Current issues in childhood overweight and obesity: a clinical and public health perspective.
Many factors influence a person’s diet.
- Human biology and physiological needs
- Costs of food and level of income
- Preferences formed by culture, religion, information and advertising
- Social changes in work patterns and gender roles
- Globalization and its influences through trade, investment and information
- Public policy

*Policies to improve diets have been rather timid, with some significant exceptions, such as the PDS of India or rationing in wartime UK.*
• Double burden - biology
• Eating habits – fast food out or home
• FDI in food retail
• SSB
• Fat tax
• Junk food debate
• Migration
• What don’t we know?
Fast foods- problem or marker?

• Fast food is certainly higher in caloric density

• But is it the only dietary cause of obesity?
The association of fast food consumption with poor dietary outcomes and obesity among children: is it the fast food or the remainder of the diet?1–3

Jennifer M Poti, Kiyah J Duffey, and Barry M Popkin

<table>
<thead>
<tr>
<th>Food groups (% of energy)4</th>
<th>Intake excluding fast food2</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fast food nonconsumers (n = 2299; 49.9%)</td>
<td>Fast food low-consumers (n = 1683; 39.5%)</td>
<td>Fast food high-consumers (n = 484; 10.5%)</td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>10.3 ± 0.3</td>
<td>10.3 ± 0.4</td>
<td>8.0 ± 0.5***</td>
<td></td>
</tr>
<tr>
<td>Dairy</td>
<td>2.4 ± 0.2</td>
<td>2.2 ± 0.2</td>
<td>1.4 ± 0.3**</td>
<td></td>
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<tr>
<td>Mixed dishes, low-fat6</td>
<td>7.7 ± 0.4</td>
<td>6.1 ± 0.4*</td>
<td>4.9 ± 0.7*</td>
<td></td>
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<tr>
<td>Fruit</td>
<td>3.4 ± 0.2</td>
<td>3.3 ± 0.2</td>
<td>2.8 ± 0.4</td>
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<tr>
<td>Vegetables7</td>
<td>0.7 ± 0.1</td>
<td>0.6 ± 0.1</td>
<td>0.4 ± 0.1*</td>
<td></td>
</tr>
<tr>
<td>SSBs8</td>
<td>5.6 ± 0.2</td>
<td>7.0 ± 0.3*</td>
<td>11.1 ± 0.9***</td>
<td></td>
</tr>
<tr>
<td>French fries</td>
<td>0.9 ± 0.1</td>
<td>1.1 ± 0.1</td>
<td>1.1 ± 0.2</td>
<td></td>
</tr>
<tr>
<td>Total energy (kcal/d)</td>
<td>1770 ± 18</td>
<td>1672 ± 25*</td>
<td>1132 ± 24***</td>
<td></td>
</tr>
<tr>
<td>Total fat (% of energy)</td>
<td>32.2 ± 0.2</td>
<td>31.6 ± 0.4</td>
<td>30.3 ± 0.5*</td>
<td></td>
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</tbody>
</table>
So what do we do?

• Ban fast food in schools?

• Educate children about what is good for them?
Kids really do avoid food that’s good for them
But only if you tell them it’s good for them.

by John Timmer - July 24 2014, 9:54pm IST

The takeaway is that having a message about food for your children isn’t a good idea. Just tell them it tastes good and hope for the best.

FDI
The study notes that the increase of obesity and overweight in Mexico coincides with the implementation of the North American Free Trade Agreement (NAFTA).

The resulting increased consumption of snack foods, soft drinks, processed dairy and meat products, combined with increased foreign direct investment (FDI) of U.S. corporations all along the food supply chain—from production and processing to restaurants and retail—has changed the Mexican food environment and contributed to rising obesity rates nationwide.
Spending in Rural Areas Outpaces Cities

• 60% of FMCG’s
• Less erosion of wealth
• Increased incomes; Guaranteed
• Lines of credit - government
• Aspirations – increasing tele-density
• Mobility
• Less saving, more spends

Figure 45: Rural consumption expenditure is higher than urban

(Figures indexed to FY02: rural consumption = 100)

Source: NSSO, Census of India, IIFL Research
Ban advertising?
Children see, children do: Will Mexican kids slim down by watching less candy ads?


Just a week after Mexico banned commercials for soda, snacks and confectionery products during cinema showings of children’s movies and during children’s TV programming, Mexican authorities say ads for Nestlé, PepsiCo, Coca-Cola, Hershey´s and Holanda products are already out of line with the new rules.
Ban attractive packaging?
The Dark Side of Marketing Healthy Food to Children

By Susan Linn and Michele Simon

In response to the public outcry over the negative impacts of junk food marketing to children, food companies have started using popular media characters to market “healthy” foods to children. These products include fruits and vegetables, as well as processed food. So we now have Campbell’s Disney Princess “Healthy Kids” soup, Kellogg’s Scooby-Doo! cereal (with less sugar), and others.

But is this really progress?

The developmental vulnerabilities of children, along with the legal, ethical, and political pitfalls of encouraging the food industry to target kids, make marketing food to children harmful regardless of nutritional content.

Children are Especially Vulnerable to Advertising

Researchers and advocates for children’s health agree that advertising junk food to children is effective. One 30-second commercial can influence the food preferences of children as young as age two. For young children, branding even trumps taste. Preschool children report that junk food in McDonald’s packaging taste better than food in plain wrapping—even if it’s the same food. Similar studies show the same results for food packaging featuring media characters.
Sugary drinks – SSB’s

• There is a LOT of sugar in soda drinks

• WHO new guidelines on sugar – limit to 10% energy or even 5%

• That is =1500/10+150

• 150/4 = ~40 g/day

• Or 20 g/day = 5 teaspoons
So how much sugar in a SSB?

How much sugar is in Pepsi?

A 12-ounce serving of Pepsi contains 41 grams of sugar. The sugar and high fructose corn syrup found in Pepsi are responsible for the 150 calories delivered by each 12-ounce serving. A 20-ounce bottle of Pepsi contains 69 grams of sugar and 250 calories.
No added sugar?

Fruit ‘juice’ with no added sugar: 13g/100 ml
Sugars-sweetened beverages and BMI

- Effect
- Limited evidence
- The direction of the effect demonstrates that greater consumption of sugars-sweetened beverages is detrimental to health
- The effect is biologically relevant

Sugars-sweetened beverages (g/day, energy/day and servings/day) and BMI

- No association
- Limited evidence

Sugars-sweetened beverages (g/day, energy/day and servings/day) and body fatness

- No association
- Limited evidence

Amount and frequency of sugars-containing beverages consumption (servings/day or ounces/day) and dental caries in deciduous dentition

- Association
- Adequate evidence
- The direction of the association indicates that greater consumption of sugars-sweetened beverages is detrimental to oral health
- The association is biologically relevant
Trends in production of food groups – India 1951 - 2010


Figure 3. Monthly expenditures on food groups by economic strata, NSSO 2009-10
Tax fat? Fat tax?
Based on the findings of the studies we reviewed, we estimated that small taxes or subsidies were not likely to produce significant changes in body mass index or obesity prevalence.

Need a 20% tax for effectiveness.

Danes simply went across the border- cookie runs.

France - palm oil tax - the Nutella tax.
Junk food

• What is it?
• Fast food? Street food?
• Vendor food?
• Restaurant food?

• Banning ‘fast food’ in schools?
• What to ban?

• Junk eating behaviors
Draft of the Rome Declaration on Nutrition

Standards in public institutions and the workplace

- Improve the school food environment by setting food-based or nutrient-based standards for foods available in schools (meals, vending machines, etc.), setting standards for foods available in the immediate vicinity of schools, making foods that can be part of a healthy diet more readily available and ensuring free provision of safe drinking water.

THE TIMES OF INDIA

Maneka mulls ban on junk food in schools across the country

NEW DELHI: To improve nutrition among school-going children, women and child development minister Maneka Gandhi plans to propose a ban on unhealthy or ‘junk’ food in school canteens across the country.

The objective is to "make available good quality, safe food to students in school canteens", said officials from the WCD Ministry.

"The idea is also to specify what constitutes 'junk' food and making children aware why they are harmful," said an official.
Migration

A population in flux
100 million – Census 2001

Migration (figures)
• Rural – Urban (21%)
• Urban – Urban (15%)
• Urban – Rural
• Rural – Rural (55%)
The appearance of overweight with migration

From: Varadarajan et al, APJCN, 2013
What do we NOT know?

• The Indian context
• Fast changing socio-economic scenario

• What are the drivers?
• How can we communicate?
• What can you do for the individual?
Myths, Presumptions, and Facts about Obesity

Krista Casazza, Ph.D., R.D., Kevin R. Fontaine, Ph.D., Arne Astrup, M.D., Ph.D., Leann L. Birch, Ph.D., Andrew W. Brown, Ph.D., Michelle M. Bohan Brown, Ph.D., Nefertiti Durant, M.D., M.P.H., Gareth Dutton, Ph.D., E. Michael Foster, Ph.D., Steven B. Heymsfield, M.D., Kerry McIver, M.S., Tapan Mehta, M.S., Nir Menachemi, Ph.D., P.K. Newby, Sc.D., M.P.H., Russell Pate, Ph.D., Barbara J. Rolls, Ph.D., Bisakha Sen, Ph.D., Daniel L. Smith, Jr., Ph.D., Diana M. Thomas, Ph.D., and David B. Allison, Ph.D.
<table>
<thead>
<tr>
<th>Fact</th>
<th>Implication</th>
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<tbody>
<tr>
<td>Although genetic factors play a large role, heritability is not destiny; calculations show that moderate environmental changes can promote as much weight loss as the most efficacious pharmaceutical agents available(^{26})</td>
<td>If we can identify key environmental factors and successfully influence them, we can achieve clinically significant reductions in obesity</td>
</tr>
<tr>
<td>Diets (i.e., reduced energy intake) very effectively reduce weight, but trying to go on a diet or recommending that someone go on a diet generally does not work well in the long-term(^{27})</td>
<td>This seemingly obvious distinction is often missed, leading to erroneous conceptions regarding possible treatments for obesity; recognizing this distinction helps our understanding that energy reduction is the ultimate dietary intervention required and approaches such as eating more vegetables or eating breakfast daily are likely to help only if they are accompanied by an overall reduction in energy intake</td>
</tr>
<tr>
<td>Regardless of body weight or weight loss, an increased level of exercise increases health(^{28})</td>
<td>Exercise offers a way to mitigate the health-damaging effects of obesity, even without weight loss</td>
</tr>
<tr>
<td>Physical activity or exercise in a sufficient dose aids in long-term weight maintenance(^{28,29})</td>
<td>Physical-activity programs are important, especially for children, but for physical activity to affect weight, there must be a substantial quantity of movement, not mere participation</td>
</tr>
<tr>
<td>Continuation of conditions that promote weight loss promotes maintenance of lower weight(^{30})</td>
<td>Obesity is best conceptualized as a chronic condition, requiring ongoing management to maintain long-term weight loss</td>
</tr>
<tr>
<td>For overweight children, programs that involve the parents and the home setting promote greater weight loss or maintenance(^{31})</td>
<td>Programs provided only in schools or other out-of-home structured settings may be convenient or politically expedient, but programs including interventions that involve the parents and are provided at home are likely to yield better outcomes</td>
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