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Adult weight change and cardiometabolic disease: studies into underlying pathways

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STELLINGEN BEHOREND BIJ HET PROEFSCHRIFT GETITELD

Adult weight change and cardiometabolic disease

Studies into underlying pathways

1. Body mass index increases the risk of type 2 diabetes and coronary artery disease, regardless of the body tissue in which body mass index-associated genes show differential expression. (this thesis)
2. Atherogenic changes in the metabolic profile related to increased adiposity are already apparent at a young age. (this thesis)
3. Weight gain during adulthood exerts its detrimental effects on cardiometabolic health via excess visceral adipose tissue and liver fat accumulation. (this thesis)
4. Both a favourable body fat distribution and metabolic profile contribute to a low risk of cardiometabolic disease in persons with obesity. (this thesis)
5. “Heterogeneity in variant-specific estimates should be seen as an opportunity to find causal mechanisms, rather than a barrier to Mendelian randomisation investigations” (Burgess et al., Nature Communications, 2020) and helps unravel differential genetic causes of complex traits.
6. “Changes in body mass index are paralleled by changes throughout the metabolite profile, which is consistent with the causal metabolic effects of adiposity” (Wurtz et al., PLOS Medicine, 2014), and indicate early signs of developing cardiometabolic disease.
7. “All individuals possess a maximum capacity for adipose expansion which is determined by both genetic and environmental factors” (Virtue et al., Biochimica et Biophysica Acta, 2010), but with high interindividual variation.
8. A high body mass index increases cardiometabolic disease risk, but “Not every obese patient is insulin resistant or at high risk of diabetes and cardiovascular disease.” (Després et al., Nature, 2007)

9. “We need to go beyond body weight, body mass index, dietary caloric restriction, and generalized weight loss to help patients in clinical practice and in our public health messages” (Neeland et al., Circulation, 2018) as lifestyle changes have been proven difficult in our obesogenic environment.
10. *When you know your own strengths and weaknesses, you are able to control your own actions and ask for help when needed*: *“Know thyself.”* (unknown, inscription at the Temple of Apollo at Delphi, Greece)