




OBESITY

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What is the cause of obesity?

- physiologic or pathologic

Pathologic causes of obesity

- **Drugs**: antiepileptics, corticosteroids, risperidone
- **Cushing** syndrome
- **Neuroendocrine** causes: **hypothalamic** tumor, hypothalamic dysfunction, autonomic dysregulation, neural crest tumor syndrome
- **Syndromic** causes :bardet-biedl s.,prader willi s.

physiologic or pathologic

History:

- Age of **onset** of obesity
- **Drugs** (steroids, antiepileptic, risperidone)
- **Family** history of obesity, diabetes, hypertension, liver and gallbladder diseases
- **Psychological** history: depression, school and social issue
- Hirsutism, irregular menstruation

Height & height velocity:

- If height is < 50th percentile, endocrine or syndromic cause of obesity should be considered

Physical exam:

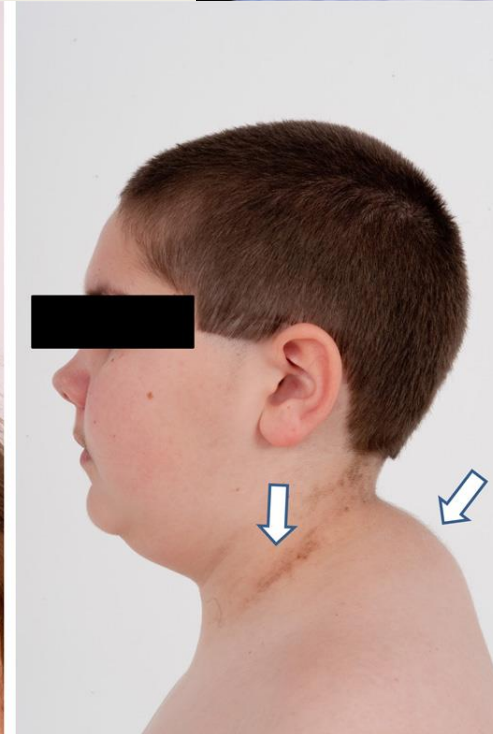
- IQ
- Facial dysmorphism
- Vision: night blindness, photosensitivity, nystagmus
- Skeletal problems, syndactyly, polydactyly
- Heart problems
- Kidney problems
- Striae

Fat distribution:

- **Overeating**: excess fat in the trunk and peripheral
- **Cushing** s: excess fat in the interscapular area (buffalo hump), face, neck and trunk

- **Acanthosis nigricans:** insulin resistance
- **Microcephaly**
- **Genitourinary:** undescended testis, micropenis, delayed puberty, precocious puberty

Cushing syndrome



Bardet biedl Syndrome



- Evaluation in obese patients



Evaluation in obese patients

- FBS, or HbA1C
- TG, Cholesterol (LDL,HDL)
- AST,ALT
- Vitamin D?
- Other evaluations if needed (T4, TSH, cushing syndrome)



Management of obesity

- Life style change
- Pharmacological treatment

Pharmacotherapy

- Fiber products
- Orlistat
- Metformin
- Liraglutide

Orlistat

- The only FDA-approved medication for obesity <16 yr
- Decreases absorption of fat
- Complications: flatulence, oily stool, spotting
- It offers little benefit for severe obesity

Metformin

- Suggested for adolescents with obesity and prediabetes
(FBS: 100-125, random BS: 140-200, HbA1c: 5.7-6.5%)

Liraglutide

NEJM;

- 125 cases on Liraglutide, 3mg, SQ, once daily for 56 wk, 126 on placebo,
- Age: 12-16 yr
- Significant reduction of BMI and weight with Liraglutide
- After discontinuation: Greater increase of BMI with Liraglutide

THANK YOU
FOR YOUR
ATTENTION

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