

# PART IV

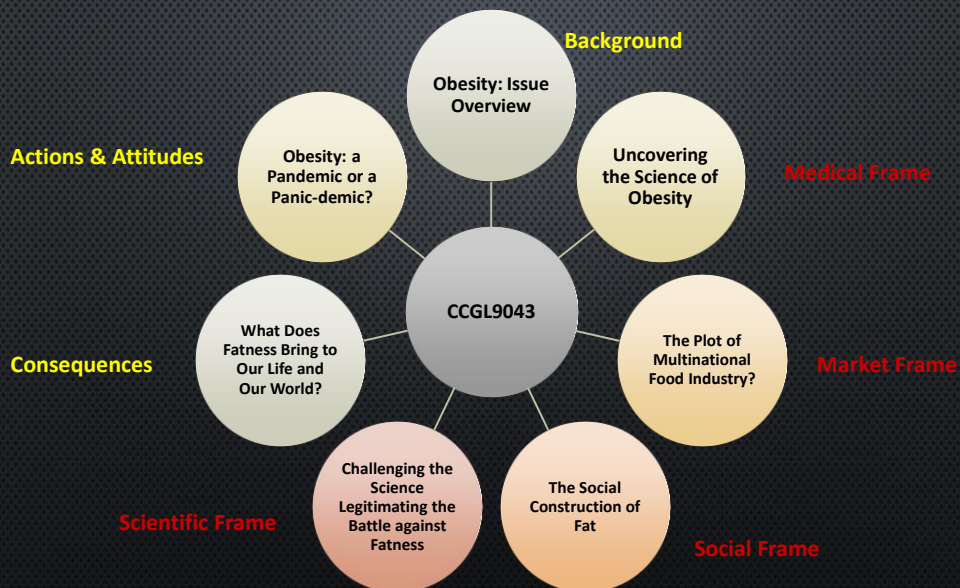
## THE SOCIAL CONSTRUCTION OF FAT

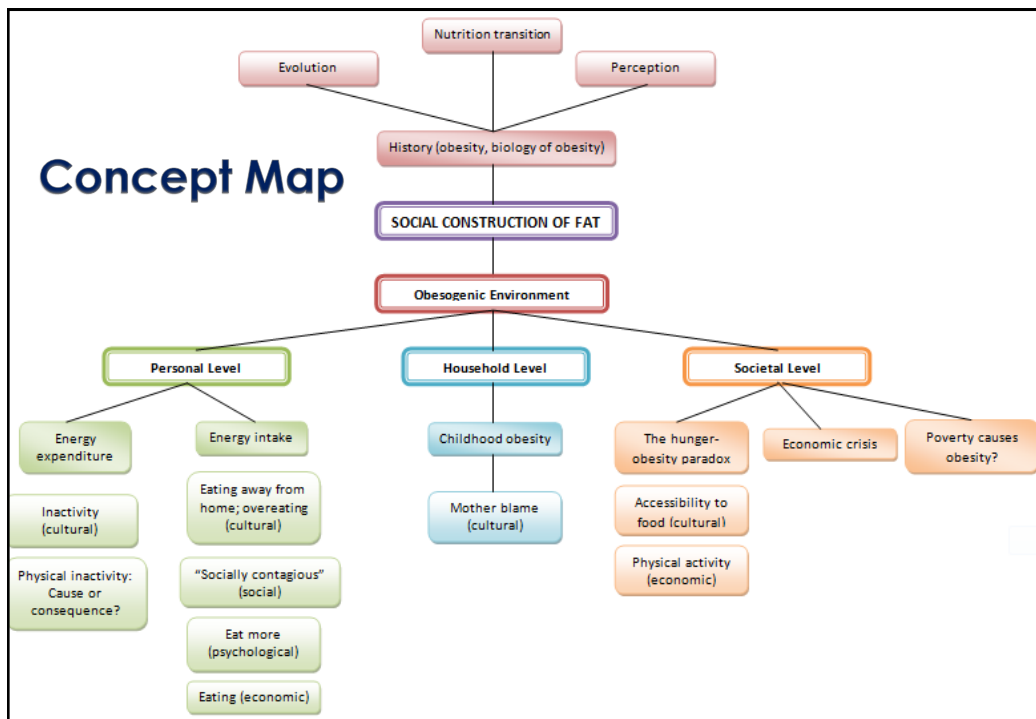
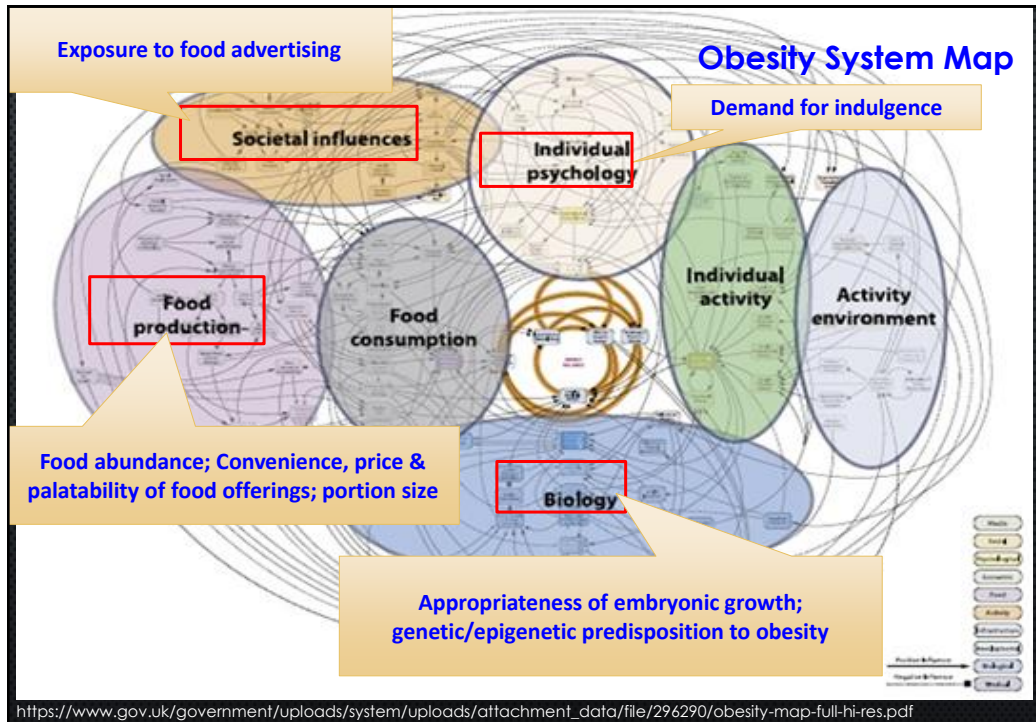
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OBESITY: BEYOND A HEALTH ISSUE



### COURSE OUTLINE





## Food intake behaviour

At individual level, it can be affected by both internal and external cues.

With eating away from home becoming more and more popular, certain cues become dominating.

## THE ENERGY INTAKE SIDE: EATING AWAY FROM HOME

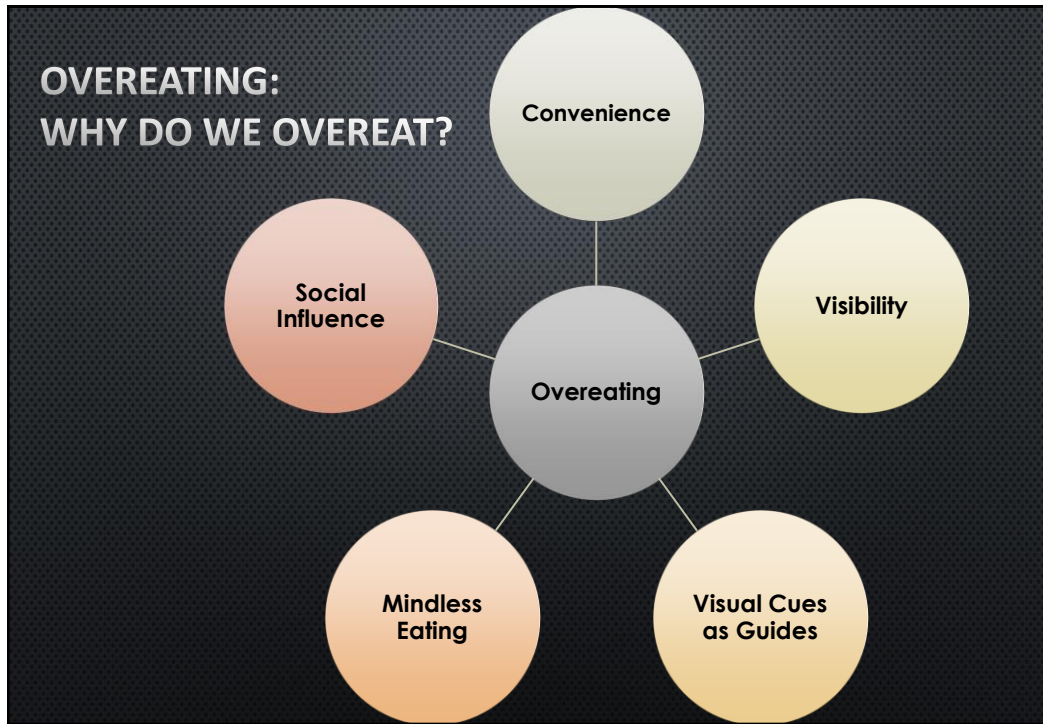


- EATING OUT OFTEN MEANS **EATING MORE** AND **EATING POORLY**.<sup>1</sup>
- THE MORE DAYS A WEEK CHILDREN ATE DINNER AT HOME WITH THE FAMILY, THE MORE LIKELY THEY WERE TO HAVE **HEALTHFUL EATING PATTERNS**.<sup>2</sup>



1. International Food Information Council website. Available at [www.ific.org](http://www.ific.org). Accessed Oct. 23, 2002.  
 2. King A. Community and public health approaches to the promotion of physical activity. *Medicine and Science in Sports and Exercise*, 1994;26:1405–1412; Sallis J, Bauman A, Pratt M. Environmental and policy interventions to promote physical activity. *American Journal of Preventive Medicine*, 1998;15:379–397.





## Media being irresponsible?

**48 HOURS**

YOUR GUIDE TO THE WEEKEND COMPLIMENTARY COPY

ON THE GO:  
THE GADGETS  
TO SEEK OUT

HACK ATTACK:  
CYBER-THRILLER  
BLACKHAT

THE 1975 ARE  
INDIE ROCK  
WORKAHOLICS

**GLUTTONS FOR PUNISHMENT**

We tackle five of the city's toughest food and drink challenges

Text: CHARLEY LANYON, JAMES GRIFFITHS and ALAN YU

**NO GUTS,  
NO GLORY**

As deadly sins go, gluttony is at the lower end of the scale. But that doesn't make it any easier on body and soul

Gluttony is deadly. It's the sin of overeating and overindulgence. It's the sin of eating too much and drinking too much. It's the sin of eating and drinking to excess. It's the sin of eating and drinking to the point of discomfort. It's the sin of eating and drinking to the point of guilt. It's the sin of eating and drinking to the point of regret. It's the sin of eating and drinking to the point of shame. It's the sin of eating and drinking to the point of humiliation. It's the sin of eating and drinking to the point of degradation. It's the sin of eating and drinking to the point of destruction. It's the sin of eating and drinking to the point of annihilation. It's the sin of eating and drinking to the point of nothingness. It's the sin of eating and drinking to the point of oblivion. It's the sin of eating and drinking to the point of oblivion.

SCMP – 22 January 2015

## GLORIFICATION OF OVEREATING



- OVEREATING IS GLORIFIED, TO THE POINT IT IS A **SPECTATOR SPORT**.
- THE BEST GORGERS BECOME **MINOR CELEBRITIES**.
- THE ANNOUNCERS USED LANGUAGE LIKE “**THE WORLD’S GREATEST ATHLETE**” TO DESCRIBE THE VICTOR.

Eating contest takes place everywhere –  
attracting all walks of life

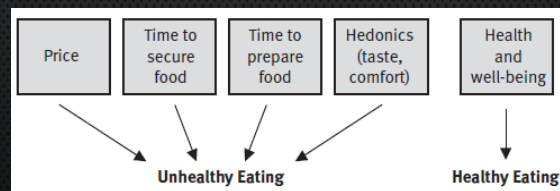
Including this one.....

[https://www.youtube.com/  
watch?v=-oamOMajEwQ](https://www.youtube.com/watch?v=-oamOMajEwQ)



## THE PERSONAL ECONOMICS OF EATING

- **TASTE, COST AND CONVENIENCE** RANK HIGH AS THE DETERMINANTS OF WHAT PEOPLE EAT.
- INSTANT GRATIFICATION > HEALTHY EATING
- **ECONOMIC CONDITIONS, CHANGES IN AGRICULTURE, AND MODERN LIFESTYLES**
  - **HIGH CALORIE DENSITY FOODS** (HIGH IN FAT & SUGAR) ARE THE LOGICAL CHOICE.



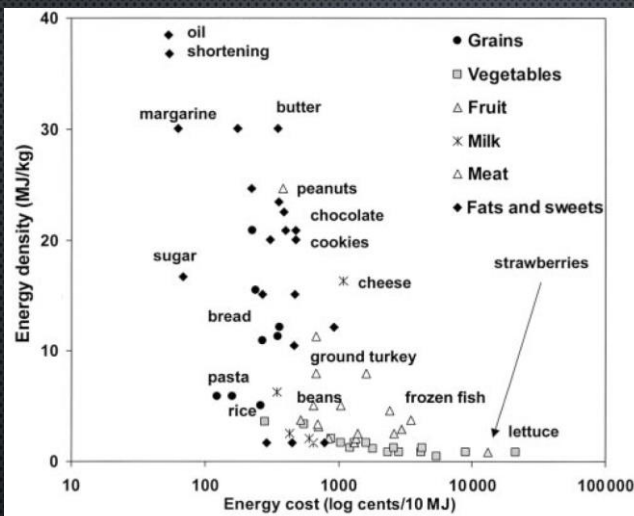
## WHAT IS CALORIE (ENERGY) DENSITY?

- **the number of calories per weight of food**

Empty calorie foods are those rich in energy but poor in nutrient profile



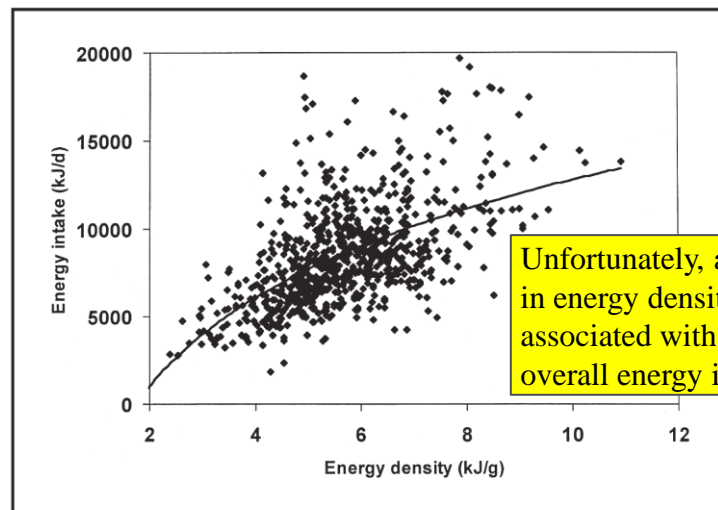
Is there any relationship between energy density, food intake and economic at personal level?



**FIGURE 4.** Relation between the energy density of selected foods and energy costs (\$/MJ). Food prices were obtained from Quality Food Centers supermarket, Seattle, winter 2003. Note that the energy cost differential between added sugars and fats and fresh vegetables and fruit can be several thousand percent, as indicated by the logarithmic scale.

Drewnowski & Spector. *AJCN* 79: 6-16, 2004

The most inexpensive way to meet energy needs is to eat energy dense foods!



**Figure 4.** Relationship between dietary energy density (kJ/g) and total energy intake (kJ/d).

Drewnowski et al. *Nutr Rev* 62:403-313, 2004

## Question –

Would you normally finish all the food you order when pay for your own meal ?

Would you normally order package meals? Why?

## IMBALANCE IN COSTS FOR HEALTHY AND UNHEALTHY FOOD



Do you agree that

1. This is a larger than normal amount of food that you would eat at lunch time.
2. You would not buy this because you cannot finish it.
3. You would finish it anyway since you purchase this.

WITH MANY TYPES OF FOODS, ONE CAN **GREATLY INCREASE CALORIES FOR A RELATIVELY SMALL INCREASE IN PRICE.**

Elo-Martin JA, Roe LS, Meengs JS, Wall DE, Rolls BJ. Increasing the portion size of a unit food increases energy intake. *Appetite*. 2002;39:74.





至尊漢堡 Big N' Tasty  
\$38.30套餐 set  
\$24.30單售 single

Single: 546 kcal

Set: 994 kcal (349 kcal for fries & 99 kcal for regular soda)

Energy cost

Single: 225 kcal per \$10

Set: 260 kcal per \$10

Spending \$14 more you get an extra 448 kcal!

<http://www.mcdonalds.com.hk/en/food/a-la-carte-list-view/burgers-list-view.html>

When eating away from home, do you normally eat alone or with others?



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[http://www.hongkong-ic.intercontinental.com/images/dining/hside\\_food3.jpg](http://www.hongkong-ic.intercontinental.com/images/dining/hside_food3.jpg)

SCMP- 26 January 2015

## IS OBESITY SOCIALLY CONTAGIOUS?

THE “**CONTAGION EFFECT**” OF OBESITY, WHICH SUGGESTS THAT PEOPLE WHO HAVE FAT FRIENDS ARE MORE LIKELY TO GAIN WEIGHT TOO.

According to their analysis, when a study participant's friend became obese, that first participant had a 57% greater chance of becoming obese himself. In pairs of people in which each identified the other as a close friend, when one person became obese the other had a 171% greater chance of following suit. “You are what you eat isn't the end of the story,” says Fowler. “You are what you and your friends eat.”

...

The obvious question is, Why? Spouses share meals and a backyard, but the researchers found a much smaller risk of gaining weight — a 37% increase — when one spouse became obese. Siblings share genes, but their influence, too, was much smaller, increasing each other's risk 40%. Fowler believes the effect has much more to do with social norms: whom we look to when considering appropriate social behavior. Having fat friends makes being fat seem more acceptable. “Your spouse may not be the person you look to when you're deciding what kind of body image is appropriate, how much to eat or how much to exercise,” Fowler says. Nor do we necessarily compare ourselves to our siblings. “We get to choose our friends,” says. “We don't get to choose our families.”



### The Spread of Obesity in Social Networks

<https://www.youtube.com/watch?v=pJfq-o5nZQ4>

Obesity Is Contagious, Study Finds  
<http://content.time.com/time/health/article/0,8599,1646997,00.html>

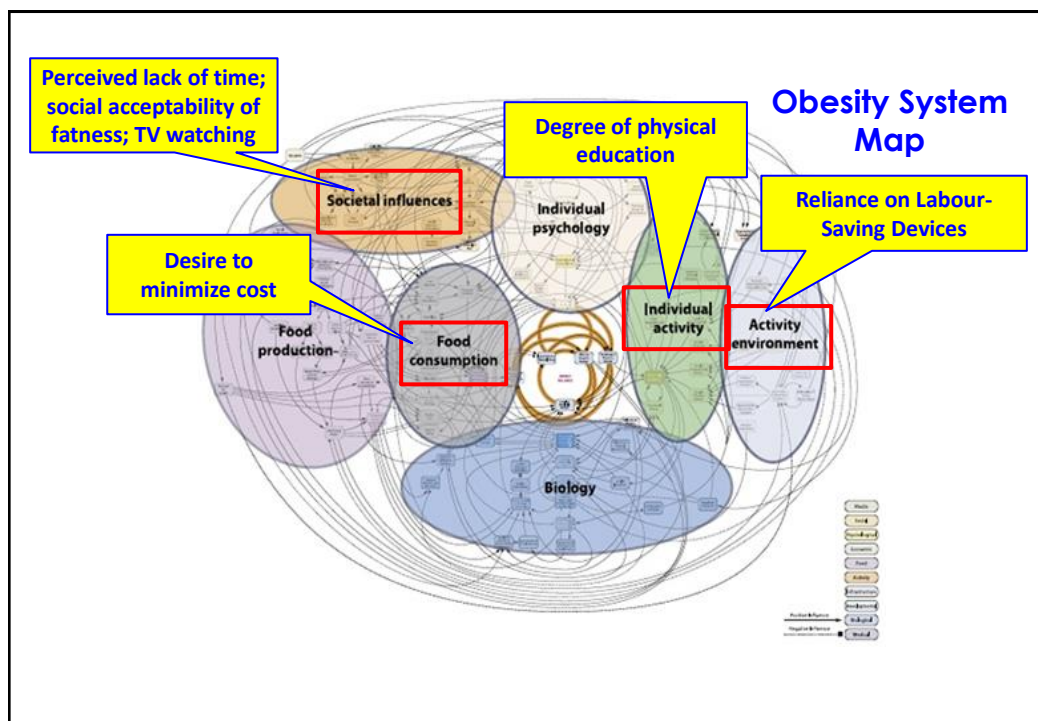


## **SURPRISE** -LOOKING AT OVERWEIGHT PEOPLE MAKES US WANT TO EAT MORE, NOT LESS?

- **ACTIVATION OF SOCIAL STEREOTYPES** VERSUS **CONFIRMATION OF SOCIAL NORMS**
- YOU DON'T NEED OVERWEIGHT PEOPLE IN YOUR **CLOSE SOCIAL NETWORK** TO INFLUENCE YOUR BEHAVIOR.



<http://healthland.time.com/2011/04/20/why-seeing-overweight-people-makes-us-eat-more-not-less/>





## SOCIAL CONSTRUCTION OF FAT AT HOUSEHOLD LEVEL

### CLASS POLL: CHILDHOOD OBESITY: IS IT POOR GENE OR PARENTING?

WHEN A CHILD OVEREAT OR EAT JUNK FOOD, IS IT POOR GENE OR PARENTING?

- A. YES, OVERWEIGHT IS GENETIC PROBLEM
- B. No, IT IS HABIT AND PARENTING
- C. BOTH GENETIC AND PARENTING ISSUE
- D. PARENTING MAKES THE DIFFERENCE



#### How to vote

1. Grab your phone
2. Go to **www.govote.at**
3. Enter **77 72 13**





The number of diabetic and obese children in city is on the rise. And it's a problem with far-reaching societal impact, writes Alan Yu



The obesity rate in local primary schools has jumped from 16 per cent in 1998 to 21 per cent in 2011. Photos: Oliver Tsang, Nora Tam

**A**t nearly 80kg, Funny Lai Yuk-fan weighs the same as her daughter. The problem: the former is a middle-aged housewife and the latter is only 15 years old. The teen suffers from type 2 diabetes, which she's had since the age of nine. Although her daughter knows she has the disease, she doesn't believe her weight is a big deal, Lai says. "Every time we take her to the doctor, she resists," says Lai. "She won't talk to the doctor but then she'll throw a tantrum afterwards. The whole process is exhausting, being her mother has always been tiring."

The case of Lai's family is symptomatic of a widespread and growing problem of diabetes affecting younger people in Hong Kong – more often than not those who are obese, statistics show. But on top of the public health concern, there is an economic and emotional cost to this alarming trend. Lai says the disease has placed a strain on her family's relationships.

"She was always fat, even before being diagnosed, so I already had to keep an eye on her diet," Lai says. "But sometimes her father and his side of the family don't agree with me. Her father would play the good guy that means I'm the bad one. They always think I control her life too much because I supervise her studies as well as her diet."

Childhood obesity and the number of younger people contracting diabetes have been on the rise in Hong Kong for a number of years. Health Department figures show that the obesity rate in local primary schools rose from 16 per cent in 1998 to 21 per cent in the 2010/2011 school year. Meanwhile, a 2009 study published in the *Hong Kong Journal of Paediatrics* reported that the number of cases of type 2 diabetes among

Hong Kong Chinese under the age of 18 increased tenfold from 1997 to 2009. Since those with obesity are more at risk of developing diabetes, the statistics could present a ticking time bomb. Using a prediction model based on current figures for obesity and diabetes, researchers expect to see a further 90,000 more cases of diabetes, about 12,000 more deaths under 65 and an extra HK\$34 billion dollar price tag for the health care system.

But the problem isn't just about the money, says Sarah McChee, honorary professor at University of Hong Kong's School of Public Health and the primary author of the study. "I tend to think of the price tag as not being just dollars, but the implications for society," McChee says. "And I think one of the biggest costs for diabetes is the impact on quality of life of the person with diabetes and their family."

She notes that complications can include stroke, heart disease and early death. One important contributing factor is the Western diet of fast food and soft drinks that children in Hong Kong have been adopting. That's been a long-running argument in Lai's family.

Lai says because she's the only family member who understands that her daughter's disease needs to be kept in check with a proper regimen of diet

and exercise, other family members indulge her with all kinds of sugary treats she should be avoiding. It even leads to name-calling. "Sometimes her uncle would say to her, 'Don't listen to that fat monster, I'll take you out to McDonald's,'" she says. Her daughter regularly returns from family visits with bags of chocolate, candy and cookies. She once returned with a six-pack of soda, and argued when Lai told her she couldn't have them all.

"Back in our day, we didn't have enough to eat, especially the older people, so all they do is indulge the children without realising the problem it can cause," Lai says. "They don't understand that children can get this disease."

It's not just the Lai family; understanding the dangers of diabetes is something that many patients struggle with, says Dr. Ronald Ma Ching-wan, an endocrinologist at Chinese University's department of medicine.

"Patients think, 'I don't feel a thing, so why should I see a doctor? It's not like I have a lump or I have pain,'" Ma says. "Patients with mildly elevated glucose levels don't show symptoms, so patients think, 'Why should I waste time changing my lifestyle?'"

Even when it should be obvious that a change in lifestyle is important, it isn't always easy, says Eva Li, a nurse at Diabetes Hong Kong, a charity established to help diabetes and raise awareness about the disease. Li has been following the case of Lai's daughter for a while.

The Health Department has school programmes to promote healthy eating. Li says, pointing to guidelines on what should be ditched up for school dinners. "I have seen students just dump all the food – which is low in sugar, salt and oil, and heavy on vegetables – because it doesn't suit their tastes."

These children find it difficult to change their eating



Dr. Sarah McChee (above)

**One of the biggest costs of diabetes is the impact on quality of life of the person and their family**

habits, and this can also have psychological effects. "Sometimes they feel self-conscious and ashamed of their disease. When they go outside, people might call them fat and that takes a toll on their self-esteem," says Li. "That has made Lai's daughter more introverted, so it can affect a patient's psychological well-being and social relationships."

Lai is relieved that her daughter has recently started swimming and exercising more, although her doctors have given up on asking her to take a weight loss target seriously.

Ma and McChee both say schools and the government need to think of more and better ways to encourage a healthy diet and regular exercise among local schoolchildren. Parents also need to pay attention to their children's diets, but McChee

also points out there are not many success stories to be gleaned from Western societies, which have been struggling with this problem for much longer. "I think the West is failing, losing the battle, and part of the reason is the vested interests of food companies. It's quite difficult to tackle them," McChee says.

"One of the problems the UK has is that parents of affected children themselves do not have very good diets, and they don't necessarily know how to prepare food that's healthy for their children."

"Hong Kong could avoid that; Hong Kong has traditionally had a fairly good diet – lots of vegetables and not too much fast food – but I just worry that if they lose that tradition, then they'll end up in the same cycle that the UK finds itself in."

McChee and Ma also point out that, in Asia, the problem goes beyond Hong Kong. Ma has co-authored research on similar trends in India, Sri Lanka and Southeast Asia, and he recently wrote a review of a similarly alarming situation on the mainland for another journal. Ma says that the World Health Organisation has established a commission to end childhood obesity, which he takes as an indicator of the scale of the problem.

On the bright side, Ma says some of his patients have successfully managed their diabetes and obesity.

"A lot of the things we teach patients with diabetes is how to manage it, such as doing more exercise, watching what you eat, eating more healthy food, getting enough sleep," he says. "When they find out they have diabetes, it is a shock, but patients who are motivated to make changes will improve their diet, they change what they eat, they pay attention to their blood glucose, they lose weight, it's a full-time job but they do it well, [the disease] is a blessing in disguise."

shirakawam.com

The obesity rate in local primary schools has jumped from 16% in 1998 to 21% in 2011.



Could be a *genetic predisposition* but likely an *epigenetic phenomenon*



## Maternal over-nutrition

- ◆ BMI relation between parents and offspring (Li et al. *AJCN* 89: 551-557, 2009)
- ◆ > 59% women of child-bearing age (20-39 yr) in the U.S.A. (2007-08) were overweight or obese (BMI  $\geq 25$  kg/m<sup>2</sup>) (Flegal et al. *JAMA* 303:235-241, 2010)
- ◆ > 50% women who give birth in the U.S.A. are overweight or obese during pregnancy (Black et al. *Diabetes Care* Aug 13, 2012)

## CHILDHOOD OBESITY

AS MOTHERS ARE USUALLY CHARGED WITH THE **PREPARATION, REGULATION, AND PURCHASE OF FOOD** FOR THEIR CHILDREN, MOTHERS—WORKING MOTHERS IN PARTICULAR—ARE HELD RESPONSIBLE FOR CHILDREN'S "POOR" EATING PATTERNS AND THEIR ASSUMED-RELATED "OBESITY"<sup>1,2</sup>.



BBC NEWS

Saturday, January 10, 1998 Published at 09:59 GMT

### World Fat child's mother guilty of neglect



Christina Corrigan died at age 13, weighing 672 lbs

A California judge has found the mother of a 13-year-old girl who died weighing 672 lbs (305 kg) guilty of a misdemeanor for child neglect.

Marlene Corrigan had been charged with a felony and could have faced a prison term of up to six years in jail. She is now awaiting her sentence.

She had denied the charges, saying that her daughter, Christina, suffered from a rare medical condition.

Marlene Corrigan

1. DeVault, M. (1991). *Feeding the family: The social organization of caring as gendered work*. Chicago: University of Chicago Press.
2. Hochschild, A. (1989). *The second shift: Working parents and the revolution at home*. New York: Viking Press.  
<http://news.bbc.co.uk/2/hi/46077.stm>  
<http://www.sfgate.com/news/article/PAGE-ONE-3-Years-Probation-in-Obese-Girl-s-3012391.php>



## PARENTAL RESPONSIBILITY

- CHILDREN DO NOT HAVE THE **MATURITY** TO MAKE HEALTHY CHOICES.
- **PARENTS' DIET AND EXERCISE PATTERNS** PREDICT A CHILD'S LIKELIHOOD OF BEING OVERWEIGHT, GIVING RISE TO THE TERM "**OBESOGENIC FAMILIES.**" [*EPIGENETIC EFFECT*]
- PARENTS MUST **COMPETE WITH TELEVISION**, MOVIES, CANDY FUND-RAISERS, SCHOOLS FILLED WITH SOFT DRINKS, SNACK FOODS, AND FAST FOODS, AND PEER PRESSURE TO EAT.



How feasible is this in an obesogenic environment?

A company called Munchkin Bottling arranged to have soft drink logos like Pepsi placed on baby bottles.

Siener K, Rothman D, Farrar J. Soft drink logos on baby bottles: do they influence what is fed to children? *Journal of Dentistry for Children*, 1997;64:55-60.

## MOTHER BLAMED

- "EXPERTS SAY THEY ARE NOW BEGINNING TO REALIZE WHAT SOCIOLOGISTS AND FAMILY THERAPISTS HAVE LONG UNDERSTOOD: THAT **JUST ABOUT EVERYTHING BEGINS AT HOME**—IN THIS CASE, **HEALTH AND FITNESS.**"<sup>1</sup>.
- THE BLAMING OF MOTHERS FOR THEIR KIDS' "EXCESS" WEIGHT **DRAWS ATTENTION AWAY** FROM VERY REAL **STRUCTURAL INEQUALITIES** IN HEALTH CARE, EDUCATION, AND EMPLOYMENT THAT ARE OFTEN FELT HARDEST BY WOMEN AND MINORITIES.



Williams, L. (March 22, 1990). Growing up flabby in America. *New York Times*, C1.

SOCIAL CONSTRUCTION OF FAT  
AT SOCIETAL LEVEL



## FROM INDIVIDUALS TO SOCIETY

- WE ARE CONCERNED WITH THE RATE OF OBESITY IN **SOCIETY**, NOT THE OBESITY OF **SPECIFIC INDIVIDUALS**.
- THE ESCALATION IN RATES OF OBESITY REQUIRES US TO APPROACH THE ISSUE OF WEIGHT GAIN IN ANOTHER WAY, AS A **SOCIAL FACT**; A FACT ABOUT SOCIETY.
- **INDIVIDUAL LEVEL VARIABLES**, BIOLOGICAL OR PSYCHOLOGICAL, CANNOT BE USED TO EXPLAIN CHANGES IN OBESITY RATES.



## THE HUNGER-OBESITY PARADOX – FACT OR FICTION?



THE RICHEST CAN BEST AFFORD TO EAT OUT AND DRIVE CARS THEREFORE THEY ARE SURELY MOST LIKELY TO BE OBESE?





## HEALTH

# Americans eating better, unless they're poor



Eating habits among poorer Americans have not changed. Photo: AFP

Many in US have adopted somewhat healthier diets, but nutritional wealth gap has widened

Associated Press in Chicago

Americans' eating habits have improved, except among the poor, evidence of a widening wealth gap when it comes to diet. Yet even among wealthier adults, food choices remain far from ideal, a 12-year study found.

On an index of healthy eating where a perfect score is 110, US adults averaged just 40 points in 1999-2000, climbing steadily to 47 points in 2009-10, the study found.

Scores for low-income adults were lower than the average and barely budged during the years studied. They averaged almost four points lower than those for high-income adults at the beginning and the difference increased to more than six points in 2009-10.

Higher scores mean greater intake of healthy foods including vegetables, fruit, whole grains and healthy fats. High scores also mean a low risk of obesity and chronic illnesses including heart disease, strokes and diabetes. Low scores mean people face

greater chances of developing those ailments.

The widening rich-poor diet gap is disconcerting and "will have important public health implications", said study co-author Dr Frank Hu of the Harvard School of Public Health. Diet-linked chronic diseases like diabetes have become more common in Americans in general, and especially in the poor, he noted.

"Declining diet quality over time may actually widen the gap between the poor and the rich," Hu said.

Harvard School of Public Health researchers developed

the healthy diet index used for the study. It is similar to US federal guidelines but features additional categories including red and processed meats, sugar-sweetened drinks and alcohol.

The study authors used that index along with government estimates on trans-fat intake to evaluate information in 1999-2010 national health surveys that included interviews with people about their eating habits. The results were published on Monday in *JAMA Internal Medicine*.

Hu said the widening diet gap reflected an income gap that deepened during the financial crisis and which probably made healthy food less affordable for many people. Hu also noted that inexpensive, highly processed foods are often widely available in low-income neighbourhoods.

The overall diet improvement was largely due to decreased intake of foods containing trans-fats, but the disappointing results point to a need for policy changes, including better nutrition education, Hu said.

The study authors say their results are consistent with an earlier report showing that "nearly the entire US population fell short of meeting federal dietary recommendations".

47

The overall US healthy eating score out of a possible 110. It increased from 40 over 12 years

## CAN ACTION-PACKED TV MAKE YOU FAT?

A new study has found that people snack more watching fast-paced television than more leisurely talk shows.

Cornell University researchers randomly assigned almost 100 undergraduates to watch one of three 20-minute sessions featuring: a sci-fi thriller; that same film without the sound; or a talk show. The students were all given healthy and unhealthy snacks.

During the film, students consumed on average about 200 grams of food, and 354 calories. That was almost 140 calories more and nearly double the weight of food they ate watching the talk show. Watching the film without sound, they ate almost 100 calories more compared with the talk show. The results suggest that a steady diet of action TV could raise risks for packing on pounds.

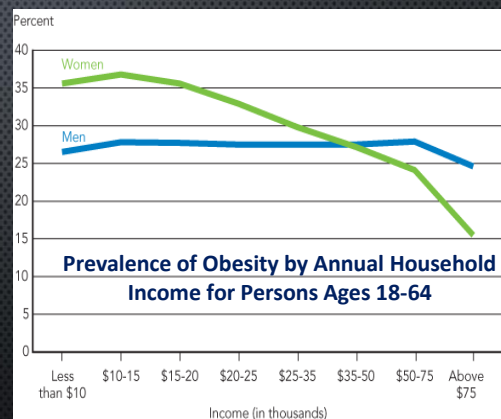
Associated Press

SCMP - Sep 3, 2014

## OBESITY & SOCIOECONOMIC STATUS

ADIPOSIITY IS STRONGLY RELATED TO **SOCIOECONOMIC STATUS (SES)** IN MODERN WESTERN SOCIETIES<sup>1,2</sup>.

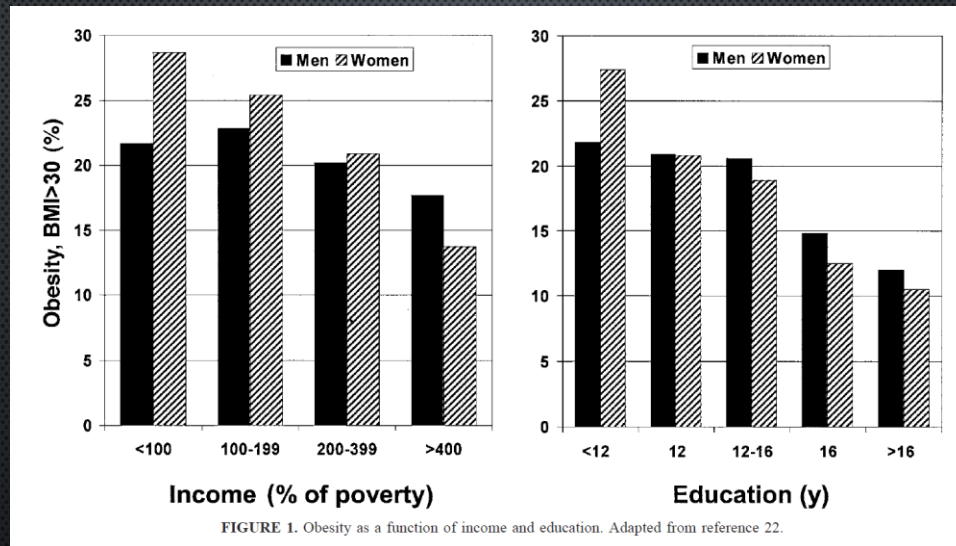
**There is a strong correlation between lower incomes and high obesity rates for women. However, obesity rates are relatively consistent across income for men.**



Source: Maximilian D. Schmeiser, *Expanding Wallets and Waistlines* (Madison, WI: Institute for Research on Poverty, 2008).

1. Sobal, J. (1991). Obesity and socioeconomic status: a framework for examining relationships between physical and social variables. *Medical Anthropology*, 13(3), 231-247.

2. Sobal, J., & Stunkard, A.J. (1989). Socioeconomic status and obesity: a review of the literature. *Psychological Bulletin*, 105(2), 260-275.

Drewnowski & Spector. *AJCN* 79: 6-16, 2004

Hindawi Publishing Corporation  
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### Research Article

## Socioeconomic and Demographic Factors for Spousal Resemblance in Obesity Status and Habitual Physical Activity in the United States

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Studies suggested that the married population has an increased risk of obesity and assimilation between spouses' body weight. We examined what factors may affect married spouses' resemblance in weight status and **habitual physical activity (HPA)** and the association of obesity/HPA with spouses' sociodemoeconomic characteristics and lifestyles. Medical Expenditure Panel Survey data of 11,403 adult married couples in the US during years 2006–2008 were used. Absolute-scale difference and relative-scale resemblance indices (correlation and kappa coefficients) in body mass index (BMI) and HPA were estimated by couples' socioeconomic and demographic characteristics. We found that **spousal difference in BMI was smaller for couples with a lower household income, for who were both unemployed, and for older spouses**. Correlation coefficient between spouses' BMI was 0.24, differing by race/ethnicity and family size. Kappa coefficient for weight status (obesity: BMI  $\geq 30$ , overweight:  $30 > \text{BMI} \geq 25$ ) was 0.11 and 0.35 for HPA. **Never-working women's husbands had lower odds of obesity than employed women's husbands (OR = 0.69 (95% CI = 0.53–0.89)). Men's unemployment status was associated with wives' greater odds of obesity (OR = 1.31 (95% CI = 1.01–1.71)).** HPA was associated with men's employment status and income level, but not with women's. The population representative survey showed that spousal resemblance in weight status and HPA varied with socioeconomic and demographic factors.





## Anthropometry and socioeconomics among couples: Evidence in the United States<sup>☆</sup>

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Marriage market

### ABSTRACT

We analyze the marriage-market aspects of weight and height in the United States using data from the Panel Study of Income Dynamics on anthropometric characteristics of both spouses. We find evidence of positive sorting in spouses' body mass index (BMI), weight, and height. Within couples, gender-asymmetric trade-offs arise not only between physical and socioeconomic attributes, but also between anthropometric attributes, with significant penalties for fatter women and shorter men. **A wife's obesity (BMI or weight) measures are negatively correlated with her husband's income, education, and height,** controlling for his weight and her height, along with spouses' demographic and socioeconomic characteristics. Conversely, heavier husbands are not penalized by matching with poorer or less educated wives, but only with shorter ones. Height is valued mainly for men, with shorter men matched with heavier and less educated wives.

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## 900m are overweight in poorer countries

**Report warns that  
governments are not  
doing enough to tackle  
global obesity crisis**

The Guardian



904m

The number of overweight  
and obese adults in  
developing countries,  
according to ODI

The extent of the world's obesity epidemic has been outlined in a report by Britain's Overseas Development Institute (ODI) that puts the number of overweight and obese adults in developing countries at over 900 million.

According to the report, overweight and obesity rates have almost doubled since 1980 in China and Mexico, and risen by a third in South Africa.

"The growing rates of overweight and obesity in developing countries are alarming," said the report's author, ODI research fellow Steve Wiggins.

"Future Diets", an analysis of public data about what the world eats, says there are almost twice as many obese people in poor countries as in rich ones. In 2008, the figures were 904 million in developing countries, where most of the world's people live, compared with 557 million in industrialised nations.

The report warns that governments are not doing enough to tackle the growing crisis, partly due to politicians' reluctance to interfere at the dinner table, the powerful influence of farming and food lobbies and a large gap in public awareness of what constitutes a healthy diet.

"The evidence is well established: obesity, together with the excessive consumption of fat and

salt, is linked to the rising global incidence of non-communicable diseases, including some cancers, diabetes, heart disease and stroke," says the report.

Factors behind the increase in obesity include rising incomes and urbanisation, which tend to lead to diets rich in animal produce, fat, salt and sugar; and the various influences of globalisation, among them advertising and the media, on diets. But the report cautions against jumping to conclusions that national diets are converging on a single international norm.

In China, for example, diets, are proportionally richer in animal products and vegetables than in the 1960s, but sugar consumption remains low. In contrast, Thailand has experienced an increase in the per-head consumption of starchy roots and pulses as well as fruit, which Thais consume more than animal products.

Some governments have managed to change diets for the better. South Korea has increased fruit and vegetable consumption through a publicity, social marketing and education campaign, including training of women to prepare traditional low-fat, high-vegetable meals. Denmark banned trans-fats, which have made its McDonald's among the healthiest in the world.

SCMP – 4 January 2014



# 62m PEOPLE IN CHINA CONSIDERED OBESE

**Country topped** only by the United States, with report author saying figure is 'alarming' in terms of financial burden on health system

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China has the second-largest number of obese people in the world behind only the United States, according to a pioneering study published in a leading international medical journal.

Globally, there are 2.1 billion people classified as overweight or obese. Of that number, 621 million people were classified as obese, according to the report in *The Lancet*.

Overweight means that a person has a body mass index – which factors in weight in relation to height – of 25 to less than 30. With a BMI of 30 or more, a person is classified as obese.

More than half of the world's obese population live in 10 countries, led by the United States with 86.9 million.

Study data showed said there were 62 million obese people living in China last year, or more than 9 per cent of the world's total.

Conducted by the University of Washington's Institute for Health Metrics and Evaluation (IHME), the study, the first of its kind, analysed data from 188 countries over 33 years and found that nearly 30 per cent (2.1 billion) of the world's population were either overweight or obese last year, up from 857 million

people in 1980. Over the same period of time, the overweight and obesity rates among adults had increased for both men (to 37 per cent from 29 per cent) and women (to 38 per cent from 30 per cent).

Lead study author Dr Marie Ng, assistant professor of global health at IHME, who had previously worked at Hong Kong University, told the *South China Morning Post* that although the overall prevalence of people

**Childhood obesity in China is another issue that really needs attention**

DR MARIE NG



China has seen an increase in overweight youth. Photo: Reuters

being overweight or obese in China was relatively low compared to other countries, the total figure was "alarming" in terms of the consequent financial burden on the health system.

"Childhood obesity in China is another issue that really needs attention," Ng said. "The proportion of obese boys, in particular, is almost double the proportion of obese men (at 6.9 and 3.8 per cent respectively)."

Among the 188 countries studied, China had the fourth-greatest increase in overweight/obesity prevalence among children during the study period. In 1980, 5.7 per cent of people under 20 years old in the country were overweight or obese; last year, the number was 18.8 per cent. For adults (20 years and above), China had the 10th biggest absolute change in overweight/obesity prevalence, rising from 11.3 per cent in 1980 to 27.9 per cent last year.

"Obesity is an issue affecting people of all ages and incomes, everywhere," said Dr Christopher Murray, director of IHME. "In the last three decades, not one country has achieved success in reducing obesity rates, and we expect obesity to rise steadily as incomes rise in low- and middle-income countries in particular, unless urgent steps are taken to address this public health crisis."

The highest overweight and obesity rates were seen in the Middle East and North Africa, where more than 50 per cent of men and 65 per cent of women aged 20 or older were found to be either overweight or obese. Among children and adolescents, the prevalence of overweight or obesity increased by nearly 50 per cent between 1980 and last year.

Last year, more than 22 per cent of girls and nearly 24 per cent of boys in developed countries were found to be overweight or obese.

In the developing world, the figures for both boys and girls were about 13 per cent.

In developed countries, the peak of obesity rates is moving to younger ages.

The rise in global obesity rates over the last three decades has been substantial and widespread, presenting a major public health epidemic in both the developed and the developing world. Health risks such as cardiovascular disease, cancer, diabetes, osteoarthritis, and chronic kidney disease increase when a person's BMI exceeds 25. In 2010, overweight and obesity were estimated to have caused 3.4 million deaths, most of which were from cardiovascular causes.

There is, perhaps, a little ray of hope from the report. The study found that in developed countries, increases in obesity that began in the 1980s and accelerated from 1992 to 2002 have slowed since 2006.

SCMP – May 30, 2014

## OBESITY & POVERTY: FOOD ACCESSIBILITY

- PEOPLE LIVING IN THE POOREST NEIGHBORHOODS HAVE 2.5 TIMES THE **EXPOSURE TO FAST-FOOD RESTAURANTS** AS DO PEOPLE IN WEALTHIER AREAS.<sup>1</sup>
- **A SHOPPING CART OF HEALTHY FOOD** COST 51 % MORE THAN A CART OF UNHEALTHY FOOD.<sup>2</sup>
- **SUPERMARKETS** WERE MUCH MORE COMMON IN WEALTHIER AREAS, AND THERE WERE 4 TIMES MORE SUPERMARKETS IN WHITE THAN IN BLACK NEIGHBORHOODS.<sup>3</sup>



1. Reidpath DD, Burns C, Garrard J, Mahoney M, Townsend M. An ecological study of the relationship between social and environmental determinants of obesity. *Health Place*, 2002;8:141-145.

2. Poulter S, Hale B. Poor families priced out of a healthy diet. *Daily Mail*, Oct. 24, 2001. Available at [www.thefooddoctor.co.uk/pricedout.htm](http://www.thefooddoctor.co.uk/pricedout.htm). Accessed Dec. 13, 2001.

3. Morland K, Wing S, Diez Roux A, Poole C. Neighborhood characteristics associated with the location of food stores and food service places. *American Journal of Preventive Medicine*, 2002;22:23-29.

# THE MAIN DRIVE: SUPPLY OR DEMAND?

**"In some neighborhoods, it's easier to get an artery-clogging piece of fried chicken than it is to get a fresh apple."**<sup>1</sup>



Maya Rockeymoore  
from the National  
Urban League



**McChicken®**

Get your hands on this  
bed of crispy green...

**\$10.00** Special price

Nutrition Info

Terms



**freshmarket**  
JAZZY APPLE  
(EACH)  
PC

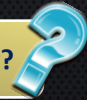
**HK\$5.20**

1

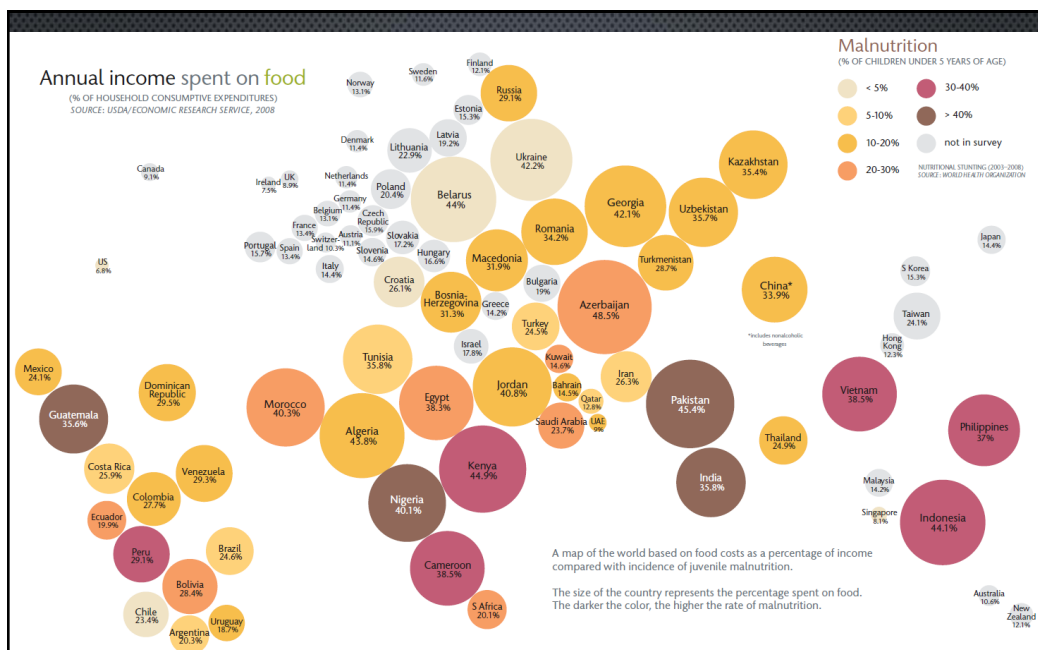
ter, set on a  
bun.

ONE CAN ARGUE DEMAND—THAT FOOD ESTABLISHMENTS PROVIDE WHAT PEOPLE WANT (FAST FOODS, SNACK FOODS, AND SOFT DRINKS) AND THAT POOR PEOPLE WANT THESE FOODS.

**Do you agree, and why?**



Quoted in Duenwald M. Good health is linked to grocer. *New York Times*, Nov. 12, 2002.





# Hong Kong household expenditure (2009/2010) in quartiles

表二 按四分位開支組別劃分的住戶開支模式

Table 2 Household Expenditure Patterns by Quartile Expenditure Group

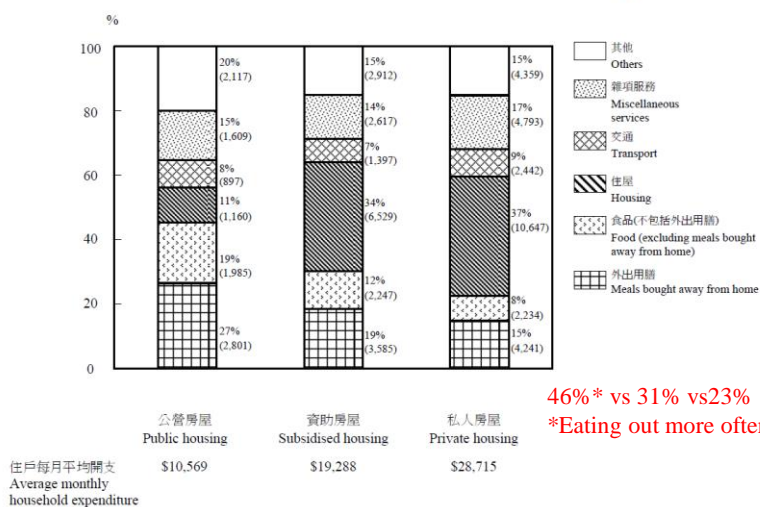
|   | 最低四分位<br>The lowest 25% |       | 第二四分位<br>The second 25% |       | 第三四分位<br>The third 25% |       | 最高四分位<br>The highest 25% |       |
|---|-------------------------|-------|-------------------------|-------|------------------------|-------|--------------------------|-------|
|   | (\$)                    | (%)   | (\$)                    | (%)   | (\$)                   | (%)   | (\$)                     | (%)   |
| 食品<br>Food                                  | 2,979                   | 41.1  | 4,767                   | 34.3  | 6,443                  | 30.8  | 9,251                    | 20.8  |
| 住屋<br>Housing                               | 2,042                   | 28.2  | 4,620                   | 33.2  | 6,889                  | 33.0  | 14,825                   | 33.3  |
| 電力、燃氣及水<br>Electricity, gas and water       | 370                     | 5.1   | 553                     | 4.0   | 651                    | 3.1   | 944                      | 2.1   |
| 煙酒<br>Alcoholic drinks and tobacco          | 86                      | 1.2   | 123                     | 0.9   | 139                    | 0.7   | 184                      | 0.4   |
| 衣履<br>Clothing and footwear                 | 166                     | 2.3   | 394                     | 2.8   | 723                    | 3.5   | 2,160                    | 4.9   |
| 耐用物品<br>Durable goods                       | 135                     | 1.9   | 378                     | 2.7   | 722                    | 3.5   | 2,309                    | 5.2   |
| 雜項物品<br>Miscellaneous goods                 | 300                     | 4.1   | 549                     | 3.9   | 889                    | 4.3   | 1,942                    | 4.4   |
| 交通<br>Transport                             | 490                     | 6.8   | 937                     | 6.7   | 1,471                  | 7.0   | 4,271                    | 9.6   |
| 雜項服務<br>Miscellaneous services              | 680                     | 9.4   | 1,586                   | 11.4  | 2,960                  | 14.2  | 8,573                    | 19.3  |
| 所有商品或服務類別<br>All commodity/service sections | 7,248                   | 100.0 | 13,908                  | 100.0 | 20,887                 | 100.0 | 44,458                   | 100.0 |

<http://www.censtatd.gov.hk/hkstat/sub/sp290.jsp?productCode=FA100068>

## Food expenditure is the largest share for the low expenditure group

圖三 按商品或服務類別及房屋類型劃分的住戶開支比重

Chart 3 Household Expenditure Shares by Commodity/Service Section by Type of Housing



## OBESITY & POVERTY: THE ECONOMICS OF PHYSICAL ACTIVITY

- **AT THE SAME TIME FOOD COSTS DROP, THE COST OF BEING PHYSICALLY ACTIVE IS RISING.**
- **DECLINING INCOME WAS ASSOCIATED WITH LESS PHYSICAL ACTIVITY, PARTLY BECAUSE THE POOR LACKED PLACES AND OPPORTUNITIES TO EXERCISE AND WERE IN WORSE HEALTH.<sup>1</sup>**
- **ACCORDING TO A STUDY IN HK, THE HIGHER LEVELS OF EDUCATION WOMEN ATTAINED, THE MORE PHYSICALLY FIT THEY WERE. TYPES OF OCCUPATIONS & FAMILY INCOME WERE HIGHLY ASSOCIATED WITH ONE'S P.A. LEVEL.<sup>2</sup>**

1. Parks SE, Housemann RA, Brownson RC. Differential correlates of physical activity in urban and rural adults of various socioeconomic backgrounds in the United States. *Journal of Epidemiology and Community Health*. 2003;57:29-35.  
2. [http://www.lcsd.gov.hk/healthy/physical\\_fitness\\_test/en/findings.php](http://www.lcsd.gov.hk/healthy/physical_fitness_test/en/findings.php)

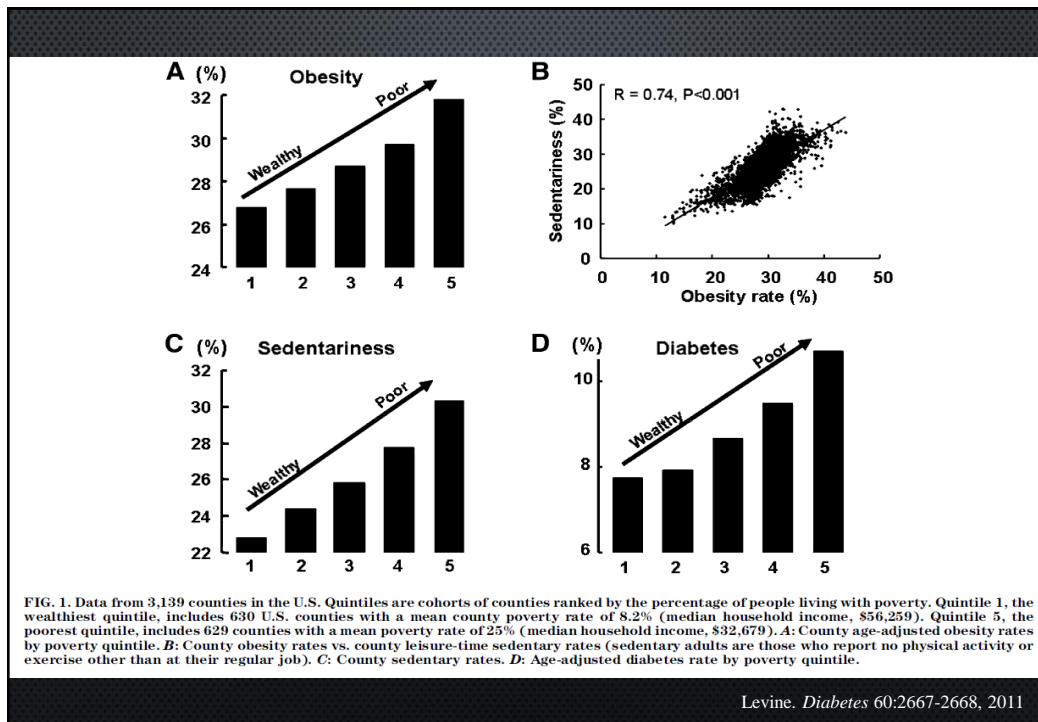
## OBESITY AND ECONOMIC CRISIS

- DURING THE 2008-09 ECONOMIC SLOWDOWN, HOUSEHOLDS IN THE UK **DECREASED THEIR FOOD EXPENDITURE** BY 8.5%, WITH SOME EVIDENCE OF AN **INCREASE IN CALORIE INTAKE** .
- A SIMILAR TREND WAS OBSERVED IN ASIAN COUNTRIES EXPERIENCING A RECESSION IN THE LATE 1990s, WITH CONSUMERS SWITCHING TO **FOODS WITH A LOWER PRICE PER CALORIE**.



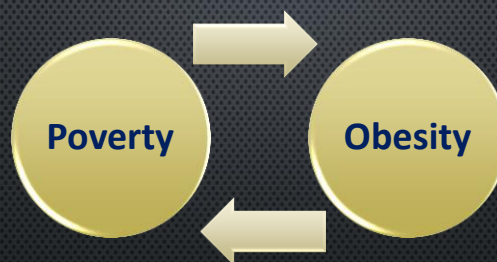
<http://www.oecd.org/els/health-systems/Obesity-Update-2014.pdf>





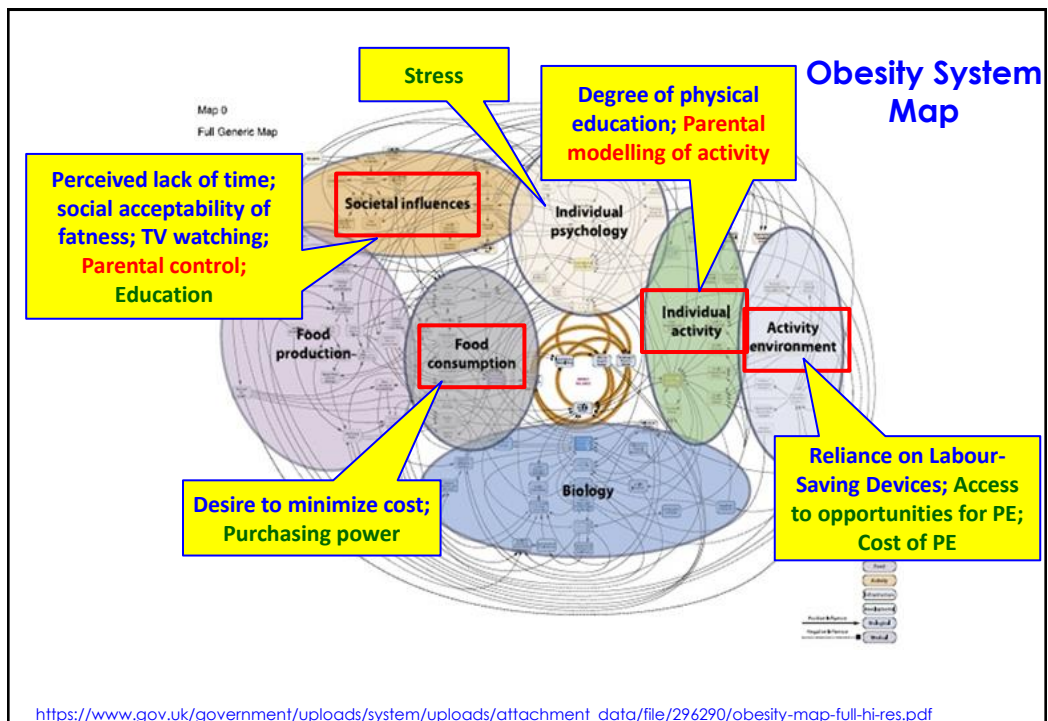
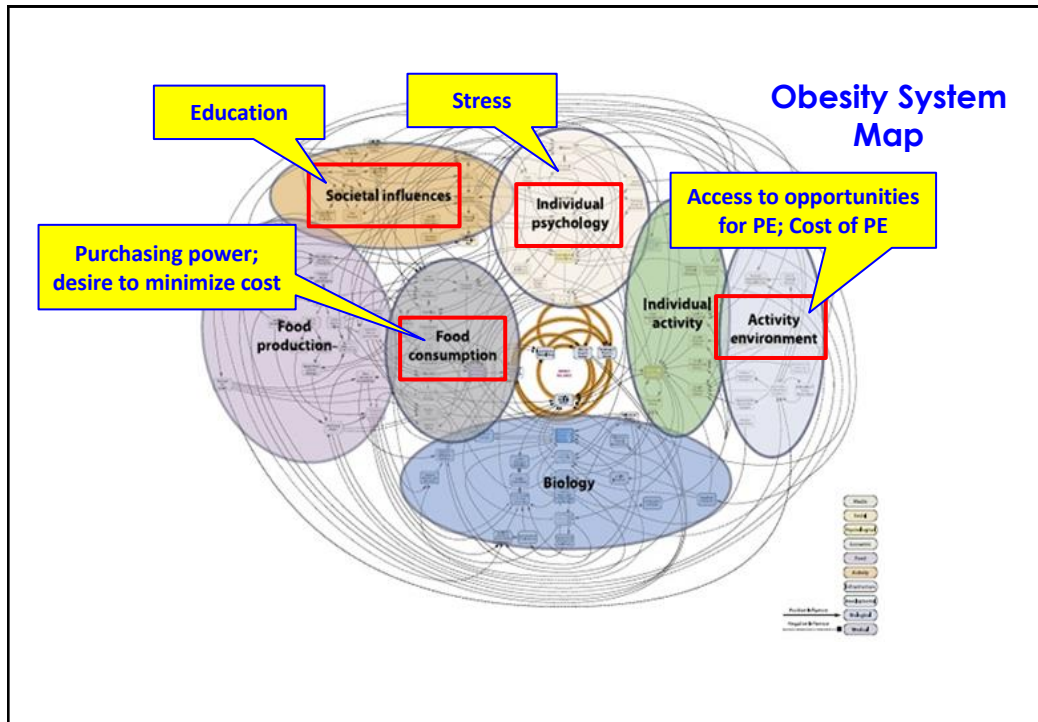
## POVERTY CAUSES OBESITY, OR V.V.?

Persons of low SES have **increased intakes of dietary fat** and get **less exercise**.<sup>1</sup>

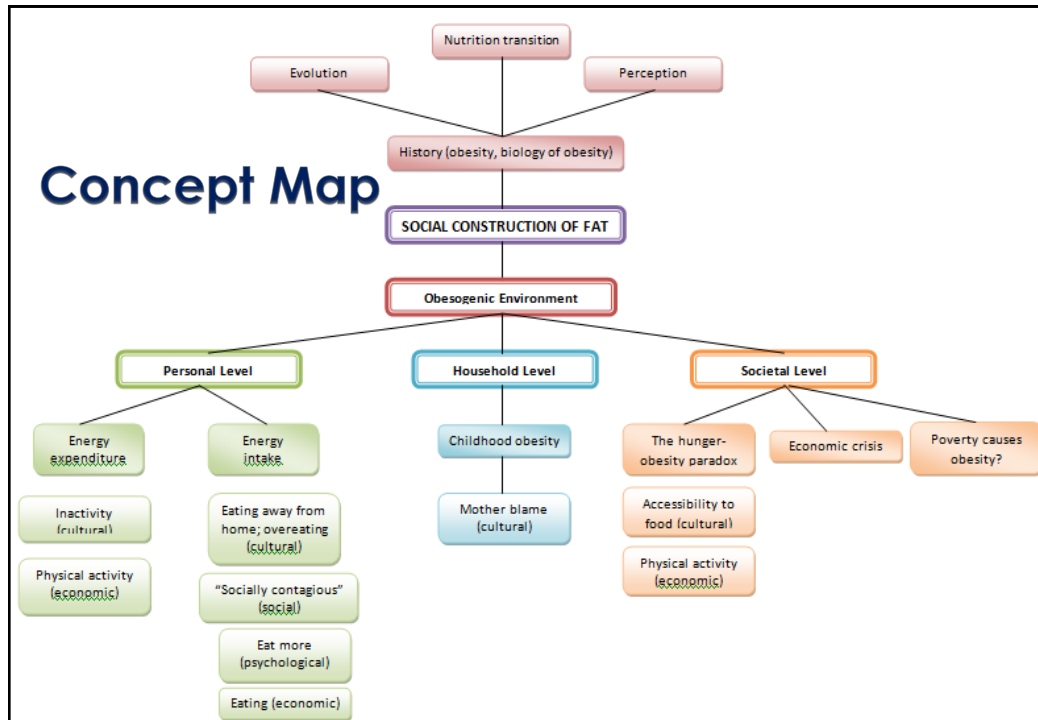


Both fatness and low SES are associated with **low self-esteem** and **high job stress**.<sup>2</sup>

1. Jeffery, R.W., French, S.A., Forster, J.L., & Spry, V.M. (1991). Socioeconomic status differences in health behaviors related to obesity: the Healthy Worker Project. *International Journal of Obesity*, 15 689–696.
2. Wamala, S.P., Wolk, A., & Orth-Gomér, K. (1997). Determinants of obesity in relation to socioeconomic Status among middle-aged Swedish women. *Preventive Medicine*, 26(5 pt. 1), 734–744.







## SELF-REFLECTION

**Is a person's weight, generally, within the control of the individual?**

- Go to MOODLE HOME PAGE, AND PUT DOWN YOUR REFLECTION AT THE **Wiki** LINK PROVIDED.