

## Review

# Development and promotion of Malaysian Dietary Guidelines

E-Siong Tee PhD

*Nutrition Society of Malaysia, Division of Human Nutrition, Institute for Medical Research, Kuala Lumpur, Malaysia*

Development and promotion of dietary guidelines is one of the key activities outlined in the National Plan of Action for Nutrition of Malaysia for the prevention of nutrition-related disorders. The first official Malaysian Dietary Guidelines (MDG) was published in 1999 and was thoroughly reviewed and launched on 25 March 2010. The new MDG 2010 is a compilation of science-based nutrition and physical activity recommendations. These guidelines form the basis of consistent and scientifically sound nutrition messages for the public. There are 14 key messages and 55 recommendations, covering the whole range of food and nutrition issues, from importance of consuming a variety of foods to guidance on specific food groups, messages to encourage physical activities, consuming safe food and beverages and making effective use of nutrition information on food labels. The MDG also has an updated food pyramid. Various efforts have been made to ensure that the revised MDG is disseminated to all stakeholders. The Ministry of Health has organised a series of workshops for nutritionists and other health care professionals, and the food industry. In collaboration with other professional bodies and the private sector, the Nutrition Society of Malaysia has been promoting the dissemination and usage of the MDG to the public through a variety of formats and channels. These include the publication of a series of leaflets, educational press articles, educational booklets, as well as through educational activities for children. It is imperative to monitor the usage and evaluation of these dietary messages.

**Key Words:** dietary guidelines, healthy eating, food pyramid, physical activity, Malaysia

## DIETARY GUIDELINES IN MALAYSIA – THE BEGINNING

Dietary guidelines have become an almost universally accepted tool in nutrition education, and in promoting appropriate dietary patterns. They are sets of advisory statements that give dietary advice for the population and relate to all diet-related conditions, i.e. nutrient deficiencies as well as nutritional excesses.

Since the 1970s, various types of food and nutrition guidelines have been formulated in the country by various groups. The first set of guidelines was formulated with the launching of the Applied Food and Nutrition Programme in 1971. Subsequently, various other guidelines were published, including specific guidelines for breastfeeding and weaning. In cognizance of the increasing incidence of non-communicable diseases, the Ministry of Health launched a series of comprehensive annual Healthy Lifestyle campaign, commencing in 1991. It was recognised that the inculcation of a culture of healthy eating is the ultimate strategy toward improving the nutritional health of the population. Hence these campaigns always included healthy eating as one of the key focus areas, besides other focus such as physical activity, smoking and mental health. Dietary guidelines were prepared to promote healthy eating practices, including some aspects of food safety, nutritional labeling, weight management and exercise. The food pyramid was also introduced in the country for the first time in 1997.

Following the convening of the International Conference of Nutrition by FAO/WHO in 1992, the National Plan of Action for Nutrition (NPAN) of Malaysia was prepared by an inter-sectoral committee, the National Coordinating Committee for Food and Nutrition (NCCFN). The NPAN Malaysia identified a variety of programmes and activities to be carried out for the improvement of the nutritional status of Malaysians during the 7th Malaysia Plan period (1996-2000).<sup>1</sup>

Nine thrust areas were identified in the NPAN, including the improvement of the health and nutritional status of the population through the promotion of healthy diets and lifestyles. One of the activities within this thrust area was the establishment of a Technical Working Group for the formulation of a set of Malaysian Dietary Guidelines (MDG). The first official set of MDG was published in 1999, and contained 8 key messages.<sup>2</sup> It was made available to nutritionists and healthcare providers and disseminated to the public through various means.

**Corresponding Author:** Dr E-Siong Tee, Nutrition Society of Malaysia, c/o 46, Jalan SS22/32, 47400 Petaling Jaya, Selangor DE, Malaysia.

Tel: 60 3 77287287; Fax: 60 3 77287426

Email: president@nutriweb.org.my

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## REVISION OF THE MALAYSIAN DIETARY GUIDELINES

A review of the NPAN was carried out by the Ministry of Health Malaysia. The strategies, programmes and activities were revised, taking into consideration the prevailing food and nutrition situation. The revised National Plan of Action for Nutrition (NPAN II) of Malaysia, covering the period 2006-2015, has spelt out details of strategies and activities to combat dual problems of under- and over-nutrition.<sup>3</sup> To ensure effective implementation, monitoring and evaluation of the Plan of Action, strategies of the Plan are oriented into the Foundation, Enabling and Facilitating Strategies. Two key strategies in NPAN II are promoting healthy eating and active living, and ensuring that everyone has access to nutrition information. The identified activities within these strategies include revision of the Malaysian Dietary Guidelines and the publication and dissemination of educational materials based on these guidelines.

In response to these recommendations, NCCFN requested the Technical Working Group (TWG) on Nutritional Guidelines to carry out a review of the 1999 Malaysian Dietary Guidelines. It was felt that these guidelines needed to be revisited, taking into consideration changes in the nutrition environment in the country as well as the evolving nutrition science in the past decade. The review process took almost 2 years, involving a large number of nutrition experts in the government sector, the academia and professional bodies.

The TWG comprised 19 scientific experts from 15 government departments, universities, professional bodies, consumer organisation and food manufacturers' association. The accompany text and key messages were prepared by a group of experts in nutrition and public health. These writers reviewed and analysed current dietary and nutrition information, and incorporated them into scientific evidence-based recommendations. These guidelines also took into account the habitual eating habits of Ma-

laysians and makes recommendations based on the Recommended Nutrient Intake of the Malaysian population (NCCFN, 2005).<sup>4</sup> The draft key messages and recommendations were deliberated through several rounds of discussion with the members of the TWG and were pre-tested with a sample of the community. The final draft document was distributed to all stakeholders and external reviewers for comments. The document was also thoroughly deliberated at a National Consensus Workshop attended by all relevant stakeholders before being finalised. The new Malaysian Dietary Guidelines (MDG) was launched on 25 March 2010, in conjunction with the 25<sup>th</sup> Scientific Conference of the Nutrition Society of Malaysia.

## FORMAT AND USE OF THE 2010 MDG

MDG 2010 is a compilation of the latest science-based nutrition and physical activity recommendations prepared by a group of key nutrition scientists in the country.<sup>5</sup> The MDG has 14 key messages and 55 key recommendations, for Malaysians over two years of age (Appendix). These messages cover a whole range of food and nutrition issues, from the importance of consuming a variety of foods to messages for guidance on specific food groups. The revised guidelines also include specific messages to encourage physical activities, consuming safe food and beverages and making effective use of nutrition information on food labels. The MDG also has an updated food pyramid (Figure 1).

Each key message or chapter has several sections. These sections are typically: terminologies, background information, scientific basis of the recommendations, and current status. Finally, each key message has several key recommendations. Within each key recommendation, several points on "how to achieve" are provided as a guide to consumers.

The main MDG is primarily meant for health-care professionals, especially nutritionists, dietitians, healthcare

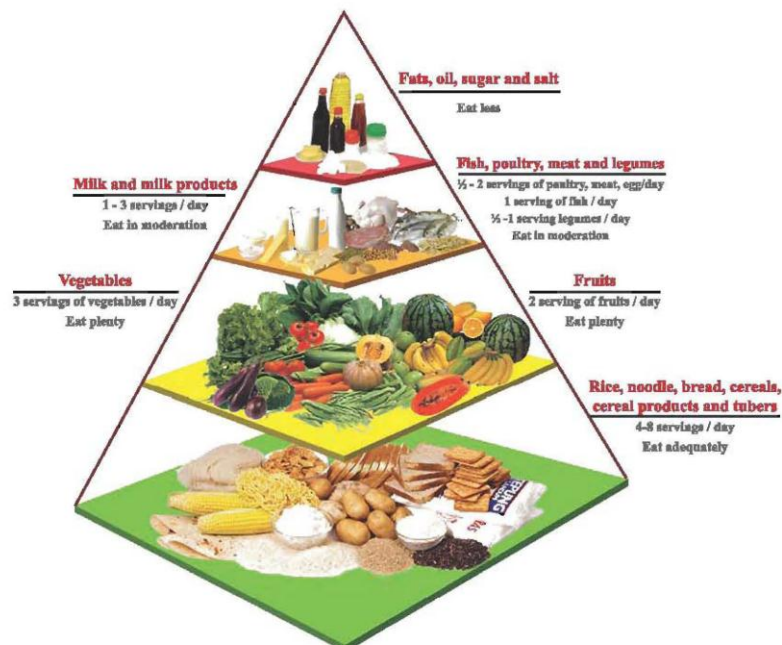


Figure 1. The Malaysian food pyramid

educators or providers and policy makers. The information in these Guidelines is useful for the development of educational materials, in designing and implementing nutrition-related programmes, including national food policies, nutrition education and information programmes. It aims to provide advice on how to promote healthy eating and also practise an active lifestyle. It is envisaged that if implemented as a whole, the dietary guidelines should encourage Malaysians to adopt appropriate food habits, be more active and make wiser food choices.

It is the intention that these guidelines form the basis of messages on healthy eating and active living that are disseminated to the public. The public must be empowered with the correct messages contained in these guidelines. It is imperative that consistent and scientifically sound nutrition messages are given to the public. It would be rather confusing to the public and detrimental to nutrition education efforts if individuals or groups promote messages that are not based on scientific consensus.

### **EFFECTIVE DISSEMINATION AND PROMOTION OF MALAYSIAN DIETARY GUIDELINES**

Dietary guidelines have become an accepted tool for encouraging the public to adopt appropriate dietary patterns. The dietary and activity pattern of Malaysians need to be greatly improved to arrest the increase in diet-related chronic diseases and to eradicate nutrient deficiencies. What is first needed is to ensure that the revised MDG is disseminated to nutritionists and other health care professionals, and indeed all involved in nutrition promotion. The Ministry of Health has organised a series of advocacy and training workshops for nutritionists and other health care professionals, as well as the food industry to widely disseminate these Guidelines.

All stakeholders must then ensure that these messages are communicated effectively to the public. It is indeed the responsibility of all stakeholders to ensure that consumers have access to this information. The food industry can also do its part in helping to disseminate these messages widely through their own network. It can also contribute by making healthier choices of foods available to the public. The following paragraphs are some examples of efforts by the health authorities, professional bodies and the food industry in promoting these dietary messages to the public. A variety of approaches, media and channels have been utilised, to try to make these messages reach the intended targets, appeal to the public and hopefully to bring about behaviour changes in terms of healthy eating and active living practices. It is also worthy of mention that many of these approaches are collaborative efforts between professional bodies and the private sector.

#### ***Promotion through various educational materials***

The Nutrition Society of Malaysia (NSM) has been promoting the dissemination and usage of the previous version of the MDG to the public through a variety of media and channels. Besides distributing these through roadshows and exhibitions, they are also made available to the public through the NSM website ([www.nutriweb.org.my](http://www.nutriweb.org.my)). A leaflet based on these guidelines was published for distribution to the public. The guideline messages and food

pyramid were highlighted in various educational booklets, e.g. the two volumes of "Healthy Recipes", "Wise Choice"; "Bright Start Nutrition"; "Total Child"; "Women & Nutrition: A Practical Guide for Healthcare Professionals"; "Women & Nutrition" leaflets; "Eat Right, Grow Right"; "Positive Parenting" magazines; and "Practical Diabetes".

With the launching of the revised MDG, the NSM continued to promote these guidelines and the food pyramid through various educational materials. A series of 4 consumer-friendly leaflets has been published in the major languages. These messages were also promoted in the recently launched recipe book for infants and young children, "Nutritionists' Choice Cookbook". The food pyramid was also the basis of teaching of the basic food groups in the booklet "Healthy Mealtime Magic – Handy Tips & Happy Tales". In the recently launched long-term Healthy Kids Programme, dietary guidelines are being disseminated through educational modules developed for primary school children, and a dedicated website: ([www.healthykids.org.my/](http://www.healthykids.org.my/)).

These key messages of the DG dietary messages have also been publicised through other media, to reach out to more Malaysians. Summaries of these messages and the pyramid are highlighted in the NSM website ([www.nutriweb.org.my](http://www.nutriweb.org.my)). They have also been published in a series of articles through the NutriScene column of a national newspaper (accessible through [www.nutriscene.org.my](http://www.nutriscene.org.my)).

#### ***Through educational materials for Nutrition Month Malaysia***

The dietary guidelines are also disseminated through educational materials published for the Nutrition Month Malaysia (NMM) programme. The objective of NMM is to promote greater awareness and the practice of healthy eating and active living, in line with the Government's healthy lifestyle programme. Initiated in 2002, NMM has been observed in the month of April for the past nine years. The NMM project is a collaborative effort among fellow professional bodies, namely the Nutrition Society of Malaysia (NSM), Malaysian Dietitians' Association (MDA), and Malaysian Association for the Study of Obesity (MASO). The project also has the support of the Ministry of Health Malaysia (MOH), particularly the Nutrition Division. Over the years, a number of activities have been carried out during NMM. Activities include publishing educational materials such as guidebooks and educational articles; seminars and workshops; as well as roadshows and exhibitions at the community level. In order to enable more Malaysians to access to these educational materials, most of the publications are also made available to the public in the NSM website.

All educational booklets published for NMM every year have included promotion of Malaysian dietary guidelines. These include the "Eat Right, Enjoy Life booklet" for adults, "Raising Healthy Eaters" and "Easy Nutrition Planner" booklets for parents of toddlers and the "Smart Nutrition booklet" for parents of primary school children.

Dietary guidelines and the food pyramid are also being promoted to children directly. A comic book and work sheets focusing on the food pyramid has been published

to teach children the different elements of this visual guide in a fun way. A series of NutriFun roadshows have been carried out to various primary schools, providing children with simple messages on the dietary guidelines. During NMM family carnivals, a NutriActive corner has been set aside to teach children the food pyramid, preparation of healthy breakfasts and physical activity through practical ways.

Articles on dietary guidelines and food pyramid have also been published in major languages and newspapers. This is to enable these messages to be disseminated to all readers in the country during the NMM period.

### THE WAY FORWARD

It has been a year since the revised MDGs were published. There has to be much more efforts in the dissemination and promotion of these guidelines. It is certainly challenging to find ways to make sure these messages are read by the consumer, and that they make efforts to practise these recommendations. It is particularly trying in recent times when nutrition and health misinformation are disseminated to consumers through various media, particularly the internet. It is daunting to convince the public that there are no short-cuts or magic bullets to solving their body weight or cholesterol problems. It therefore requires continuous efforts and a great deal of determination to convince the public that adopting the dietary guidelines is the safe and most effective way to preventing chronic diseases and solving their nutritional problems.

The dietary guideline messages must reach all involved in nutrition promotion. The MDG messages must be incorporated in the teaching curriculum of healthcare professionals, e.g. nurses and medical doctors. Since these are the front-line professionals that the public are in contact with, it is essential that they have the appropriate knowledge on healthy eating and active living.

In turn, all healthcare professionals must continue to disseminate dietary guideline messages in all possible ways. Different formats and channels must be utilised to disseminate these messages effectively. Particular attention must be given to assist the public to understand the concept of the food pyramid and use it to guide food choices. Greater efforts must also be given to promoting understanding of serving sizes in the food pyramid.

There should also be other innovative ways to disseminate these messages. Plans are being made to disseminate the dietary guidelines through new media such as the short message service (SMS). Another yet to be implemented channel is to promote dietary guideline messages through food labels. It is hoped that this proposal can be implemented by the Food Safety and Quality Division of the Ministry of Health in the near future. It is important to ensure that this should not be misused by irresponsible vendors to convey illegal health claims through the food labels.

In the meantime, there has to be efforts to obtain feedback from the public on their understanding of the messages in the guidelines. More studies need to be conducted into the understanding of these messages and the food pyramid. Based on these findings, it may become neces-

sary to fine-tune messages to enhance consumer understanding and usage.

### AUTHOR DISCLOSURE

The author has no conflicts of interest to declare.

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### APPENDIX

#### Key messages and recommendations of the Malaysian Dietary Guidelines 2010

(source: reference 5)

#### Key Message 1: Eat a variety of foods within your recommended intake

##### Key recommendations

1. Choose your daily food intake from a combination of foods based on the Malaysian Food Pyramid.
2. Choose your daily food intake according to the serving size recommended.

#### Additional recommendations: Nutrient supplements

Eating a variety of foods daily as guided by the Malaysian Food Pyramid should provide all the nutrients needed by the body. Therefore, supplements are not necessary for most individuals. Supplements of vitamins, minerals or fibre do not supply the nutrients and other essential components present in foods that are important to health. Nutrient supplements cannot be used as a substitute for proper food choices and supplements of some nutrients taken regularly in large amounts are harmful. However, supplements may be needed to meet specific nutrient requirements such as during convalescence, in pregnant and lactating women and for the elderly. Nutrient supplements should only be taken on the advice of nutritionists, dietitians or medical doctors.

#### Key Message 2: Maintain body weight in a healthy range

##### Key recommendations

1. Maintain body weight in the healthy range by balancing calorie intake with physical activity.
2. Weigh yourself regularly, at least once a week.
3. If you are an adult, prevent gradual weight gain over time.
4. If overweight, aim for a slow and steady weight loss.

5. If underweight, increase energy intake as recommended.

**Key Message 3: Be physically active everyday**

**Key recommendations**

1. Be active everyday in as many ways as you can.
2. Accumulate at least 30 minutes of moderate intensity physical activity on at least five to six days a week, preferably daily.
3. Participate in activities that increase flexibility, strength and endurance of the muscles, as frequent as two to three times a week.
4. Limit physical inactivity and sedentary habits.

*Overweight/ Obese*

To lose weight, a total of more than 30 minutes a day of moderate intensity physical activity is recommended, whilst approximately 45 to 60 minutes per day of moderate intensity physical activity is required to prevent the transition from overweight to obesity. For weight control and for preventing weight gain or regain among formerly obese individuals, a total of 60 to 90 minutes a day of moderate intensity activity or lesser amount of vigorous activity is recommended.

**Key Message 4: Eat adequate amount of rice, other cereal products (preferably whole grain) and tubers**

**Key recommendations**

1. Consume at least four servings of cereal foods daily.
2. Choose at least half of your grain products from whole grains.
3. Choose cereal products that are high in fibre, low in fat, sugar and salt.

**Key Message 5: Eat plenty of fruits and vegetables everyday**

**Key recommendations**

1. Eat a variety of fruits everyday.
2. Eat a variety of vegetables everyday.
3. Eat at least five servings of fruits and vegetables everyday.

**Key Message 6: Consume moderate amounts of fish, meat, poultry, egg, legumes and nuts**

**Key recommendations**

1. Consume fish more frequently, if possible daily.
2. Consume meat, poultry and egg moderately.
3. Practise healthier cooking methods for fish, meat poultry and egg dishes.
4. Choose meat and poultry that are low in fat and cholesterol.
5. Consume legumes daily.
6. Include nuts and seeds in weekly diet.

**Key Message 7: Consume adequate amounts of milk and milk products**

**Key recommendations**

1. Consume milk and milk products everyday.
2. Replace sweetened condensed milk and sweetened condensed filled milk with unsweetened liquid or powdered milk.

**Key Message 8: Limit intake of foods high in fats and minimise fats and oils in food preparation**

**Key recommendations**

1. Limit the intake of saturated fats to less than 10% of total daily calorie intake.
2. Increase the intake of unsaturated fats monounsaturated fatty acids (MUFA) and polyunsaturated fatty acids (PUFA).
3. Limit the intake of foods with high cholesterol.
4. Limit foods containing trans fatty acids (TFAs).
5. Minimise the use of fat in food preparation in order to keep total daily fat intake between 20% to 30% energy.
6. When eating out, choose low-fat foods.

**Key Message 9: Choose and prepare foods with less salt and sauces**

**Key recommendations**

1. Limit salt intake to one teaspoon a day.
2. Reduce consumption of highly salted foods and condiments.

**Key Message 10: Consume foods and beverages low in sugar**

**Key recommendations**

1. Eat foods low in sugar.
2. Drink beverages low in sugar.

**Key Message 11: Drink plenty of water daily**

**Key recommendations**

1. Drink six to eight glasses of plain water daily.
2. Maintain fluid intake from other food sources.
3. Avoid alcoholic beverages.

**Key Message 12: Practise exclusive breastfeeding from birth until six months and continue to breastfeed until two years of age**

**Key recommendations**

1. Prepare for breastfeeding during pregnancy.
2. Initiate breastfeeding within one hour of birth.
3. Breastfeed frequently and on demand.
4. Give only breast milk to baby below six months with no additional fluid or food.
5. Continue to give babies breast milk even if the baby is not with the mother.
6. Introduce complementary foods to baby beginning at six months of age.
7. Lactating mothers should get plenty of rest, adequate food and drink to maintain health.
8. Husbands and family members should provide full support to lactating mothers.

**Additional recommendation: Breastfeeding and working mothers**

For successful lactation to continue after returning to work, supportive worksite health promotion policies are required that provide education and facilitate either frequent feeding or frequent expression and storage of breast milk.

Health professionals and child care providers should support mothers by encouraging them to continue breastfeeding and offering on-going support during the transition back into the workplace.

**Key Message 13: Consume safe and clean foods and beverages****Key recommendations**

1. Choose safe and clean foods and beverages.
2. Store foods appropriately.
3. Prepare foods hygienically.
4. Cook foods thoroughly.
5. Hold foods appropriately.
6. When eating out, choose safe and clean premises.

**Key Message 14: Make effective use of nutrition information on food labels****Key recommendations**

1. Use Nutrition Information Panel (NIP) as a guide in making food choices.
2. Make use of nutrition claims wisely.
3. Educate children on the use of NIP.

Review

## Development and promotion of Malaysian Dietary Guidelines

E-Siong Tee PhD

*Nutrition Society of Malaysia, Division of Human Nutrition, Institute for Medical Research, Kuala Lumpur, Malaysia*

### 馬來西亞飲食指南的發展及推廣

為了預防營養相關的疾病，在馬來西亞全國性營養行動計畫中，飲食指南的發展及推廣是關鍵項目之一。第一個馬來西亞官方飲食指南(MDG)是在 1999 年發表，而經過完整的回顧審定，在 2010 年 3 月 25 日頒布新版本。新的 MDG 2010 是有科學基礎的營養及體能活動建議的匯集。這些指南形成對大眾具一致性及科學正確性的營養基本資訊。有 14 項主要訊息及 55 條建議，涵蓋食品營養議題的整個範疇，從攝取多樣性食物的重要性到特定食物類別的指導、鼓勵體能活動的訊息、攝取安全食物及飲料、及有效地使用食品標籤上的營養資訊。MDG 也更新食物金字塔。做了各種努力以確保修訂後的 MDG 可以傳播到所有相關工作者。衛生部已經為營養學者、其他健康照護專業者及食品業者籌組一系列的研討會。經由與其他專業團體及私部門的合作，馬來西亞營養學會透過各種型式及管道，促進 MDG 的傳播及大眾的應用。這些包含印製一系列的傳單、發表教導性的文章、宣導小冊子以及透過兒童的教育性活動。監測這些飲食資訊的運用及評估是迫切需要的。

**關鍵字：**飲食指南、健康飲食、食物金字塔、體能活動、馬來西亞