

# Nutrition in Children

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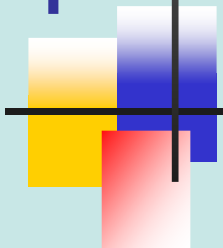
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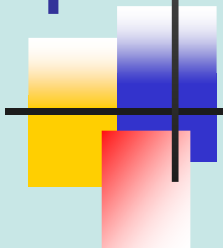


# Topics of interest

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- Dietary Guidelines for Healthy Children
- Overweight in Children
- Childhood obesity
- Dehydration in Children

Topics of interest



# Topics of interest

- Dietary Guidelines for Healthy Children



Topics of interest

# Dietary Guidelines for Healthy Children



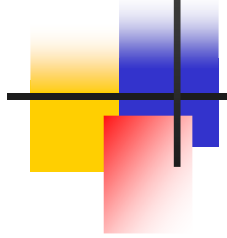
Dietary Guidelines



# Healthy Pattern of Nutrient Intake

- The following pattern of nutrient intake is recommended:
  - **Saturated fat** -- 7-10% of total calories
  - **Total fat** -- an average of no more than 30% of total calories
  - **Dietary cholesterol** -- less than 300mg per day
    - Each of these numbers refers to an average of nutrient intake over several days.

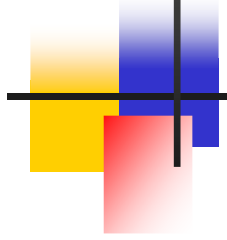
A Healthy Diet



# C.I.N.D.I. Dietary Guidelines

1. Eat a nutritious diet based on a **variety of foods** originating mainly from plants, rather than animals.
2. Eat **bread, grains, pasta, rice or potatoes** several times a day.
3. Eat a variety of **vegetables and fruits**, preferably fresh and local, several times per day (at least 400g per day).

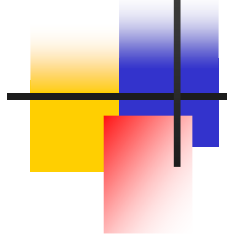
A Healthy Diet



# C.I.N.D.I. Dietary Guidelines

4. Maintain **body weight** between the recommended limits (BMI of 20-25) by taking moderate levels of physical activity, preferably daily.
5. Control **fat intake** (not more than 30% of daily energy) and replace most saturated fats with unsaturated vegetable oils or soft margarines.

A Healthy Diet

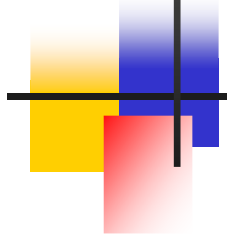


## C.I.N.D.I. Dietary Guidelines

6. Replace fatty meat and meat products with beans, legumes, lentils, fish, poultry or lean meat.
7. Use milk and dairy products (sour milk, yoghurt and cheese) that are low in both fat and salt.
8. Select foods that are low in sugar, and eat refined sugar sparingly, limiting the frequency of sugary drinks & sweets.

A Healthy Diet





## C.I.N.D.I. Dietary Guidelines

11. Prepare food in a safe and hygienic way.  
Steam, bake, boil or microwave to help reduce the amount of added fat.
12. Promote exclusive **breast-feeding** and the introduction of safe and adequate complementary foods from the age of about 6 months, but not before 4 months, while breast-feeding continues during the first years of life.

A Healthy Diet

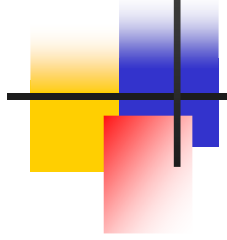




# Topics of interest

Overweight in Children

Topics of interest



# Overweight in Children

- Among American children ages 6-11, the following are overweight, using the 95<sup>th</sup> percentile of body mass index (BMI) values on the CDC 2000 growth chart:
  - For non-Hispanic whites, 12.0% of boys and 11.6% of girls.
  - For non-Hispanic blacks, 17.1% of boys and 22.2% of girls.
  - For Mexican Americans, 27.3% of boys and 19.6% of girls.

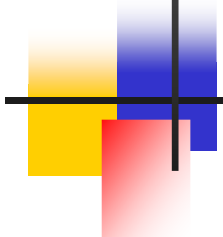
Overweight



# Overweight in Adolescents

- Among American adolescents ages 12-19, the following are overweight, using the 95<sup>th</sup> percentile of BMI values on the CDC 2000 growth chart:
  - For non-Hispanic whites, 12.8% of boys and 12.4% of girls.
  - For non-Hispanic blacks, 20.7% of boys and 26.6% of girls.
  - For Mexican Americans, 27.6% of boys and 19.4% of girls.

Overweight

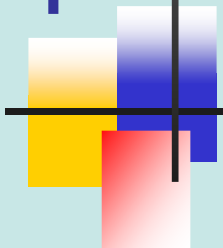


# Overweight – STATISTICS

- Based on data from the 1999-2000 NHANES, the prevalence of overweight in children ages 6-11 increased from 4.2% to 15.3% compared with data from 1963-65. The prevalence of overweight in adolescents ages 12-19 increased from 4.6% to 15.5%.



Overweight

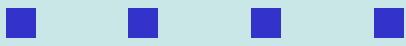


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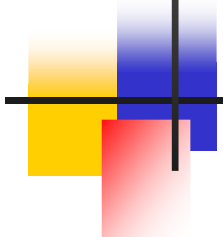


Topics of interest

Childhood obesity



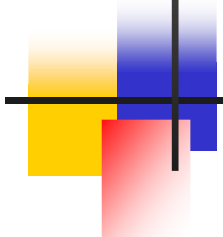




# Causes of Childhood Obesity

- Genetics - ??
- Diet
  - 50-100 kcal in excess => obesity
- Physical inactivity
- Hormones

Childhood Obesity



# Preventing & Treating Childhood Obesity

- Reaching and maintaining an appropriate body weight is important. That is why recommendations that focus on **small** but **permanent** changes in eating may work better than a series of short-term changes that can't be sustained.

Childhood Obesity

# Preventing & Treating Childhood Obesity

## - RECOMMENDATIONS

1. **Reducing dietary fat** is the easiest change. Highly restrictive diets that forbid favorite foods are likely to fail. They should be limited to rare patients with severe complications who must lose weight quickly.
2. **Becoming more active** is widely recommended. Increased activity is common in all studies of successful weight reduction. Create an environment that fosters physical activity.

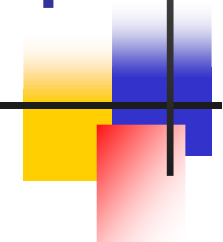
Childhood Obesity

# Preventing & Treating Childhood Obesity

## - RECOMMENDATIONS

3. Parents' involvement in modifying obese children's behaviour is important. Parents who model healthy eating and activity can positively influence their children's health.

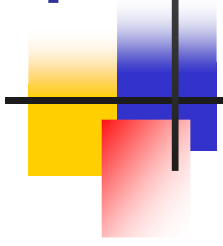
Childhood Obesity



# Treating Childhood Obesity

- In treating most obese children, the main emphasis should be to prevent weight gain above what's appropriate for expected increases in height. This is called prevention of increased weight gain velocity. For many children this may mean limited or no weight gain while they grow taller.
- Recommendations for maintaining weight should include regular physical activity and careful attention to diet to avoid too many calories.

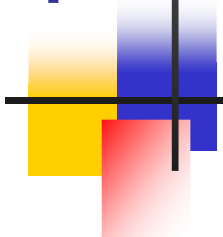
Childhood Obesity



# Treating Childhood Obesity

- Factors predicting success are:
  - frequent intervention visits.
  - including parents in the dietary treatment program.
  - strong social support of dietary intervention from others involved in preparing food.
  - regular exercise prescription including social support.

Childhood Obesity



# Treating Childhood Obesity

- The importance of continuing these lifestyle changes well past the initial treatment period should be emphasized to the entire family. The healthiest way to change weight is gradually.

Childhood Obesity

# Topics of interest

- Dehydration in Children

Topics of interest

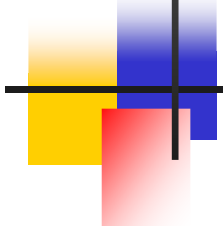


# Causes of Dehydration in

## Children - 1

- Dehydration is most often caused by a **viral infection** that causes fever, diarrhoea, vomiting, and a decreased ability to drink or eat.
  - Common viral infections causing vomiting and diarrhoea include rotavirus, Norwalk virus, and adenovirus.
- Sometimes **sores in a child's mouth** caused by a virus make it painful to eat or drink, helping cause or worsen dehydration.
- More serious **bacterial infections** may make a child less likely to eat and may cause vomiting and diarrhoea.
  - Common bacterial infections include *Salmonella*, *Escherichia coli*, *Campylobacter*, and *Clostridium difficile*.

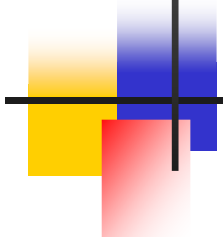
Dehydration



# Causes of Dehydration in Children – 2

- Parasitic infections such as *Giardia lamblia* cause the condition known as giardiasis.
- Increased sweating from a very hot environment can cause dehydration.
- Excessive urination caused by unrecognized or poorly treated diabetes (not taking insulin) is another cause.
- Conditions such as cystic fibrosis or sprue do not allow food to be absorbed and cause dehydration.

Dehydration



# Symptoms of dehydration in children

- Be concerned if your child has an excessive loss of fluid by vomiting or diarrhoea, or if the child refuses to eat or drink.

Dehydration



# Signs of dehydration in children

- Signs of dehydration
  - Sunken eyes
  - Decreased frequency of urination or dry diapers
  - Sunken front fontanel
  - No tears when the child cries
  - Dry or sticky mucous membranes
  - Lethargy
  - Irritability



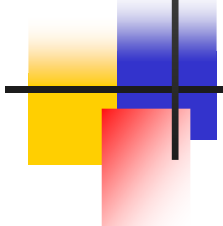
Dehydration



# In cases of mild dehydration

- If the dehydration is mild (3-5% total body weight loss), the doctor may ask you to give the child small sips of Pedialyte or other oral rehydration fluids.
- If your child is able to drink fluids, and no dangerous underlying illness or infection is present, you will be sent home with instructions on oral rehydration, information about things to be concerned with and reasons to return or call back.

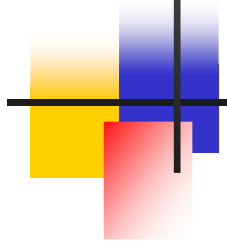
Dehydration



# In cases of moderate dehydration

- If the child is moderately dehydrated (5-10% total body weight loss), the doctor may place an [IV into a vein](#) and give the child fluids in this manner. If your child is able to take fluid by mouth after IV fluid replacement, looks better after IV fluid replacement, and has no apparent dangerous underlying illness or infection, you may be sent home with instructions on [oral rehydration](#), instructions for close follow-up with your family doctor and instructions on things to be concerned about and reasons to return or call back.

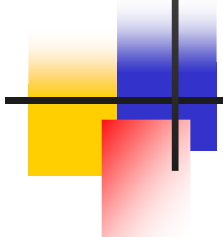
Dehydration



# In cases of severe dehydration

- If the child is severely dehydrated (more than 10-15% weight loss), the child will most likely be admitted to the hospital for **continued IV fluid replacement, observation, and often further tests** to determine what is causing nausea, vomiting, and dehydration. Children with bacterial infections will receive **antibiotics**. In children, vomiting and diarrhoea are **almost never treated with drugs** to stop vomiting (called antiemetics) or antidiarrhoeals.

Dehydration



# Finally

When in doubt, seek expert help or advice!



Thank you

