



# Nutrition during and post pregnancy

## Parenting Awareness for Young people

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**OPEN EUROPE**

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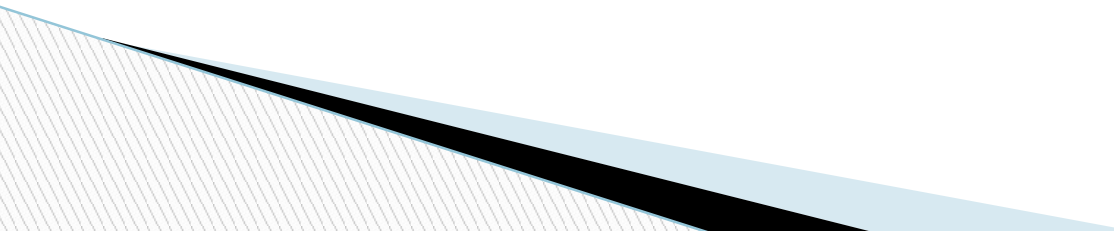


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# OBJECTIVES

- Improve maternal and fetal health, in addition to covering nutritional needs.
  - Decrease the risk of:
    - Birth defects
    - Suboptimal fetal development (e.g. low birth weight )
  - Prevent to develop chronic diseases in the future for the mother and the fetus
- 



# Promote good health



- Optimize nutrition and lifestyle
- Stop smoking and alcohol consumption
- Increase physical activity



Normal body weight

**BMI < 25 KG/m<sup>2</sup>**



Risk of unhealthy pregnancy  
outcomes for both

**Excessive gestational weight  
gain**

# WHY BMI < 25KG/M2 ?

- IMC : <25 Kg/m<sup>2</sup> x < 30 kg/m<sup>2</sup> □ overweight

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□ IMC : ~~<25 Kg/m<sup>2</sup> x~~ >30 kg/m<sup>2</sup> □ overweight

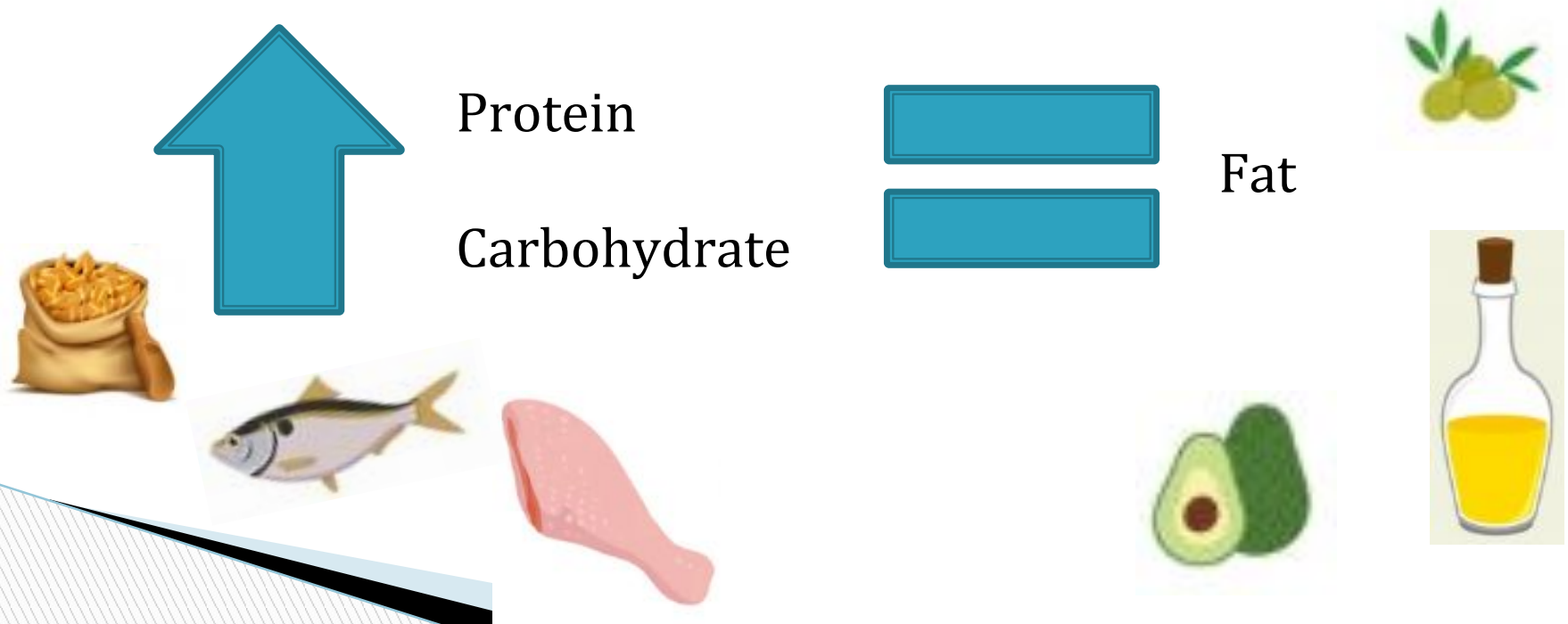
clinically obese



- Gestational diabetes
- Develop preeclampsia
- Caesarean section
- Postpartum haemorrhage
  
- Still-born
- Might be too big (macrosomia)
- Hypoglycemia

# NORMAL WEIGHT GAIN

- Between 10 and 16 kilograms over the whole pregnancy



# NORMAL WEIGHT GAIN

- Between 10 and 16 kilograms over the whole pregnancy



Protein

Carbohydrate



**linoleic and alpha  
linoleic acid !**  
(2 portions fish/week or oily fish)



# KEY MICRO NUTRIENTS

- ▣ **Folate**
- ▣ **Calcium**
- ▣ **Iodine**
- ▣ **Vitamin D**
- ▣ **Vitamin B12**
- ▣ **Iron**



# FOLIC ACID (VITAMIN B9)

- Essential to healthy fetal development
- Needs folate to :
  - Synthesize and repair DNA
  - Cell division and growth
  - Produce healthy red blood cells □ prevent anemia

Folates are essential nutrients



# FOLIC ACID (VITAMIN B9)

18-26 days after conception the neural tube is closed.



Very difficult to arrive with only  
dietary intake



Supplement

(400  $\mu\text{g}$  per day) before and  
during the first 12 weeks

# CALCIUM

- The same for the general population

1000-1300 mg/day

Maternal  
skeleton

CALCIUM

Fetal bone  
development and  
growth



- Dairy products
- Green leafy vegetables
- Fortified soy products or cereals
- Sardines and anchovies (ate with thorns)



# VITAMIN D

- Development of bone mass and bone health.
- The fetus is totally dependent on the maternal pool of vitamin D.



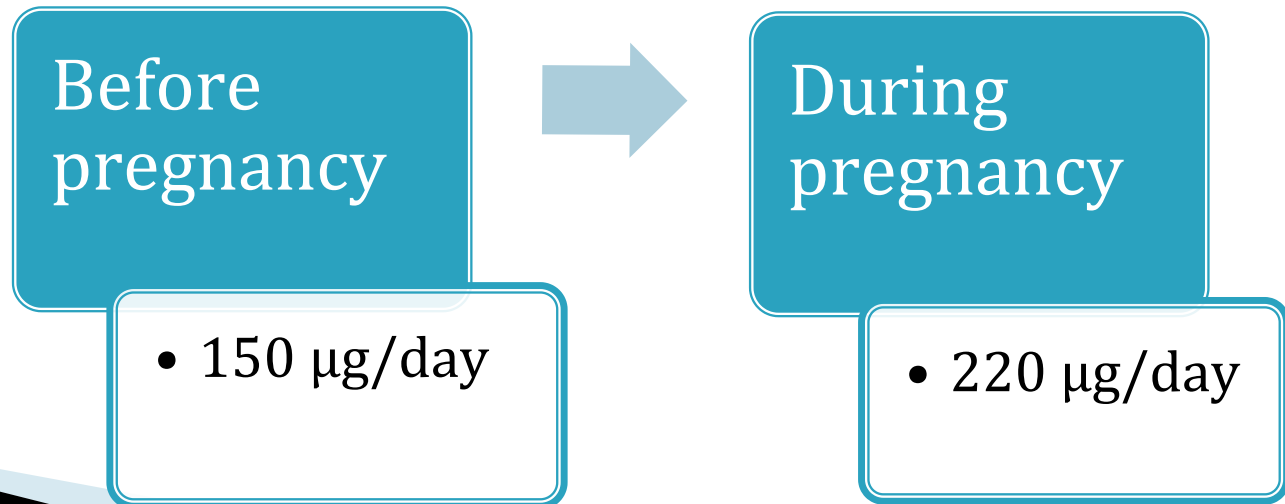
- Oily fish
- Eggs
- Fortification foods (e.g some breakfast cereals)



10  $\mu\text{g}$  vitamin D supplement throughout pregnancy.

# IODINE

- Important role in fertilization and mental development, placental growth and increasing blood volume of the mother .
- Increased demand of thyroid hormones during pregnancy.



# IODINE



iodized salt



Seafood naturally rich in iodine



Fortified food products

# VITAMIN B12

- Essential for the formation of red blood cells.
- Normal neurological function.
- ONLY in animal products:
  - Fish
  - Meat
  - Eggs
  - Dairy products
  - + fortification food



Vegan and vegetarian diet

Supplementation



# IRON



- Needed to:
  - Fetal growth and development
  - Growth of the placenta
  - Increase of maternal red blood cells

- **NOT** recommended **supplementation** for all pregnant women!

*Individually*

- Iron deficiency □ increased the risk for low birth weight

**RDA PRECONCEPTION**

150 µg

**RDA PREGNANCY**

220 µg

**RDA PRECONCEPTION**

15-18 mg

**RDA PREGNANCY**

27 mg

**RDA PRECONCEPTION**

≥ 400 IU

**RDA PREGNANCY**

≥ 600 IU

**IODINE**

**FOLATE**

**IRON**

**VITAMIN B12**

**VITAMIN D**

**CALCIUM**

**RDA PRECONCEPTION**

≥ 400 µg

**RDA PREGNANCY**

400-600 µg

**RDA PRECONCEPTION**

2.4 µg

**RDA PREGNANCY**

2.6 µg


**RDA PRECONCEPTION**

1000-1300 mg

**RDA PREGNANCY**

1000-1300 mg

# POSTPARTUM

- ❑ Not do weight loss diets.
  - ❑ Diet as varied as possible
  - ❑ Consumption of liquid (more if you are breastfeeding)
  - ❑ Eat foods rich in fiber, such as vegetables, fruits, whole wheat bread, in order to avoid the constipation.
  - ❑ Reduce sugars
  - ❑ Intake of iron-rich foods or a supplement to avoid the possible anemia .
- 



An illustration of eight hands clapping in a circle. The hands are arranged in two columns of four. Each hand is shown in a different color and pattern: pink and white stripes, teal, purple with black polka dots, light blue, blue, yellow and white stripes, orange and white stripes, and purple. The hands are clapping, with short lines radiating from the points of contact to indicate motion. The text "THANK YOU!" is centered in the middle of the clapping hands.

**THANK YOU!**