CHILD HEALTH & PACKAGED FOOD CONSUMPTION

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- CONVENER IAP TASK FORCE FOR PREVENTION OF CHILDHOOD OBESITY & LIFESTYLE DISORDERS
- ADVISOR IAP TASK FORCE FOR PREVENTION OF NON COMMUNICABLE DISEASES
- NATIONAL PROJECT COORDINATOR IAP AAP NCD Collaboration
A STORY OF TWO CHILDREN
GAUTAM
GARRY
GARRY  
[both were 2.9 kg at birth]  
GAUTAM

Bottle Feed  
Mother’s feed
CITIES
[started going to school]

GARRY

GAUTAM
GARRY’s BREAKFAST

At Kellogg’s, we believe in the power of a grain-based breakfast to give you the energy you need to start the day every day. That’s why we are proud to offer our Anaaj ka nashta, chosen and cooked with selected corn, wheat, rice, barley and oats. Most of our offerings are fortified with multivitamins and have added preservatives. Our range of breakfast cereals is inspired by the Kellogg’s kitchen, just like at home.

Sun-roasted golden corn, chosen carefully from the fields of India - Simply cooked. Lightly roasted. A

Kellogg’s Corn Flakes with Bhaang and Millet

BC

A

Complan

C

Horlicks

B
GAUTAM’S Breakfast

![Milk](image1.png)
![Salad](image2.png)
![Paratha](image3.png)
![Boiled Eggs with Butter](image4.png)
School Lunch

GARRY [Money]       GAUTAM [Home made]
School Activities

GARRY

GAUTAM
GARRY’S HOME & MEAL TIME!!
GAUTAM’S HOME & MEAL TIME
EVENING SNACKS/REWARDS/GIFTS

GARRY

GAUTAM

[Image of a family having a picnic]
FOOD CHOICES

GARRY

GAUTAM
GAUTAM’S PLAYGROUND
GARRY’S PLAYGROUND?

Physical Inactivity
Advertising
Promotions on mobile
MEDICAL CHECK UP
AT 4 YRS -23KG [NORMAL 16 KG]  
GARRY’S TEETH
GARRY:
TYPE 2 DIABETES AT 12 YRS
HYPERTENSION AT 17 YRS
AT 19 YRS

GARRY

GAUTAM
GARRY’S DR ADVISED ['L’FSS]

**DIET** LOW IN

- **FAT**
- **SUGAR**
- **SALT**

INCREASED **ACTIVITY**

**DRUGS**
GARRY’S FUTURE RESIDENCE
21st-century COSY LAZY lifestyle

Evolution/Decay?

NCDs.... the new pandemic
Non Communicable Diseases

**KILL 38 MILLION PEOPLE /YEAR GLOBALLY.**

- 75% of NCD deaths - 28 million - occur in LMICs.
- 16 million NCD deaths occur "premature" [ <70 yrs]
- 82% of these "premature" deaths occurred in LMICs.
- Projected NCD deaths in 2030 --- 55 million

- **HALF OF NCD DEATHS ARE ASSOCIATED WITH BEHAVIOURS BEGINNING IN ADOLESCENCE**

WHO: KEY FACTS  2015
WHO: KEY FACTS 2015

80% of all NCD deaths occur due to

<table>
<thead>
<tr>
<th>Condition</th>
<th>Deaths</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVD/Stroke</td>
<td>17.5 million</td>
<td>48%</td>
</tr>
<tr>
<td>Cancers</td>
<td>8.2 million</td>
<td>21%</td>
</tr>
<tr>
<td>Respiratory</td>
<td>4 million</td>
<td>12%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1.5 million</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

LMICs contribution

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%</td>
<td>of CVD &amp; Diabetes deaths</td>
</tr>
<tr>
<td>90%</td>
<td>of COPD</td>
</tr>
<tr>
<td>2/3rds</td>
<td>of all cancer deaths</td>
</tr>
</tbody>
</table>
**WHO: MODIFIABLE RISK FACTORS – UNHEALTHY DIET ASSOCIATED WITH 3 OUT OF 4 MAJOR NCDs**

<table>
<thead>
<tr>
<th>RISK FACTOR</th>
<th>Tobacco</th>
<th>Unhealthy Diet</th>
<th>Physical</th>
<th>Harmful</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANNUAL DEATHS→</td>
<td>6 million [8-2030]</td>
<td>1.7 million</td>
<td>Inactivity 3.2 million</td>
<td>Drinking 3.3 million</td>
</tr>
<tr>
<td>CVDs</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Type 2 DM</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Cancer</td>
<td>√</td>
<td></td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Ch resp disease</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MOST OF THESE BEHAVIOURS INITIATE EARLY:

Childhood provides window opportunity for prevention
Early Treatment & Care

FOCUS ON CHILDREN !!
UNHEALTHY EATING

- Quantity
- Quality
- Eating Behaviours

“CONVENIENCE / PACKAGED FOOD”

- Commercially prepared
- Ready to eat
- Long shelf life
- Created to become appealing
- Cost more
- But saves time
- Meat slaughtered miles away at your doorstep
- Much tastier than home cooked food
- Healthier formulations
- Comfort food - destressor/party/order home delivery
FOOD FACTORY FAVOURITE CONSTITUENTS

- Sweetener
- Junk Food
- Factory Created Fats
- Salt
- Colourings
- Chemicals
WHY PACKAGED FOOD IS UNHEALTHY?

1. Imbalance of nutrients
   - EXCESS: Fat, Sugar, Salt (sodium).

2. Replace Healthy Foods:

3. Presence of Chemical additives (Cancer, ADHD, Obesity, Heart disease)
   - Preservatives (esp. in processed and packed food)
   - Trans fatty acids (TFAs)
   - Saturated fats
   - Processed foods technically modified for preservation

4. Environment implications

5. Industrial demands
NIN defines Unhealthy (junk) foods as:

“Those containing little or no Proteins, vitamins or minerals but are rich in Salt, Sugar, Fats and are high in Energy” \[HFSS\]

Concerns: The most common (61%) effect of skipping a meal was consumption of Junk foods !!
3 major CULPRITS

JUNK FOOD/ [HFSS]

F...FAT
S...SALT
S...SUGAR
RDA FOR F-S-S FOR A 10-12 YEAR OLD MODERATELY ACTIVE CHILD

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>RDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>S Salt/sodium</td>
<td>salt is 5 g; sodium is 2 g</td>
</tr>
<tr>
<td>F Total fat</td>
<td>Total fat intake should not be &gt;30%</td>
</tr>
<tr>
<td></td>
<td>Energy required (E)</td>
</tr>
<tr>
<td>Trans fatty acids (TFAs)</td>
<td>&lt;1% E</td>
</tr>
<tr>
<td>Saturated fatty acid (SFAs)</td>
<td>&lt;8% E</td>
</tr>
<tr>
<td>S Added sugar</td>
<td>30 g</td>
</tr>
</tbody>
</table>

Notes: *Average for calculation purpose [2,190 Kcal for a boy weighing 34.3 kg and 2,010 Kcal for a girl weighing 35 kg];
Source: *Dietary Guidelines for Indians, 2011, National Institute of Nutrition*
LET'S DO A LITTLE EXPERIMENT.

GARRY is very hungry. He goes to Restaurant and orders:
- Hamburger (Double quarter pounder with cheese)
- Large french fries [FREE]
- A can of coke
- M&M's McFlurry
THE CALORIES & FATS INGESTED

A] 500..25g
B] 1000..45g
C] 1500..65g
D] 2000..85g
E] 2500..95g
**Nutrition facts**

<table>
<thead>
<tr>
<th></th>
<th>Total amount</th>
<th>RDA (for an adolescent)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CALORIES</strong></td>
<td>2010 kcl</td>
<td>2000-2500 kcl</td>
</tr>
<tr>
<td><strong>TOTAL FATS</strong></td>
<td>85g</td>
<td>70g</td>
</tr>
<tr>
<td><strong>SATURATES</strong></td>
<td>36g</td>
<td>18g</td>
</tr>
<tr>
<td><strong>CARBOHYDRATES</strong></td>
<td>251g</td>
<td>289g</td>
</tr>
<tr>
<td><strong>SUGARS</strong></td>
<td>133g</td>
<td>30g</td>
</tr>
<tr>
<td><strong>FIBER</strong></td>
<td>10g</td>
<td>25g</td>
</tr>
<tr>
<td><strong>PROTEIN</strong></td>
<td>67g</td>
<td>55g</td>
</tr>
</tbody>
</table>
Maintaining a Healthy Weight is a Balancing Act
Calories In = Calories Out

How long will you have to walk leisurely in order to burn those extra 2010 calories?*
FOR COMPENSATING THIS MEAL SAGAR WILL HAVE TO??

4.5 HOURS RUNNING
=10.5 MILES RUN
running (5mph)

8.5 HOURS WALK =
21 MILES WALK
(2.5mph)

[leisure walk for 1 hour
~240 calories]
THE MATHEMATICS !!

• If One has an extra 200 calories every day

\[ 200 \text{ calories} \times 365 \text{ days in 1 yr} = 73,000 \text{ calories per year} \]

• To Gain 1 pound one needs +3500 calories

\[ \frac{73,000 \text{ calories per year}}{3500 \text{ calories per pound}} = 20 \text{ KGs of weight gain in 1 year} \]
GLOBAL OVERVIEW OF UNDER-5 YRS CHILDHOOD OBESITY -- WHO

- 41 MILLION globally ..2015
- (31 MILLION IN DEVELOPING COUNTRIES
- ↑ >30% HIGHER)..2013
- EXPECTED 70 MILLION BY 2025
- MORE LETHAL THAN UNDERWEIGHT
CHANGING MORBIDITY PATTERN IN PEDIATRICS

HYPERTENSION / TYPE 2 DM IN ADOLESCENTS

HEART DISEASES IN YOUNG ADULTS

Younger population →→ Heavier burden NCDs
CONCERN:
ADULT DISEASES SEEN IN OBESE CHILDREN !!

ENDOCRINE  Prevalence of IGT is 7-25% & Type 2 DM is 0.5-4% in obese children.

• CVS: HTN[ > 50 percent], Dyslipidemia, BMI >25-28.9, RR of CAD 1.72 and with BMI > 33, RR 3-44. CVS mortality increased by 4 fold.
• Cancer related mortality increased by 2 fold.
• Gastrointestinal: NAFLD [10%], Cholelithiasis {2%}
• Pulmonary: OSA [8%], Obesity hypoventilation [17 %]
• Orthopedic: Slipped capital femoral epiphysis (SCFE) 50%-70%, tibia vara, increased #, genu valgum, musculoskeletal pain, impaired mobility.
• Neurologic: Stroke, pseudotumour cerebrii
• Dermatologic: Intertrigo, Furunculosis & Hidradenitis suppurativa
• Psychosocial systems: Bullying, alienation, distorted peer relationships, poor self esteem, distorted body image, anxiety & depression.

Overall mortality increased by 6-12 times.
PREMATURE DEATH IN ADULTHOOD !!
The Y-Y paradox

Chittaranjan S Yajnik, John S Yudkin

THE LANCET • Vol 363 • January 10, 2004
FATS:

TRANS FATS

• Occur naturally in food of animal origin
• Created—Hydrogenation of PUFAs
• For a longer shelf life/ better form / texture
• Component of baked goods, cookies, cakes, deep-fried foods
• LABELLED "PARTIALLY HYDROGENATED"
• Chemical configuration adversely affects LDL & HDL
• Interfere with desaturation of n-3 fatty acids

Saturated fats $\propto$ Carbohydrates: HDL & LDL $\downarrow\downarrow$
Saturated fats $\propto$ Unsaturated fats: Less $\downarrow$ in HDL
Saturated fats $\propto$ Trans fats: $\downarrow\downarrow$ HDL & $\uparrow\uparrow$ LDL
DIETARY GUIDELINES

ENERGY FROM FATS : (% OF TOTAL CALORIES)

- Adults: 20 - 35%
- Children: 25 - 35%
  - < 4 yrs: 30 to 40%
- < 10% saturated fats: replacing them with MUFAs & PUFAs.

Trans fats consumption as low as possible [WHO < 1%]

- Fats for cooking:
  - High MUFA: canola oil, olive oil.
  - High n-3 PUFA: alpha-linoleic acid eg. walnut oil, Fish oil/Flaxseed oil. to a lesser extent, soybean oil, are also beneficial.
  - Benefits of n-6 FAs: Sunflower/Safflower/Corn Oils - UNCERTAIN??
<table>
<thead>
<tr>
<th>Fat/FA</th>
<th>REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL FAT</td>
<td>20-35 %E</td>
</tr>
<tr>
<td>SFA</td>
<td>&lt;10% E</td>
</tr>
<tr>
<td>Total PUFA (LA + ALA + EPA + DHA):</td>
<td>6 – 11%E</td>
</tr>
<tr>
<td>n-6 PUFA (LA).</td>
<td>2.5 – 9% E</td>
</tr>
<tr>
<td>n-3 PUFA (ALA)</td>
<td>0.5 – 2% E</td>
</tr>
<tr>
<td>TFA</td>
<td>&lt;1% E</td>
</tr>
<tr>
<td>MUFA</td>
<td>15 – 20 %E,</td>
</tr>
</tbody>
</table>
THE MENACE OF SUGARY DRINKS

- CHILDREN CONSUME >50% OF TOTAL BEVERAGE CONSUMPTION
- MAJOR RISK FACTOR FOR OBESITY
- GLOBALLY KILL 2 LAC PEOPLE EVERY YEAR
WHO recommends a reduced intake of free sugar throughout life course.

Free sugars include monosaccharide and disaccharide added to foods and beverages by the manufacturer and sugar present in honey syrup, fruit juice and fruit concentrate.

WHO recommends to limit free sugar intake to less than 10% of total energy.

WHO suggests a further reduction in free sugar to below 5% of total energy intake (conditional recommendations).
SUGARS

- Empty calories with no beneficial effect;
- Related with obesity, diabetes & metabolic syndrome

- **Mainly Fructose is used in commercial products**
- Addictive
- 100% metabolic burden on liver like Alcohol
- Most lipophilic carbohydrate
  (Consuming fructose is consuming fat!!)
- No safe limit
- Metabolism creates toxins like uric acid → gout
- Accelerates progression of CKD, CVDs, promotes CA.
SALT

- Added for preservation and taste
- Limit: 5000 mg Salt = 2000 mg Sodium
- Assoc with Hypertension, Cardiovascular disease (CVD)
- India, hypertension is the leading NCD risk & accounts for over 10 per cent of all deaths.

Reduction in dietary intake by 3 g of salt,
- 50 % ↓↓ in hypertension.
- 22 % ↓↓ deaths from stroke
- 16 % ↓↓ deaths from CHD
1 CAN = 10 tsf Sugar

Nutrition Facts
Serving Size 1 Can
Servings Per Container 12
Amount Per Serving
Calories 140
% Daily Value*
Total Fat 0g 0%
Sodium 45mg 2%
Total Carbohydrate 39g 13%
Sugars 39g
Protein 0g

Standard Can of Soda
Let’s do the calculation:
39g x 4 (4 calories/1g of sugar) = 156 calories
This means there are 156 calories of sugar in every can of soda.

*Note that there are more sugar calories than total calories noted on the label. This is allowable according to CFR-Code of Federal Regulations Title 21.

100% of the calories in every can is SUGAR!

http://dchealthyblites.com
### F-S-S CONTENTS OF SOME COMMON PACKED FOOD

<table>
<thead>
<tr>
<th>Food item</th>
<th>Amount</th>
<th>Calories [Kcal]</th>
<th>Total fat [g]</th>
<th>Saturated fat [g]</th>
<th>Sodium [g]</th>
<th>Added sugar [g]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lays Potato Chips</td>
<td>100 g</td>
<td>544</td>
<td>34</td>
<td>5.4</td>
<td>0.78</td>
<td>1</td>
</tr>
<tr>
<td>Haldiram Aloo Bhujia</td>
<td>100 g</td>
<td>630</td>
<td>50</td>
<td>10</td>
<td>0.68</td>
<td>0</td>
</tr>
<tr>
<td>Maggi Noodles**</td>
<td>80 g</td>
<td>360</td>
<td>14</td>
<td>6.8</td>
<td>0.95</td>
<td>0.8</td>
</tr>
<tr>
<td>Coca Cola</td>
<td>300 ml</td>
<td>156</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>39</td>
</tr>
<tr>
<td>Pepsi</td>
<td>300 ml</td>
<td>156</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>39</td>
</tr>
<tr>
<td>Slice</td>
<td>300 ml</td>
<td>180</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>Maaza</td>
<td>300 ml</td>
<td>156</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>39</td>
</tr>
<tr>
<td>Cadbury Dairy Milk Chocolate**</td>
<td>40 g</td>
<td>211</td>
<td>11</td>
<td>8</td>
<td>0.06</td>
<td>21</td>
</tr>
</tbody>
</table>
FOOD PROCESSING DISASTERS

Just to improve texture, taste & flavour
• preventing growth of microorganisms

• Slows oxidation of fat-rancidity

• carcinogenic to humans (salting, curing [other salts NaNO3, NaNO2], fermenting, smoking)

• SUGAR
INVERT SYRUP

• TRANSFATS
• PARTIALLY HYDROGENATED
• FRACTIONATED
FOOD ADDITIVES

IT IS IMPOSSIBLE TO PRESERVE FOOD WITHOUT ADDED CHEMICALS & ADDITIVES

– Artificial flavours
– Colouring agents
– Preservatives
– Caffeine
  – Use in carbonated beverages and energy drinks
  – Addictive stimulant
  – In excess leads to impaired muscle and nerve functions and dehydration
ENERGY DRINKS: A DANGEROUS PLOT

Over-consumption - potential AE to \( \uparrow \uparrow \) caffeine

Use in carbonated beverages and energy drinks

Addictive stimulant

excess leads to impaired muscle and nerve functions and dehydration

Toxic Dose is 200 mg (1 mg = 4 ppm) ppm

<table>
<thead>
<tr>
<th>Brand</th>
<th>Amount (mL)</th>
<th>Cost (Rs)</th>
<th>Caffeine content declared by manufacturer (ppm)</th>
<th>Caffeine content as tested by CSE (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Bull</td>
<td>250</td>
<td>95</td>
<td>320 (80 mg/250 mL)</td>
<td>310.08</td>
</tr>
<tr>
<td>Tzinga</td>
<td>250</td>
<td>25</td>
<td>300 (75 mg/250 mL)</td>
<td>258.37</td>
</tr>
<tr>
<td>Triple X</td>
<td>250</td>
<td>75</td>
<td>100</td>
<td>117.14</td>
</tr>
<tr>
<td>Cloud 9</td>
<td>250</td>
<td>85</td>
<td>Not given</td>
<td>142.25</td>
</tr>
<tr>
<td>Burn</td>
<td>300</td>
<td>75</td>
<td>320</td>
<td>291.73</td>
</tr>
</tbody>
</table>

Source: CSE (Centre for Science and Environment). (2013)
INFLUENCE OF MEDIA
THEIR IDEALS
FOOD SALES

Toofani karte hain ??
TV: MAJOR FACTOR AFFECTING FOOD CHOICES IN CHILDREN

Environmental Victim...

• Targeted by food industry.
• Major viewer of TV
• Limited knowledge & Little understanding
• Food Habits formed at this age persist in adulthood.....
Beginning of an addiction
CREATING BRAND CONSCIOUS BABIES?

• 6 months: MENTAL IMAGES OF CORPORATE LOGOS AND MASCOTS.

• 2 years: BRAND LOYALTY.
INDUSTRY IN SEARCH OF PERMANENT LOYAL CLIENTS

From infancy till end
Hyperactive Children
Pestering Power
Yielding Guilty Parents/Grandparents
Money & Mobiles
Free Home Delivery
Sales on Food
Integral part of all Celebrations
Foods a part of Reward/Punishment

CRADLE TO GRAVE TACTICS
**SCREEN TIME:**

- Sedentary=Screen Time=No PA
- Unregulated Snacking...Overeating
- Tend to consume higher fat foods and less fruits, vegetables
- Media influences eating behaviours Food choices esp when their idols speak about a food
- Less Sleep time
  - obesity is highest in children watching TV≥4 hours/day,>25%.
  - TV in bedroom increases odds of overweight by additional 31% for every hour watched...

**RECOMMENDATIONS:**

- No TV in bed room
- No eating in front of TV
- Limiting screen time < 2Hrs a day (AAP 14 hrs Screen time per week.)
- Taking activity breaks during commercials

*TV, computer and videogames are a privilege, not a right!!*
What can we do ??

A] Improve Food Choices
   Ingredient choices !!
B] Read before you buy/eat !!
C] Adopt Traffic Light System to
   choose Food + Ingredients
   Red: Eat Least
   Yellow: Eat Moderately
   Green: Eat At Lib
D] Adopt Principles of Healthy Life style
Children grow up in 3 environments

HOME

COMMUNITY

SCHOOL
WHY TACKLE THE FAMILY?

Both parents obese = child’s risk of obesity-\textup{\textsuperscript{\textup{s\textup{ed}}} } 6-15x
<table>
<thead>
<tr>
<th>RECOMMENDATION</th>
<th>QUALITY OF EVIDENCE</th>
<th>STRENGTH OF RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit child’s consumption of sugar sweetened beverages;</td>
<td>HIGH</td>
<td>STRONG</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eat a diet with the recommended quantities of fruits and vegetables</td>
<td>HIGH</td>
<td>STRONG</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eat breakfast daily;</td>
<td>HIGH</td>
<td>STRONG</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eat meals together as much as possible;</td>
<td>HIGH</td>
<td>STRONG</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limit eating out, especially eating at fast food restaurant</td>
<td>HIGH</td>
<td>STRONG</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjust portion sizes appropriately for age;↑ over last 4 decades.</td>
<td>HIGH</td>
<td>STRONG</td>
</tr>
</tbody>
</table>

FAMILY LEVEL

• Ensure breakfast
• Meal time should be family time.
• No TV viewing while eating.
• Respect food choices while ensuring healthy menu.
• Foods should never be a part of reward or punishment.
• Follow principles of healthy lifestyle for all.
SCHOOL LEVEL

1. Ban availability of most common junk foods in schools & nearby

PIL Successful

2. Develop a School canteen policy.

3. Regulate/restrict marketing promotion of junk food e.g. sponsors of school fete.

4. Ensure minimum 1hr physical activity in school routine.

5. Mandatory BMI record yearly.
NUTRIENT PROFILING MODELS TO CATEGORISE FOOD

TRAFFIC LIGHT CONCEPT
What should be available at School?!

- Traffic Light Concept!

<table>
<thead>
<tr>
<th>Color</th>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREEN</td>
<td>Always on menu</td>
<td>Vegetables, legumes, fruits, grain (cereal) foods; mostly whole grain and/or high in fibre, lean meat, egg, fish etc</td>
</tr>
<tr>
<td>YELLOW</td>
<td>Select carefully small portion size and reduced frequency</td>
<td>Baked vegetable-based snacks, ice creams, milk-based ices and dairy desserts etc</td>
</tr>
<tr>
<td>RED</td>
<td>Not on menu Banned from schools as they are HFSS</td>
<td>Energy drinks, carbonated &amp; other sweetened beverages, fried packaged foods, chocolates, potato fries</td>
</tr>
</tbody>
</table>
GREENING THE MENU

- Choose vegetable topped pizza - skip fatty meat toppings
- Choose grilled chicken - skip fried foods
- Choose smaller portions - skip “super size”
- Other good choices: baked veggies, side salads, bean burritos
When To Intervene?

BMI Trajectory

Obesity

Overweight

Rapid Weight Gain
REGULATIONS/ACTIONS REQUIRED AT ALL LEVEL

- Child
- Government
- Junk Food
- Family
- Community
- School
CONSUMER AWARENESS
FOR ALL
CHILD/PARENTS/TEACHERS/
COMMUNITY...ALL

IN GUISE OF HEALTH
These do not claim to be health foods...
These do! “Tasty Nutrition”

“Tasty Nutrition”:
26.6 gm/ 30 gm carbs = 88.7% sugar!
THESE ARE POSITIONED AS HEALTHY!

Zero cholesterol! Trans Fat free!
Per 100 gm: 489 cal; Fat 21.2%
Whole wheat flour 15.3%: so 85%
maida: of course better than 100% maida!
Edible common Salt: content ???

Ingredients: listed in order of amounts: Refined wheat flour 70%, edible vegetable oil, sugar, yeast, salt, milk solids, emulsifiers, malt extract, raising agent.
Fat 14%, sugar 3%
So 70 maida + 14 fat + 3 sugar = 87%. What is the remaining 13%?
HEALTHY VS JUNK BISCUITS

##### glucose biscuits:  
449 cal/ 100 gm  
- Carbs 76.2%, of which sugar 25.6%,  
- protein 8.7%, fat 12.1%  
- Ingredients: maida 60%, sugar 25.6%, edible veg oil 12.1%...

##### Cream biscuits:  
474 cal/ 100 gm  
- Carbs 76%, of which sugar 30%, protein 5.5%, fat 16.5%  
- Ingredients: maida, sugar, edible veg oil, hydrogenated veg oil, sugar...
Back reads: “Atta 51%”
Per slice 72 calories, 14mg Na

##### Multi Grain bread: whole wheat flour 48%, High Fibre ???
Legumes + oil seeds 6%, cereal products 5%...
Sugar 3.5%, fat 4%, edible common salt, amt: ????

The calories in baked and regular chips are the same, so is the salt content!
Regular VS Diet Snacks...!!

Nylon Chivra:
462 cal/ 100gm; 119 cal/ 25gm.
600 mg Na/100gm: 20% of day’s RDA

Diet Chivra: ‘Savour this light snack guilt free’
522 cal/ 100gm; 130 cal/ 25gm.
1450 mg Na/100gm
Regular VS Diet Snacks...!!

<table>
<thead>
<tr>
<th>Ingredients:</th>
<th>Kaju Dalmoth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutritional Information</td>
<td><img src="image1" alt="Nutritional Information" /></td>
</tr>
</tbody>
</table>

Chappan Bhog ‘Salty Delite’: **535 cal/ 100 gm**
Salt: not mentioned!!
Energy bars: ↑ High calories,
Can you read the information??

‘Low fat, power packed snack’
132 cal/ bar
30% sugar! 13.3% fat...

‘Healthy snack for women’
Hi Calcium !!!! 160 cal/ bar
Corn syrup, fructo-oligosaccharides, fructose, glycerine,....
HEALTHY SOUP....Low in fat: 8.2g !!
Carb 61g+ 7g Sugar !!
Look at the Na: 3977 g/100 g
Nutritional values of ???HEALTH DRINKS CLAIMED

• Recommended by Pediatricians!!
• Clinically proven to help kids grow!!
• Pictures show Child gain height!!
• For Picky eaters!!
• Complete balanced Nutrition!!
<table>
<thead>
<tr>
<th>BRAND</th>
<th>CALORIES (KCAL)</th>
<th>CARBOHYRATES</th>
<th>SUGAR</th>
<th>FAT</th>
<th>PROTEIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>B#####</td>
<td>383</td>
<td>85.4 gm</td>
<td>71.1 gm</td>
<td>18</td>
<td>7.1</td>
</tr>
<tr>
<td>H#####</td>
<td>355</td>
<td>71.2 gm</td>
<td></td>
<td>3.1 gm</td>
<td>10.1 gm</td>
</tr>
<tr>
<td>C#####</td>
<td>439</td>
<td>60.8 gm</td>
<td>34.6 gm</td>
<td></td>
<td>15.6</td>
</tr>
<tr>
<td>P#####</td>
<td>463</td>
<td>61.3 gm</td>
<td></td>
<td>18.19 gm</td>
<td>13.87</td>
</tr>
<tr>
<td>N#####</td>
<td>101.2</td>
<td>15.8 gm</td>
<td></td>
<td>2.3 gm</td>
<td>4.15 gm</td>
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<tr>
<td>P#####</td>
<td>179.6</td>
<td>26.9 gm</td>
<td></td>
<td>0.6 gm</td>
<td>16.8 gm</td>
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<tr>
<td>B#####</td>
<td>385</td>
<td>83 gm</td>
<td>27 gm</td>
<td>3 gm</td>
<td>8 gm</td>
</tr>
<tr>
<td>A#####</td>
<td>392</td>
<td>85 gm</td>
<td>32.7 gm</td>
<td>2.2 gm</td>
<td></td>
</tr>
</tbody>
</table>
INDIA

• FSSAI has laid standards for manufacture/storage/supply/restriction on ads/penalty for misleading ads

• NGO Udai Pai Foundation PIL Delhi HC 2010

• 16.3.15 APPROVED, ORDERED STRICT IMPLEMENTATION, GIVEN FSSAI TIME TO CONVERT THESE GUIDELINES TO LAWS & ENFORCE THEM

• CBSE has already passed orders in all Schools of the Country
GOVERNMENT

- **HEALTH & FAMILY WELFARE**
  Health Education regarding Healthy Life Style
  School Health Check Up

- **EDUCATION**
  Mandatory Yearly Health Check ups & BMI
  60-45 min of Physical Activity daily
  Encourage Walk/Biking to School if Possible
  School Canteen Policy
  Banning of Junk Food in and 500 metres around School

- **TRANSPORT**
  Cycle/Walking Paths

- **SPORTS**
  No Sponsors from Unhealthy Foods/Drinks

- **MEDIA & ADVERTISING**
  Responsible Media Advertising
  All Food Ads should be screened by an Expert Committee to check for scientific authenticity/adverse effects/exaggerated claims/timings/channels of ads
  No Ads on Kids Channel...at least upto 9 pm initially
  TV, newspapers and school education campaigns.

- **MEDIA PERSONALITIES**...should be made socially responsible for the alarming rise in burden of NCDs
FSSAI

• Identify HFSS Foods
• Ban availability of Junk Food in & 500 mtr around schools
• List Unpackaged Food Items NEEDING REGULATIONS
• Implement School Canteen Guidelines on Traffic Light Concept
  80% of the Foods should be from Green Category
  Red Category should be banned
  Attempt to Greening the Yellow Category

Stringent Implementation of the Regulation Policy with a clear FOP Labelling ('front-of-pack' labelling)
  Nutrition facts labelling.
  Establish stringent limits for unhealthy ingredients like trans fatty acids.
JUNK FOOD CATEGORISATION BASED ON NUTRIENT PROFILING MODEL OF THE UK

Total 'A' points = points for energy + points for saturated fat + points for sugars + points for sodium.
Total 'C' points = points for % fruit, vegetable & nut content + points for fibre + points for protein.

Overall score = Total 'A' points - Total 'C' points

- A food is classified as 'less healthy' where it scores 4 points or more.

- A drink is classified as 'less healthy' where it scores 1 point or more.
# NUTRIENT PROFILING MODEL OF UK SCORE FOR FOOD ITEMS IN INDIA

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Cut-off score</th>
<th>Score !!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lays Potato Chips</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Haldiram Aloo Bhujia</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>Maggi Noodles</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>McAloo Tikki Burger</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Cadbury Dairy Milk Chocolate</td>
<td>4</td>
<td>24</td>
</tr>
<tr>
<td>Coca Cola</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pepsi</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Slice</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Maaza</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
**Nutrition Facts**

Serving Size: 2/3 cup (55g)
Servings Per Container: About 8

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>% Daily Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories</td>
<td>230</td>
</tr>
<tr>
<td>Calories from Fat</td>
<td>40</td>
</tr>
<tr>
<td>Total Fat</td>
<td>8g</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>1g</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0g</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>0mg</td>
</tr>
<tr>
<td>Sodium</td>
<td>160mg</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>37g</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>4g</td>
</tr>
<tr>
<td>Sugars</td>
<td>1g</td>
</tr>
<tr>
<td>Protein</td>
<td>3g</td>
</tr>
</tbody>
</table>

Vitamin A: 10%
Vitamin C: 8%
Calcium: 20%
Iron: 45%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.

<table>
<thead>
<tr>
<th>Calories:</th>
<th>2,000</th>
<th>2,500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fat</td>
<td>Less than 65g</td>
<td>80g</td>
</tr>
<tr>
<td>Sat Fat</td>
<td>Less than 20g</td>
<td>25g</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>Less than 300mg</td>
<td>300mg</td>
</tr>
<tr>
<td>Sodium</td>
<td>Less than 2,400mg</td>
<td>2,400mg</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>360g</td>
<td>375g</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>25g</td>
<td>30g</td>
</tr>
</tbody>
</table>

**Menu label**

**Premium & Double Stacked Subs**

- **6" Sub**
  - 590 THE FEAST: 5.29 Cal 5.29
  - 520 BIG PHILLY CHEESESTEAK: 5.29 Cal 480
  - 580 PASTRAMI: 5.29 Cal 420
  - DOUBLE® Turkey Breast: 4.99 Cal 630
  - DOUBLE® Sweet Onion Chicken Teriyaki: 5.49 Cal 630
  - DOUBLE® Subway Club®: 5.29 Cal 630
  - DOUBLE® Italian B.M.T.: 5.29 Cal 630

**Traffic light label**

- Energy: 460KJ / 110kcal
- Fat: 0.7g - LOW
- Saturated Fat: 0.1g - LOW
- Carbohydrate: 1.1g - MEDIUM
- Sugars: 5.1g - MED
- Sodium: 0.2g - MEDIUM

*Typical values per 100g: Energy 1530 KJ / 360 kcal*
JAAGO GRAAHAK JAAGO !!

DON'T BELIEVE THE FALSE EXAGGERATED CLAIMS

"CRADLE TO GRAVE " BUSINESS TACTICS

READ before buy [read in bw the lines too!!]

WHATEVER IS ADVERTISED IS UNHEALTHY...

NATURAL HAS NEVER BEEN ADVERTISED
LET'S STOP BEING TAMED BY GADGETS
We don’t need junk food, say school kids

MOVE HC The court had earlier slammed Centre for delay in enforcing the ban

NEW DELHI: On Wednesday, a group of school students joined the growing lobby demanding ban on the sale of junk food in schools and college canteens across the country.

"Uncontrolled consumption of junk food and beverages is leading to obesity... Does the fundamental right of an individual or a group to engage in an economic activity allow him to harm the lives of others?" asked the petition filed by 10 students of Father Agnel School. They also submitted postcards to the bench headed by Acting Chief Justice Ajay Kumar Goel.

We want the government to take "has written" to all state health told the court. "On one hand.
PLEA ON BEHALF OF IAP TASK FORCE FOR PREVENTION OF CHILDHOOD OBESITY & NCDs

TREAT JUNK FOOD LEGALLY AS TOBACCO !!
ANY TAKERS? ADVERTISE US !!
Fruits and vegetables...more matters! Eat at least 5 servings a day. Limit 100% fruit juice.

Participate in at least one hour of moderate to vigorous physical activity every day.

Cut screen time to 2 hours or less a day.

Restrict soda and sugar-sweetened sports and fruit drinks. Instead, drink water and 3-4 servings/day of fat-free/skim or 1% milk.