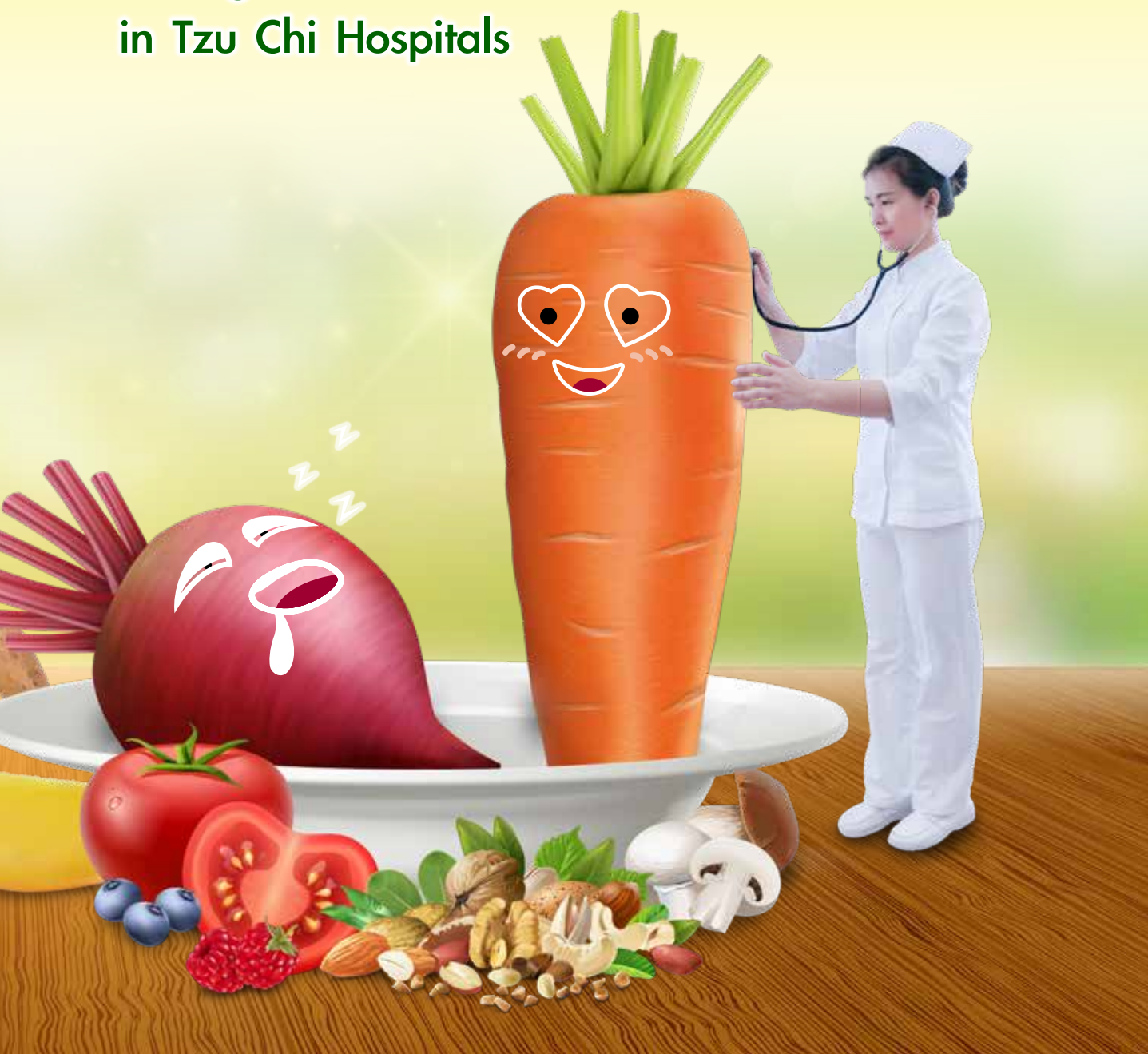




About the Cognition and Experiences of Vegetarian Diet of Nurses in Tzu Chi Hospitals



By Lin Shih-Chun, Nursing Department Supervisor, Dalin Tzu Chi Hospital

In recent years, media reports covering numerous celebrities in Europe and America who advocate healthy, low-carbon lifestyles to make a contribution to saving our planet have sparked a wave of vegetarianism. For instance, at the Golden Globe Awards ceremony in July, 2022, plant-based meals were served to over 1,000 movie stars present at this gala event. The goal was to demonstrate the rising concern about global warming in the global movie and entertainment industry and show support for environmental protection actions by championing vegetarianism.

The Tzu Chi Medical Mission, which has its origin in the foundation of Hualien Tzu Chi Hospital in 1986, currently encompasses seven Tzu Chi Hospitals and one clinic. All institutions of the Tzu Chi Medical Mission serve vegetarian meals and we advocate vegetarian diets in our hospitals among patients and their family members. We also ensure that all convenience stores, restaurants, and cafes in our hospitals provide vegetarian meals. The cover story of this issue in which the Nursing Department of Dalin Tzu Chi Hospital aims to give readers a better understanding of the cognition and

Basic Statistics

Gender	Number of People	%
Female	1,054	93.4
Male	74	6.6
Total	1,128	100.0
Age	Number of People	%
under 20	5	0.4
21~25	297	26.3
26~30	234	20.7
31~35	145	12.9
36~40	127	11.3
above 40	320	28.4
Total	1,128	100.0
Years worked in the hospital	Number of People	%
under 1	142	12.6
1.1~2	107	9.5
2.1~3	105	9.3
3.1~5	172	15.2
above 5	602	53.4
Total	1,128	100.0

experiences of vegetarian diets on the part of Tzu Chi nursing personnel and provide a reference for future vegetarian and health management-related activities.

The Nursing Department distributed e-questionnaires to all nursing personnel of Tzu Chi Hospitals for this cover story. A total of 1,128 valid questionnaires have been received.

Vegetarianism as an Expression of Compassion Based on Non-Killing Conducive to Emotional Stability

Vegetarianism is defined as follows in this article: vegan, ovo-lacto, and “five pungent spice” vegetarian diets. Only less than 5% (375 million) of the global population of 7.9 billion are vegetarians. India is the country with the highest percentage of vegetarians (around 31%). Taiwan is ranked second with a total percentage of around 10-13% or 3-3.3 million individuals based on different data sources.

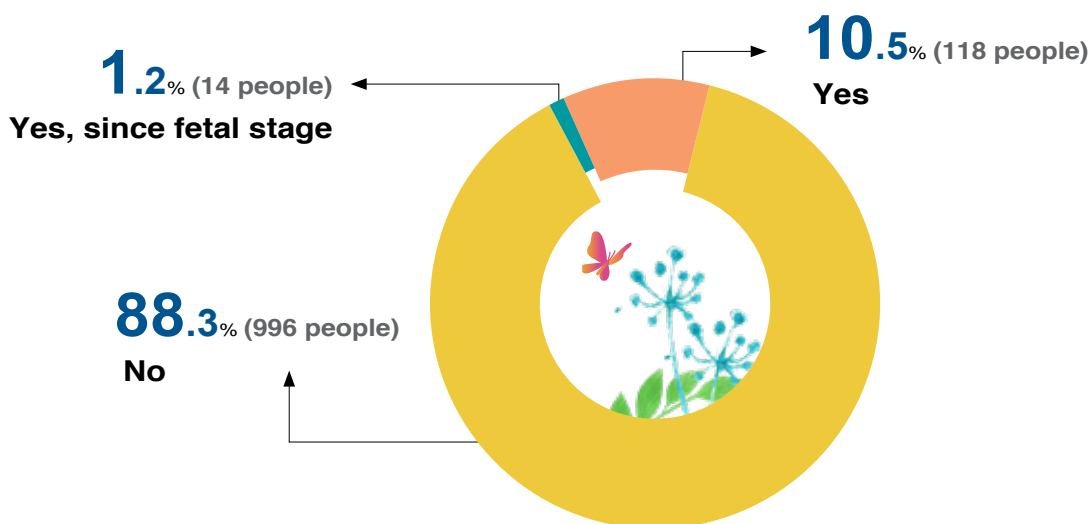
Job Title	Number of People	%
Registered nurse	865	76.7
Deputy head nurse	32	2.8
Head nurse	61	5.4
Supervisor and above	19	1.7
Case manager / functional unit	50	4.4
Nurse Practitioner / senior RN	101	9.0
Total	1,128	100.0
Department	Number of People	%
Internal Medicine	189	16.8
Surgery	159	14.1
Pediatrics	36	3.2
Obstetrics & Gynecology	49	4.3
Intensive Care & ER	199	17.6
Functional Unit	18	1.6
Kidney Dialysis	47	4.2
Operating Room	78	6.9
Outpatient Clinic	200	17.7
Palliative Care	28	2.5
Administration	21	1.9
Psychiatry	36	3.2
Others	68	6.0
Total	1,128	100.0

The results of this questionnaire survey reveal that 11.7% of the Tzu Chi nursing personnel are vegetarians (1.2% have been vegetarians since their fetal stage). This percentage is roughly equivalent to the vegetarian rate of the whole country. If the age bracket (most nurses are aged between 20-60) is taken into consideration, the vegetarian rate of Tzu Chi nursing personnel is probably slightly higher than that of all Taiwanese citizens in the same cohort, but this is just a speculation.

As for physiological or psychological effects of vegetarian diets, 43.9% and 34.8% of the surveyed vegetarian nurses (sample size of 132) believe that “they have become more benevolent since they are no longer involved in the killing of living beings” and that “they have become a more emotionally stable person.” 24.2% noticed that their “skin has become more radiant” and that their “chronic disease-related values (e.g., cholesterol, low-density lipoprotein, uric acid, blood glucose, and blood pressure) have shown significant improvement.” Some respondents claim that vegetarian diets are conducive to weight control and mental well-being.

However, a small number of the surveyed vegetarian nurses stress negative effects they have personally experienced such as weight gain within a short period of time, poor stamina, and rapid weight loss. It is therefore evident that changes to dietary habits must be based on accurate and balanced nutritional concepts to maximize the health promoting effects of plant-based diets.

Q1 | **Are you vegetarian(plant-based diet)?**
(N = 1,128)



Hsiao-Tzu, one of several interviewed nurses of Dalin Tzu Chi Hospital, became a vegetarian two years ago. She shared her own story with us. “Clinical work is extremely stressful and the shift work messes up the sleep cycle. I used to rely on high-calorie fast food to release my stress, compensate for the hard work, and reward myself. I often had late-night snacks. As a result, I gained weight and got out of shape rapidly. When I noticed I had breathing difficulties, I knew I couldn’t go on like this. I therefore decided to switch to a vegetarian diet and take up an exercise regimen. I lost five kilograms over a period of several months. As a result, my body became lighter and I felt refreshed and rejuvenated!”

Another RN told me that she decided to follow suit and become a vegetarian in line with the promotion and advocacy campaign of the hospital. She relies on soybean-based foods as her main source of protein. She confessed that she couldn’t get used to eating these foods due to the overpowering bean flavor. Consequently, she abandoned vegetarianism after a while.

Protection of Animals’ Right to Life Through Adoption of a Low-Carbon Healthy Diet

The next section of the survey aimed to determine the cognition of vegetarian diets on the part of Tzu Chi nursing personnel. 68.8%, 65.9%, and 58.3% of the surveyed nurses believe that vegetarianism “reduces the carbon footprint”, “protects animals’ right to life based on the concept of nonkilling”, and that “accurate and balanced vegetarian diets are beneficial to physical and mental well-being”, respectively. The next most common answers were “prevents extreme climate patterns and thereby reduces the incidence of natural disasters” (44.9%), “reduces the risk of strokes and cardiovascular disease” (37.0%), and “reduces the risk of chronic diseases other than strokes and cardiovascular disease” (34.3%): and followed by “Reduces the risk of cancer” and “mitigates obesity”.

Despite the fact that a majority of the surveyed nurses selected reduction of carbon footprints as the most important benefit of vegetarianism, the actual percentage of less than 70% seems a bit low (we expected at least 80% of the respondents to select this item) in view of the all-out commitment of Tzu Chi Foundation and all hospitals of the Tzu Chi Medical Mission to the promotion of relevant concepts and adoption of concrete action in the fields of environmental protection, carbon reduction, energy conservation, and vegetarianism. We surmise that this can be attributed to the fact that junior RNs who strive to gain a foothold in their clinical careers lack a clear grasp of information not directly related to their careers. Fortunately, the awareness of the

benefits of vegetarianism in the field of disease risk prevention is gradually increasing.

In coordination with carbon reduction and energy conservation efforts in response to climate change and global warming and in light of the rising evidence of the health promoting effects of vegetarianism, international organizations successively promote vegetarian or plant-based diets. Based on their research findings, numerous scholars recommend the prevention of chronic diseases such as cardiovascular disease, cancer, and Type 2 diabetes through a high intake of plant-based foods such as fruit, vegetables, whole grains, nuts, and beans. Empirical studies also recommend daily intakes of fruit and vegetables (800g), whole grains (200g), and nuts (15-20g) to ensure a perfect plant-based diet that effectively prevents chronic diseases. These studies further point out that their results are consistent with relevant findings in the field of epidemiology. For instance, it has been corroborated that a sufficient intake of fruit and vegetables, whole grains, and nuts can lower the risk of coronary artery disease (diets rich in fruits & vegetables and whole grains can also reduce the incidence of strokes and Type 2 diabetes, respectively). A high intake of fruit and vegetables, in particular, can decrease the risk of various types of cancer. It is therefore evident that vegetarian diets have a crucial impact on our health.

40% Flexitarians – Health-Promoting Effects of Diets Rich in Fruit and Vegetables

Despite the fact that only slightly more than 10% of the surveyed nurses are self-declared vegetarians, we asked all respondents about their life experiences to determine the percentage of nurses who are willing to select vegetarian meals when ordering takeout or delivery. A total of 41% of all survey participants are willing to eat vegetarian meals three times or once a day, once a week, or once a month. 46.3% selected “not sure, depends on my mood”. Only 12.7% stated unequivocally that they wouldn’t choose vegetarian meals.

CommonWealth Magazine published an article titled “What you should do for your health this year is eat more vegetarian meals” in early 2020. This article mentions the dietary term “Flexitarian Diet”, which is a combination of the words “flexible” and “vegetarian” and refers to a semi-vegetarian style of eating that encourages eating less meat and more plant-based foods to gain health benefits. A media report reveals that flexitarians accounted for 42% of the world population in 2020. The percentage of flexitarian Tzu Chi nurses is even higher since only 12.7% of the survey participants reject vegetarianism and will therefore never be flexitarians.

Due to their heavy workload, clinical nurses tend to prefer simple and convenient food for their meal breaks. They usually have their meals in the staff canteen and cook

Q2

The physiological or psychological effects of your vegetarian diet?

(N = 132, multi-choices)

No-killing & then become more benevolent **43.9%**




Emotionally stable **34.8%**



Skin has become more radiant **24.2%**



Chronic disease-related values (e.g., cholesterol, low-density lipoprotein, uric acid, blood glucose, and blood pressure) better **24.2%**



Effective weight control **15.9%**




Sleep well & be more energetic **10.6%**



Got fat in a short period of time **7.6%**



Got weaker & dizzy **6.8%**



Become skinny in a short period of time **3.0%**



Others **11.4%**



by themselves or eat out after work. Due to the promotion of vegetarian diets in hospitals and exposure to a growing trend of vegetarianism over an extended period, they are also more and more willing to consider ordering vegetarian, plant-based meals.

As a matter of fact, due to the rising emphasis on health and fitness, vegetarian, plant-based meals enjoy growing popularity as an alternative food option. Restaurants

Q3

As you know , the benefits of vegetarian diet?
(N = 1,128, multi-choices)

Reduces the carbon footprint 68.8

No killing, protect animal living rights 65.9

Accurate and balanced vegetarian diets are beneficial to physical and mental well-being 58.3

Prevents extreme climate patterns and thereby reduces the incidence of natural disasters 44.9

Reduces the risk of strokes and cardiovascular disease 37.0

Reduces the risk of chronic disease other than strokes and cardiovascular disease 34.3

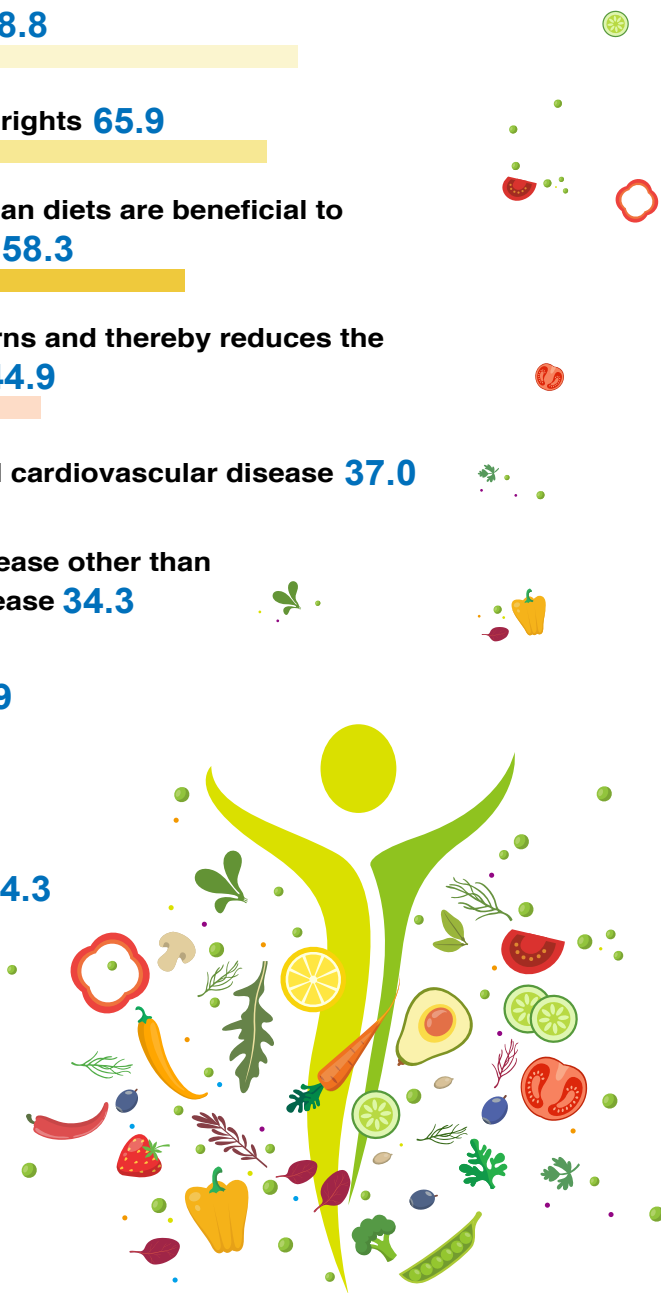
Reduces the risk of cancer 28.9

Mitigates obesity 25.9

Improves physical endurance 14.3

Decreases the conversion to moderate/severe condition when COVID-19 positive 10.9

Others 1.0



start offering vegetarian meals on their menus and vegetarian dishes no longer have the same flavors. In the past, vegetarian food was often very salty and greasy and solely consisted of processed ingredients. Presently, businesses are committed to developing healthy and delicious vegetarian meals to cater to the palates of vegetarians and attract a rising number of customers. A large number of convenience stores and restaurants have jumped on the bandwagon of vegetarianism. During the pandemic, a significant number of people learned how to cook Michelin-grade vegetarian dishes at home from Youtube or other social media platform.

Culinary Delicacies at the Yi Te Reunion Event Earn Praise – Weight Loss and Body Slimming as an Appealing Option

The results of the questionnaire survey clearly indicate that acceptance of vegetarian diets is widespread among nursing personnel. We therefore asked the respondents which vegetarian-promoting activities would attract them.

The top-ranked answer is “the Tzu Chi-Yi Te Reunion Event which featured vegetarian meals prepared by Yi Te Association Mums and Dads” (63.3%) followed by “vegetarian weight-loss course – restore your health and slim your figure” (27.5%), “21-day health challenge activity – plant-based lunch box menu designed by licensed nutritionists” (22.3%), and “cooking course taught by a renowned chef – learn how to prepare simple and tasty vegetarian meals” (21.9%). It is therefore obvious that in addition to the loving care of the Yi Te Mums and Dads, the Tzu Chi-Yi Te Reunion Event also featured vegetarian culinary delicacies that delighted the palates of the participating nursing personnel.

The percentage of respondents who are willing to demonstrate their own cooking skills is relatively low and it seems that most survey participants prefer ready-made meals, which don't require any effort on their part.

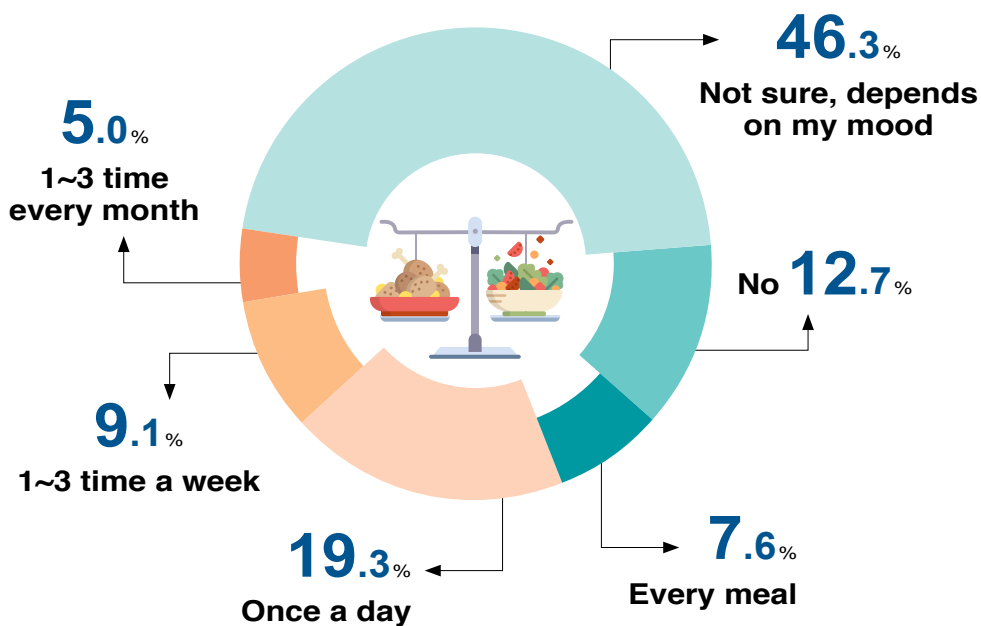
Promotion of Vegetarianism - Highly Attractive, Diversified Meal Options

As the COVID-19 pandemic which has been ravaging the world for over two years continues unabated, Dharma Master Cheng Yen reminds us that vegetarianism which is actively promoted by Dalin Tzu Chi Hospital is the most effective epidemic prevention measure. The Hospital offers nutritious, healthy, and tasty vegetarian meals which are designed by licensed nutritionists. In line with the diversified dietary options available on the market, the nutritionists have created a wide range of meals including vegetarian Korean Army Stew, Italian pasta au gratin, pizza with bell peppers and white sauce au gratin, and vegetarian Taiwanese-style chicken nuggets. Whenever appetizing and mouth-

Q4

In your experiences, how often you choose vegetarian-diet while out dining/order delivery?

(N = 1,128)



watering new menus are announced in the hospital, staff discussions are centered around the meal options and long lines form inside the staff canteen. The kitchen personnel have their hands full on those days. This bears clear testimony to the attractiveness of vegetarian food.

Of course, such special treats are not available on all days. The nurses admit that they lack interest in the watery meals that frequently appear on the menu and prefer ordering takeout or delivery instead. The design of vegetarian meal options that cater to the food preferences of the staff members therefore poses a significant challenge for the nutritionists.

The aforementioned 21-day health challenge activity has been jointly promoted by Tzu Chi Hospital and local community volunteers. The feedback provided by the participating nurses shows that this activity not only enabled them to successfully reduce their weight it also normalized their metabolism values, improved their mental and physical well-being, and made them feel energized. Since the participants have maintained their vegetarian dietary habits after conclusion of the activity, they also tend to share their

Q5

Which vegetarian-promoting activities would attract your participation?

(N = 1,128, multi-choices)

Tzu Chi-Yi Te Reunion Event which featured vegetarian meals prepared by Yi Te Association Mums and Dads 63.3%

Vegetarian weight-loss course 27.5%

21-day health challenge activity – plant-based lunch box menu designed by licensed nutritionists 22.3%

Cooking course taught by a renowned chef – learn how to prepare simple and tasty vegetarian meals 21.9%

Hospital held competition to show my cooking skills 8.0%

Others 6.8%



insights and experiences with their family members, colleagues, and friends and thereby encourage them to become vegetarians. By promoting the benefits of vegetarian diets and practicing what they preach, they not only help themselves but also make a valid contribution to purifying our planet. In conclusion, the easiest way to become a healthy vegetarian is to increase one's fruit and vegetable intake, reduce one's meat consumption, and gradually progress toward consuming vegetarian meals three to four days a week or on a daily basis. Let's all adopt a healthy vegetarian diet!

References

- a Aune, D. (2019). Plant foods, antioxidant biomarkers, and the risk of cardiovascular disease, cancer, and mortality: a review of the evidence. *Advances in Nutrition*, 1, 10(Suppl_4):S404-S421. <https://doi.org/10.1093/advances/nmz042>
<https://www.cw.com.tw/article/5098707>
<https://ubrand.udn.com/ubrand/story/12116/5829904>
<https://www.foodnext.net/news/industry/paper/5593576776>