



DORIAN EU RESEARCH PROJECT
THE ROLE OF MATERNAL OBESITY
Mothers and Health conference

8th of March 2016



- DORIAN Developmental ORIGins of healthy and unhealthy AgeiNg
- EU Research project on the impact of obesity during pregnancy on the life of offspring
- Consortium of 10 partners in 6 countries
- January 2012 - December 2014

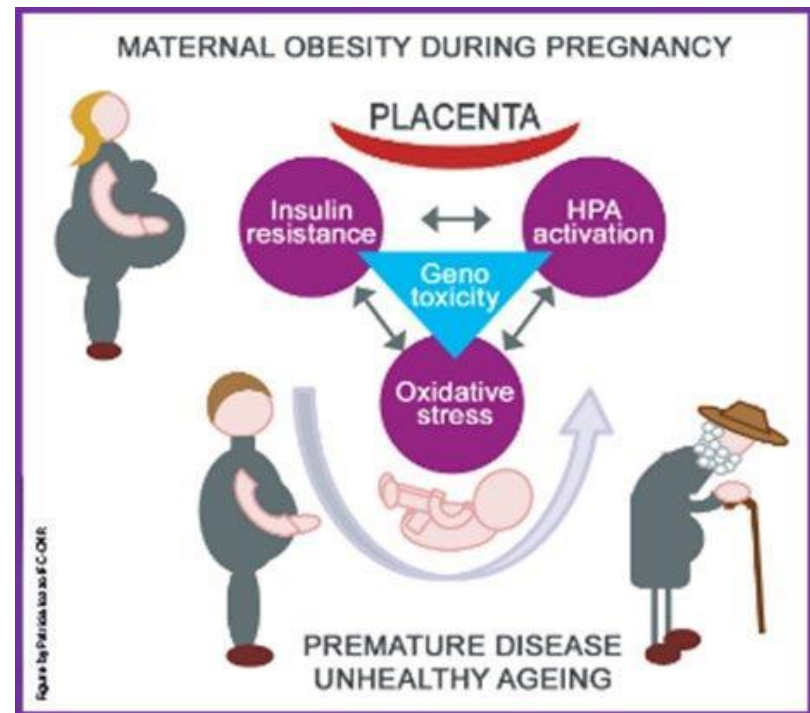
MMM'S ROLE: DISSEMINATION PARTNER WITH EASO

- ✓ To the scientific community
- ✓ End-users and policy makers
- ✓ Provide stakeholders with a practical strategy on how to translate scientific evidence into guidelines, policy, etc.



DORIAN HYPOTHESIS

- Maternal obesity increases the risk of **premature ageing**
- Insulin resistance & exposure to stress = **inflammation, telomere shortening & epigenetic changes**
- **Prevention & Treatment** is possible



1. DORIAN HELSINKI



- 13,000 people
 - 60-70 years old
 - More likely to develop:
 - ✓ Cardiovascular diseases
 - ✓ Cerebrovascular diseases
 - ✓ Type 2 diabetes
- => when born from overweight mothers

2. DORIAN PISA



- 90 mothers and their kids
 - Body Weight of the children
 - Cardiac Development in children is related to
 - ✓ pre-pregnancy overweight
 - ✓ weight gain during pregnancy
- => maternal weight & blood glucose will influence metabolism of the offspring at birth

3. DORIAN PISA (I)



- Telomeres= protective cap at end of DNA
- Long telomeres means health protection & repair of DNA
- Shorter telomeres means disease & shorter lifespan
- Maternal overweight and high weight gain
=> shorter telomeres in offspring

3. DORIAN PISA (II)

Advice for pregnant women

- If born with shorter telomeres
- If they have high weight

situation can be reversed by **PREVENTION!**

- ✓ avoiding excess weight gain
- ✓ being physically active



4. DORIAN EDINBURGH



- Obese mothers have a diet richer in fats & poorer in micronutrients
- Weaker protection against cortisol (stress hormone)
 - ✓ Foetal growth will slow down
 - ✓ Can provoke mental disorders in adulthood
- Advice:
 - ✓ Healthy lifestyle
 - ✓ Seek professional help if anxiety & depression

MESSAGE TO POLICY MAKERS (I)

1. Need to develop **prevention strategies**, incorporating educational tools targeting women of child-bearing age
2. Include advice about **healthy & low-calorie food**
3. Facilitate **cross-talk** between gynaecologists and nutritionists
4. Develop and implement **mindfulness training programs** for parents

MESSAGE TO POLICY MAKERS (II)

5. Develop **new strategies for mental health support** in pregnancy
6. Implement **exercise training programs** for improving the health status of elderly
=> beneficial even in frail women
7. Inform all health care professionals about **potential risks** derived from high fat food
=> on the mother and their offspring

Thank you for your attention

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