre for Health Protection, Department of Health, 2017). However, increasing the daily consumption of fruit and vegetables by one to two servings could cut cardiovascular risks by 30% (World Health Organization, 2014).

## FINDINGS II

A new fresh juice drink was developed based on the results from the questionnaire and the sensory evaluation. The questionnaire study revealed that **the elderly preferred sweet and soft snacks and 80% of the participants in the sensory evaluation thinks the acceptability of the newly developed snack is good.** The product can help increase the intake of fruits and vegetables, and reduce the risks of cardiovascular disease. It also provides a new snack option, thereby helping to improve the elderly's quality of life.



Figure 1.

## PRODUCT PACKAGING

The developed snack not only contains rich nutrients, but it also takes into account the physical capabilities of the elderly (Figure 1) to make it more user-friendly for the elderly.

## FURTHER DEVELOPMENT

The continuous experiment helped to collect the opinions of elderlies aged 65 or over to ensure the taste and texture of the snacks are suitable for them, and that different series of snacks need to be developed. On the other hand, vitamins and probiotics can be substantially affected by exposure to heat, water and/or sunlight. Therefore, more attention should be paid to evaluating cost-saving methods and maintaining product quality.



Figure 2.

Nutrition Facts	
Serving size	1 bag (250mL)
Amount Per Serving	
<b>Calories</b>	<b>290</b>
	% Daily Value*
<b>Total Fat</b> 15g	<b>19%</b>
Saturated Fat 1.5g	8%
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 5mg	<b>0%</b>
<b>Total Carbohydrate</b> 39g	<b>14%</b>
Dietary Fiber 8g	29%
Total Sugars 29g	
Includes 0g Added Sugars	0%
<b>Protein</b> 8g	<b>16%</b>
Vitamin D 0mcg	0%
Calcium 160mg	15%
Iron 1.4mg	8%
Potassium 830mg	20%
Vitamin C 187mg	210%
Vitamin E 8.1mg	50%
Vitamin B6 0.2mg	10%
Vitamin B12 0mcg	0%

Ingredients: Oranges, Kiwifruit, Almond Butter (No Added Sugar And Salt), Passion-Fruit Juice, 100% Fresh Juice

Contains: Almond

Figure 3.