

# Obesity Prevention and Control Efforts in Singapore

2008 Case Study



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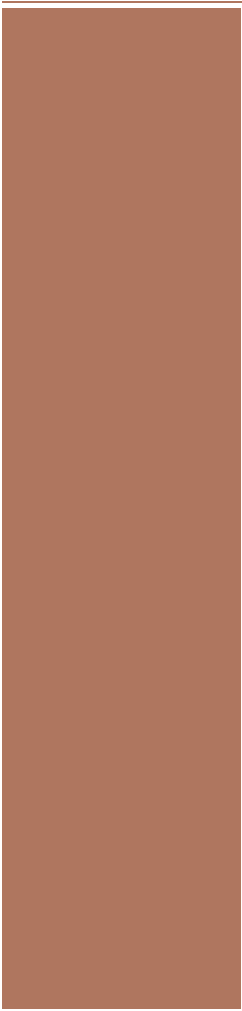
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Singapore, downtown skyline.

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## Overview

In response to the growing challenge of obesity and its associated diseases in Singapore in the 1990s, the country launched a National Healthy Lifestyle Program in 1992. The program spearheaded national strategies with the goal of controlling obesity through public education campaigns that focused on physical activity and healthy eating. Over the years, these efforts expanded to include strategies that promote supportive environments, restrict the availability of energy-dense foods to children, and increase access to exercise and fitness facilities—making “healthier choices for Singaporeans easier choices.”

Obesity prevention and control efforts in Singapore are largely coordinated by the Health Promotion Board (HPB), a statutory board largely funded by the Ministry of Health. HPB is the lead agency that drives national health promotion and disease prevention programs to help Singaporeans attain optimal health throughout life.



A food stall in downtown Singapore.





# Changing Health Patterns in Singapore

The transition in health patterns of Singapore's population over the last half-century can, in large part, be attributed to the country's rapid economic progress, improved healthcare, and aging population. In addition, Singapore embarked on a major modernization program beginning in 1965, which led to improvements in housing and sanitary conditions, increased availability of potable water, and the implementation of comprehensive vaccine and disease surveillance programs.

Since the mid 1960s, Singapore's economy has grown by an average of 9 percent each year. By the 1990s, the country had become one of the world's most prosperous nations, with the second-highest per capita GDP in Asia. As its affluence and economic security increased, Singapore underwent an epidemiological transition from a pattern of high prevalence of infectious diseases, associated with malnutrition and poor environmental sanitation, to a pattern featuring a high prevalence of chronic and degenerative diseases associated with more affluent lifestyles. Today cancer, cardiovascular disease, and diabetes mellitus are among the top ten disease conditions affecting Singaporeans, and they account for more than 60 percent of all deaths.<sup>1</sup>

## Measurable progress

Singapore has made significant achievements in improving the health status of its people. Compared to National Health Survey (NHS) findings in 1998, NHS findings in 2004 showed significant improvements in rates of major non-communicable diseases, such as diabetes mellitus, as well as cardiovascular risk factors:<sup>2</sup>

Disease/Risk Factor	Prevalence in 1998	Prevalence in 2004
Diabetes mellitus	9.0%	8.2%
Hypertension	27.3%	24.9%
High total blood cholesterol	25.4%	18.7%
Cigarette smoking	15.2%	12.6%

Additionally, over the same time period, regular exercise increased from an average of 16.8 percent to 24.9 percent among Singaporeans.<sup>3</sup> With regard to children and adolescents, Singapore has been somewhat successful in reducing the overall proportion of overweight students—from 11.7 percent in 1993 to 9.5 percent in 2006.<sup>4</sup> Despite these advances, however, overweight and obesity continues to trend upward.

## Continuing challenges

According to NHS statistics, the prevalence of obesity among adults between 18 and 69 years of age has increased steadily from 1992–2004:<sup>5</sup>

<sup>1</sup> See Singapore Ministry of Health Statistics Database, <http://www.moh.gov.sg/mohcorp/statistics.aspx?id=5526>.

<sup>2</sup> "National Health Survey: 2004," Singapore Ministry of Health, Epidemiology and Disease Control Division, 2004.

<sup>3</sup> Ibid.

<sup>4</sup> These figures rely on unpublished data from the Singapore Ministry of Education (MOE), 1993 and 2006.

<sup>5</sup> "National Health Survey: 1992," Singapore Ministry of Health, Epidemiology and Disease Control Division, 1992; and "National Health Survey: 2004," Singapore Ministry of Health, Epidemiology and Disease Control Division, 2004.

Disease	Prevalence in 1992	Prevalence in 1998	Prevalence in 2004
Obesity (BMI $\geq$ 30)	5.1%	6.0%	6.9%
Overweight (25 $\leq$ BMI $\leq$ 29.9)	21.1%	24.4%	25.6%

The relationship between body mass index (BMI) and body fat percentage (BF%) in Singaporeans—and indeed in many other Asian populations—is different from that of Caucasians.<sup>6</sup> At any given BF% the BMI of Singaporeans tends to be lower than that of Caucasians. In addition, the risks for cardiovascular disease and diabetes exist at lower BMI points for Asian populations, including Singaporeans.

In 2002 the World Health Organization (WHO) convened an expert consultation group to review the interpretation of recommended BMI cut-off points for determining overweight and obesity in Asian populations. The consultation group recommended retaining current principal WHO BMI cut-off points as the international classification to facilitate international comparisons. But, they also recommended that the cut-off points of 23 and 27.5 kg/m<sup>2</sup> should be added as points for public health and clinical actions. Risk categories as a result of these additional BMI cut-off points include: moderate risk (25  $\leq$  BMI  $\leq$  29.9) and high risk (BMI  $\geq$  27.5). The 2004 National Health Survey showed that 36.7 percent of Singaporeans were at moderate risk and 16 percent were at high risk.<sup>7</sup>

## Political Leadership to Address Health Issues, Including Overweight and Obesity

In light of the shift in disease patterns over the past half-century, Singapore's Review Committee on National Health Policies undertook a policy review of the country's healthcare services in the early 1990s. In its October 1991 report, the committee endorsed a new government focus on health promotion and disease prevention in order to reduce morbidity and mortality and control health risk factors (including overweight and obesity) in Singapore. The report emphasized the role of the individual in safeguarding his/her own health. As a result, a coordinated series of health promotion measures were initiated under the National Healthy Lifestyle Program (NHLP), which was launched in 1992. The NHLP focused on four lifestyle pillars:

1. not smoking;
2. being physically active;
3. eating right; and
4. managing stress to combat major chronic diseases and their risk factors.

Annual NHLP campaigns were organized for different population subgroups. Until 2007, NHLP campaigns focused on physical activity and healthy eating, highlighting the benefits of both.

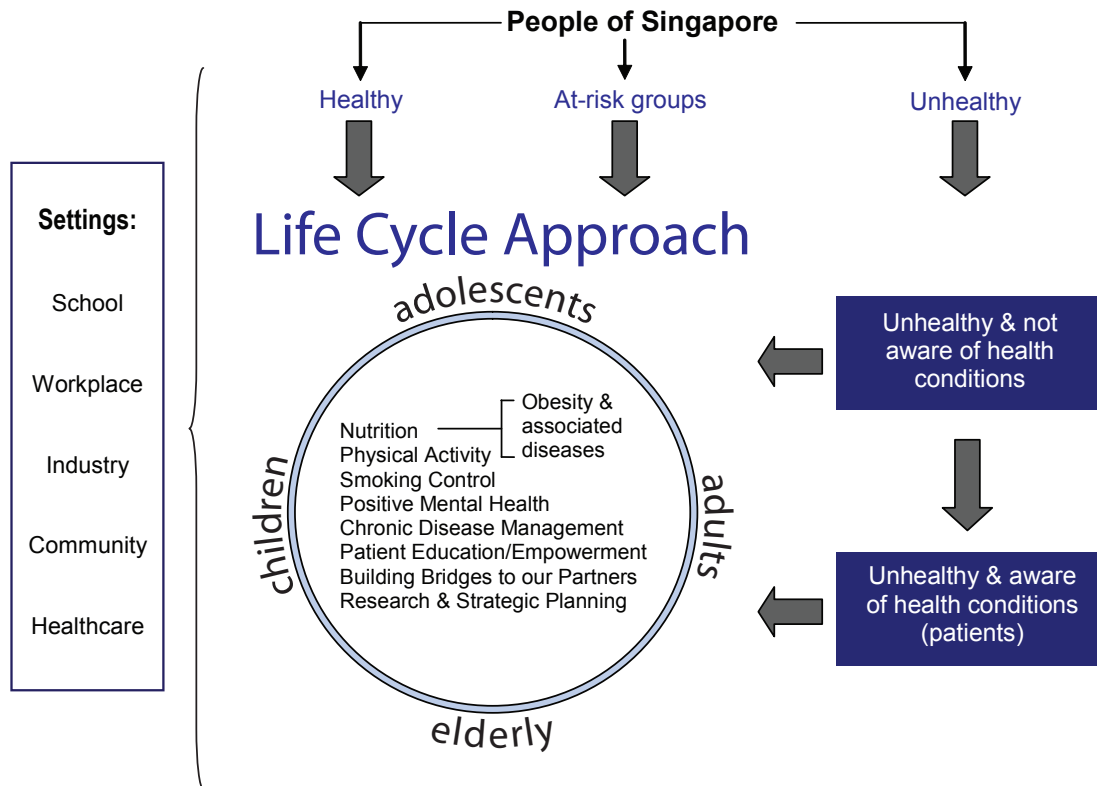
When Singapore's Health Promotion Board (HPB) was formed on April 1, 2001, it created a NHLP Department to coordinate and drive NHLP campaigns. In addition, HPB began driving the implementation of the country's other health education and promotion and disease prevention programs. Some examples of these programs include the National Myopia Prevention Program, Childhood Injury Prevention Program, and Breast and Cervical Cancer Screening Programs.

<sup>6</sup> BMI is defined as the individual's bodyweight divided by the square of his/her height.

<sup>7</sup> "National Health Survey: 2004," Singapore Ministry of Health, Epidemiology and Disease Control Division, 2004.

HBP’s strategic framework (see figure below) uses a life cycle approach to address major health issues (including overweight and obesity). This approach leverages different settings to reach out to healthy people (e.g., people who are not overweight/obese); people at risk for certain health conditions (e.g., the overweight and obese); and people who have had existing chronic health conditions (e.g., those who have diabetes, stroke, hypertension, and who are overweight/obese).

### Health Promotion Board’s Strategic Framework to Promote a Healthy Population



In addition, HPB is actively engaged in research on the monitoring and evaluation of the effectiveness of these health promotion programs. In January 2007 HPB was designated as a WHO Collaboration Center for Health Promotion and Disease Prevention.

## Current Efforts to Address Obesity

Obesity is a complex problem requiring multiple prevention and control interventions over a long period of time. To address it appropriately, it is necessary to engage and mobilize various partners and stakeholders. Policies and programs have been customized in Singapore for different segments of the population and conducted at various settings—in schools, workplaces, healthcare institutions, and communities.

### I. HEALTH PROMOTING POLICIES

#### *Dietary and Physical Activity Guidelines*

HPB developed official dietary guidelines for Singapore's population, with separate guidelines for adults<sup>8</sup> and children.<sup>9</sup> HPB also developed complementary, evidence-based dietary and physical activity guidelines that now form the basis of Singapore's health promotion programs related to nutrition, physical activity, and general health.

#### *National Awards and Funding Schemes*

**CHERISH Award for Schools:** HPB introduced the CHERISH (Championing Efforts Resulting in Improved School Health) Award for primary and secondary schools, junior colleges, and centralized academic institutions in 2000. This award recognizes schools with comprehensive health promotion programs for staff and students and is founded upon the principles of the WHO's Health Promotion School Initiative. The WHO defines a Health Promoting School as one that strives to improve the health of school personnel, families, and community leaders by helping these stakeholders understand how the community contributes to health and education. To date, approximately 80 percent of schools in Singapore have received the CHERISH Award.

To complement the CHERISH Award, HPB also offers participating schools a health promotion grant, which encourages schools to sustain their health promotion efforts for students and staff. To qualify for a grant, schools must have received the CHERISH Award in the past, as well as show an improvement in their status since the award was first given. Eligible schools are reimbursed up to 50 percent of the total cost of the health promotion programs, with a maximum payout of SGD\$5,000 (approximately US\$3,660).

**Singapore Workplace Health Promotion Programs:** Almost 60 percent of Singaporeans over the age of fifteen years participate in the workforce in some way.<sup>10</sup> This makes the workplace a natural and effective setting in which to promote the health and well-being of both employees and management.

To incentivize companies and organizations to start and sustain Workplace Health Promotion (WHP) programs, HPB introduced WHP grants in 2001. Any organization can apply for up to SGD\$5,000 to help support the development and sustainability of a WHP program. The organization must co-fund the project by contributing an equal or higher amount. The grant may be used by companies and organizations to fund activities such as training for staff to conduct workplace health promotion programs, health risk assessment for employees, and health education activities. Grants may also support the purchase of related equipment and facilities or incentives that increase participation and motivate behavior change.

<sup>8</sup>"ABCs of Healthy Eating," Singapore Health Promotion Board, 2003, [http://www.hpb.gov.sg/hpb/default.asp?pg\\_id=935](http://www.hpb.gov.sg/hpb/default.asp?pg_id=935).

<sup>9</sup>"Birth to Eighteen Years: Dietary Tips for Your Child's Wellbeing," Singapore Health Promotion Board, 2007, [http://www.hpb.gov.sg/hpb/default.asp?pg\\_id=935](http://www.hpb.gov.sg/hpb/default.asp?pg_id=935).

<sup>10</sup>"Singapore in Figures," Singapore Department of Statistics, 2007, <http://www.singstat.gov.sg/pubn/reference/sif2007.pdf>.

**HEALTH Award for Companies:** To recognize the achievements of companies with commendable WHP programs, the Singapore HEALTH (Helping Employees Achieve Lifetime Health) Award was introduced in 1999. There are currently 350 award winners, employing a total workforce of about 340,000. Under the framework of the award, organizations are encouraged to implement a comprehensive WHP program that considers key components of lifestyle and personal health skills, environmental support, and organizational policies.

## II. PROMOTING SUPPORTIVE ENVIRONMENTS THROUGH SOCIAL PROGRAMS

### Programs in Schools

**Model School Tuck-Shop<sup>11</sup> Program:** HPB introduced the Model School Tuck-Shop Program (MSTP) in 2003 to increase access to healthier food choices in schools. Schools are provided with a set of healthier food service guidelines that aim to limit students' exposure to fat, salt, and sugars in food typically consumed in the tuck-shops, as well as increase their consumption of fruit and vegetables. For example, the sale of deep-fried food and preserved meats (e.g., sausages) is limited to once per week, and school tuck-shops are required to have at least two working water coolers within close vicinity. Assessments are commissioned by HPB and conducted by nutritionists regularly to evaluate the schools' adherence with these guidelines.<sup>12</sup> Those that adhere to the guidelines are awarded MSTP status.

The MSTP is a voluntary program, and approximately 74 percent of schools have achieved MSTP status to date. In addition to the food service guidelines, culinary training workshops educate tuck-shop vendors on how to change their menus and prepare healthier food for the students. MSTP status is a prerequisite for schools that hope to receive the gold and platinum levels of the CHERISH Award mentioned in the previous section.

**The Trim and Fit Program:** In 1992 the Ministry of Education introduced the Trim and Fit Program, in Singapore's schools. This program aims to improve the physical fitness of the student population and to reduce the overall prevalence of overweight students. Healthy nutrition and regular physical activity are key tenets of the TAF program and physical education is part of the school curriculum. All schools are equipped with sports facilities and equipment, outdoor fitness stations, and health-and-fitness rooms to encourage children to engage in regular physical activity.

The overall percentage of students who passed the physical fitness test rose from 61.5 in 1993 to 80.8 percent in 2006, while the overall percentage of overweight students decreased from 11.7 percent in 1993 to 9.5 percent in 2006.<sup>13</sup> These findings show that, overall, the program was successful in increasing physical fitness levels and decreasing the obesity levels of schoolchildren and adolescents in Singapore. Following a review of the TAF Program in 2005, the program evolved into a Holistic Health Framework (HHF), which was formally established in 2007. The HHF seeks to broaden health promotion in schools beyond obesity prevention and fitness management by embracing a broader concept of students' general well-being and developing their intrinsic motivation to lead a healthy lifestyle.



A vendor preparing food for children in a primary school that has achieved the Model School Tuck-Shop status.

<sup>11</sup> Tuck-shops are small food-selling retailers, found in schools.

<sup>12</sup> "8 Guidelines for a Model School Tuck-Shop," Singapore Health Promotion Board, [http://www.hpb.gov.sg/hpb/default.asp?pg\\_id=1709#guidelines](http://www.hpb.gov.sg/hpb/default.asp?pg_id=1709#guidelines).

<sup>13</sup> These figures rely on unpublished data from the Singapore Ministry of Education (MOE), 1993 and 2006.



### Program in the Workplace

**Healthier Canteen Certification Program:** The Healthier Canteen Certification Program was introduced in 2006 to help employers encourage their employees to adopt healthier dietary practices. Appointed health facilitators and canteen vendors (or certified healthier caterers) work closely together with HPB nutritionists to help implement and drive the program. To date, 45 organizations have joined the Workplace Canteen Certification Program, of which half are HEALTH Award winners.



A typical hawker center in Singapore.

### Community-wide Programs

**Healthier Hawker Program:** Launched in July 2006, the Healthier Hawker Program encourages hawker centers to prepare their signature dishes with healthier ingredients.<sup>14</sup> With about half of Singaporeans patronizing hawker centers almost every day of the week, the program aims to provide a healthier food supply to Singaporeans—without compromising taste, accessibility, or cost—by incentivizing vendors to switch to healthier ingredients, such as cooking oil with a lower percentage of saturated fat; fiber-enriched noodles; and low-fat milk in lieu of coconut milk.<sup>15</sup> HPB partially subsidizes the costs of some of these healthier ingredients, which are slightly more expensive than the regular ingredients. For example, HPB absorbs about 10 percent of the cost of the healthier cooking oil to make it more affordable to the hawkers.

Participating stalls display the “Healthier Choice Symbol” on their Food Hygiene Certificate. Through public education campaigns, Singaporeans are encouraged to choose participating stalls over others. Since its inception in 2006, the number of vendors participating in the Healthier Hawker Program has increased from 32 to 800.



**Healthier Dining Program:** The Healthier Dining Program was introduced in 2003 to increase the availability of healthier dishes in restaurants. HPB works with participating restaurants to modify existing dishes so that they contain less oil, salt, and sugar—and include more fruit and vegetables—as well as to introduce healthier new dishes. To encourage patronage of healthy restaurants, HPB runs articles in food magazines and national newspapers and conducts quizzes and competitions. A list of healthy restaurants is published on HPB’s website.<sup>16</sup> More than 300 restaurants are currently participating in the program. The proportion of table orders that have at least one healthier dish increased from 35 percent in 2004 to 63 percent in 2008.



An example of a menu from a restaurant participating in the Healthier Dining Program.

<sup>14</sup> Open-air complexes housing many stalls that sell a variety of inexpensive foods.

<sup>15</sup> “Report of the National Nutrition Survey,” Singapore Health Promotion Board, 2004, [hpb.gov.sg/data/hpb.home/files/edu/NNS%20Report\\_Final\(merged\).pdf](http://hpb.gov.sg/data/hpb.home/files/edu/NNS%20Report_Final(merged).pdf).

<sup>16</sup> HPB’s public website is: [www.hpb.gov.sg](http://www.hpb.gov.sg).

HPB has also had some success working with fast food chains to provide healthier options for their customers. In 2008 a majority of the fast food outlets in Singapore offer one or more of the following healthy options: salads (with dressing served separately); pure fruit juices; potato fries with no salt at the customer's request; and additional lettuce with hamburgers.

**Community Initiatives Promoting Physical Activity:** To encourage Singaporeans to incorporate physical activity into their daily life, HPB collaborates with the People's Association, Singapore Sports Council, and various sporting companies like California Fitness to organize brisk-walking, running, and jogging groups, as well as aerobic workouts and Tai Chi in public places such as the central business district, industrial parks, residential heartlands, and national parks. Some of these activities are choreographed to be culturally appropriate for different ethnic populations, such as "Kebaya-robics" for the Malay community.

Singapore's national urban planning includes the construction of exercise corners in every housing estate. Parks are located near residential estates, with tracks built separately for cycling/rollerblading and jogging/walking, as well as senior citizens' exercise corners.



A weekly running session in the Central Business District for working adults.

### III. COLLABORATING WITH PARTNERS TO PROMOTE HEALTHY BEHAVIOR

HPB collaborates with various partners and stakeholders from the public and private sectors to implement a number of national health education and disease prevention efforts.

Collaborating Partners	
Government agencies	Agri-Food and Veterinary Authority of Singapore, Singapore Sports Council, Ministry of Manpower, People's Association, Housing & Development Board, and National Parks Board
Private organizations	The business community and food industry
Unions	Singapore National Employers Federation and the National Trade Union Congress
Community partners	Hawkers, supermarkets, town councils, and community clubs
Non-governmental organizations	Singapore National Heart Foundation and Family Service Centers

#### Intra-Governmental Partnerships

Since 2006, HPB has collaborated with the Ministry of Education to jointly administer the CHERISH Award. This collaboration marked a significant milestone for the award by demonstrating the Ministry's support for such an initiative. In addition, HPB also actively participates in the Healthy Youth Committee, which is an inter-ministerial committee championed by the Ministry of Education to look into strategies for nurturing holistic health and development for young people.

#### Partnerships with Food Manufacturers

HPB's Healthier Choice Symbol (HCS) Labeling Program was introduced in 1998 to provide a framework for governmental cooperation with the food industry, as well as to improve nutrition labeling and ensure a healthy food supply. Manufacturers with products that meet predefined nutritional criteria set by HPB display the HCS displayed on their food labels.

Since 1998, food manufacturers in Singapore have responded favorably to this initiative by reducing salt, total fat, saturated fat, trans-fat, and sugar in consumer products. There is also evidence that good practices by supermarket chains in promoting HCS products at affordable prices have led to a shift in consumers' preferences and purchasing behavior:

- The percentage of sales of HCS products compared to the total number of products in the same category (e.g., low-fat fresh plain milk labeled with HCS versus all fresh plain milk) increased from 29 percent in 2003 to 50 percent in 2007.<sup>17</sup>
- Based on results from a survey conducted by HPB in 2004, 67.4 percent of people were aware of HCS labels on food products in the market, and 69.0 percent of these people had used this symbol to assist them in making healthier food choices.<sup>18</sup>



Various food products labeled with the "Healthier Choice Symbol."

### ***Partnerships with Trade Unions, Business Associations, and Employers***

To scale up the Workplace Health Promotion (WHP) Program in Singapore, HPB formed its National Tripartite Committee in 1999, which includes the employer's federation, trade unions, and the government. The committee reviews local and international evidence on WHP activities and consults with experts to identify program gaps. In 2000 the Tripartite Committee released a report that provided for the first time a national strategic roadmap for WHP. The report included several landmark recommendations, such as the Singapore HEALTH Award and the WHP Grant and Funding Scheme. A National Intersectoral Committee, comprised of employers, employee unions, and key government and private agencies, was subsequently set up to execute the recommendations of the National Tripartite Committee.

Today HPB nurtures thriving relationships with key partners such as the Singapore National Employers Federation, the National Trade Union Congress, small and medium enterprises, and various peak business associations.

## ***IV. EMPOWERING PARTNERS AND INDIVIDUALS***

HPB provides training to healthcare professionals (e.g., pharmacists, doctors, nurses, and medical undergraduates); WHP facilitators (e.g., occupational health and safety doctors and nurses and human resource personnel); community leaders; educators; parents; and domestic helpers and caregivers by leveraging existing social and institutional networks. Examples of training programs include the National Workplace Health Promotion Conference and "Wok the Talk"—a training program to arm community WHP ambassadors with healthy eating tips and food preparation skills. These ambassadors, in turn, share these messages and skills with families and friends through cooking sessions.

## ***V. RAISING AWARENESS THROUGH HEALTH EDUCATION AND COMMUNICATION***

HPB engages in ongoing efforts to educate the general public via media campaigns and road shows that focus on how to make healthier lifestyle choices and which feature specific themes such as eating a

<sup>17</sup> These figures rely on unpublished data from the Singapore Health Promotion Board (HPB), 2003 and 2007.

<sup>18</sup> These figures rely on unpublished data from the Singapore Health Promotion Board (HPB), 2004.



balanced diet, healthier food preparation, lowering fat intake, reading food labels, and tips on achieving weight loss. These campaigns also encourage physical activity.

### ***Programs in Schools***

Through Singapore's Health Education and Home Economics school curricula, young people learn about the importance of healthy nutrition and regular physical activity. HPB collaborates with the MOE to provide evidence-based input in the planning and development of these curricula and plans and organizes various health education programs to encourage the young to adopt healthy dietary practices and engage in regular physical activity. These programs, targeted at a diverse audience, ranging from preschool-age children to students in tertiary institutions and are conducted in school and community settings. Examples of such programs include school health fairs, skits, and puppet shows. In addition, HPB engages students in planning and organizing peer-led initiatives that focus on healthy eating and regular physical activity.

HPB employs teams of doctors, nurses, and nutrition educators to assess and manage the referrals of severely overweight students to HPB's own weight management clinics, where these students and their parents or caregivers receive counseling on how to achieve a healthy weight. Students who require further specialist care (e.g., those with coexisting morbidities like hypertension and diabetes) are referred to specialist clinics in Singapore's hospitals for specialist management and follow-up.

### ***Programs in the Workplace***

Singapore's Workplace Nutrition Program has several components to which companies can subscribe with the goal of educating their employees and encouraging them to adopt healthier dietary practices. Some of these components include "E-bytes," the Healthier Food Products Bazaar, and making vending machines available that dispense products labeled with the Healthier Choice Symbol (HCS).

- "E-bytes" is a free online program that helps employees gain knowledge on healthy eating and make healthier choices.
- The Healthier Food Products Bazaar provides an opportunity for employees to buy fruits, vegetables, and HCS products at discounted prices without having to leave the workplace.
- The National Workplace Weight Management Program is called "Weigh to Go." Given that 58.7 percent of private workplaces (representing 75 percent of the total private-sector workforce in Singapore) have a comprehensive and sustainable WHP Program, the workplace is an effective conduit for weight management programs.<sup>19</sup> The Comprehensive National Workplace Weight Management Program aims to raise awareness among working adults about the importance of obtaining a healthy weight and equipping them with the skills and social support to lose pounds and maintain a healthy weight.

<sup>19</sup>These figures rely on unpublished data from the Singapore Health Promotion Board (HPB), 2006.

## Key Challenges for Singapore

In spite of HPB's efforts to prevent and control obesity over the years, Singapore still faces a rising trend of overweight, obesity, and associated diseases. Possible reasons for this trend include:

- Easy access to affordable, ready-to-eat foods such as hawker foods and fast foods, which tend to contain more fat and fewer vegetables.
- Busy lifestyles that lead families to eat out at hawker centers and fast food outlets. According to the National Nutrition Survey 2004, almost half (49.3 percent) of adult Singaporeans have their meals at hawker centers six or more times per week.<sup>20</sup>
- A significant increase in the proportion of adult Singaporeans with an excess of energy intake: from 31.8 percent in 1998 to 48.2 percent in 2004.<sup>21</sup> This increase in energy intake can be attributed to larger portions of meals being consumed and/or increased frequency of snacking.
- Overwhelming demands at work, leaving the working adults with little or no time for exercise. According to the National Health Survey 2004, only 21.2 percent of working Singaporeans 18–69 years of age exercised regularly, compared to 24.9 percent of the general population.<sup>22</sup>
- Cultural beliefs associating excess body fat with health, prosperity, and contentment with life.

Additional, broader challenges that Singapore is working hard to address are outlined below.

### **Broader Government Engagement**

Broad government engagement—across and within ministries—in obesity prevention must be strengthened. The country could benefit from broader public policies in the following areas:

- The country's building and urban planning policies must improve the physical environment in ways that encourage people to exercise and stay physically active.
- More comprehensive food pricing and labeling policies will influence the availability of healthier choices.
- Regulatory policies related to advertisements by the commercial weight loss industry will protect the public from being misinformed about effective weight management practices.

### **Dependency on Imported Foods**

Singapore is heavily dependent on imported foods. Currently more than 90 percent of all foods consumed in the country are imported. Measures such as legislating nutrition labeling and imposing other fiscal policies (e.g., taxing of foods of low nutritional value as well as levying taxes on the advertising and promotion of such foods) could have a potentially significant impact on consumer choices and preferences by influencing the availability and affordability of these foods.

Like many other countries, Singapore is confronted with spiraling food costs. Food products that are healthier also tend to be more costly (e.g, whole wheat bread versus white bread, low-fat milk versus whole milk, leaner cuts of meat versus fatter cuts), making it difficult for people in the lower income groups to afford healthier foods. Singapore's health education messaging and other activities must address this dilemma.

<sup>20</sup> "Report of the National Nutrition Survey," Singapore Health Promotion Board, 2004, [hpb.gov.sg/data/hpb.home/files/edu/NNS%20Report\\_Final\(merged\).pdf](http://hpb.gov.sg/data/hpb.home/files/edu/NNS%20Report_Final(merged).pdf).

<sup>21</sup> Ibid.

<sup>22</sup> "National Health Survey: 2004," Singapore Ministry of Health, Epidemiology and Disease Control Division, 2004.

### *Individual Behavior*

Overemphasizing the dire consequences of obesity in health messages could potentially lead to health problems such as eating disorders among vulnerable individuals, such as young people.

## Toward the Future

An inter-ministerial taskforce on obesity prevention and control, comprised of government bodies such as the Ministry of Environment, Ministry of Transport, and the Ministry of National Development, as well as representatives from the private sector, will be set up in the latter part of 2008 in Singapore to support obesity prevention and control efforts. HPB will lead this taskforce in addressing the daunting challenge of rising obesity in Singapore and implementing strategies that go beyond increasing the range and accessibility of healthier foods and making exercise facilities more accessible. The taskforce must be courageous in seeking out “new” anti-obesity strategies and public policies and monitoring their effectiveness. New collaborators must engage additional partners and mobilize the broader community in order to achieve any measurable impact on obesity rates over the long term.











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