

# Gene analysis for studying the process of weight regain after weight loss

Citation for published version (APA):

Roumans, N. J. T. (2017). *Gene analysis for studying the process of weight regain after weight loss*. [Doctoral Thesis, Maastricht University]. Gildeprint Drukkerijen. <https://doi.org/10.26481/dis.20170623nr>

## Document status and date:

Published: 01/01/2017

## DOI:

[10.26481/dis.20170623nr](https://doi.org/10.26481/dis.20170623nr)

## Document Version:

Publisher's PDF, also known as Version of record

## Please check the document version of this publication:

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# Stellingen

behorende bij het proefschrift:

## **Gene analysis for studying the process of weight regain after weight loss**

1. When overweight people return from negative energy balance to balance, gene expression changes of several stress- and extracellular matrix-related genes including their interactions, are highly related to weight regain. (This thesis)
2. The processes of weight loss and weight maintenance are biologically distinct therefore, research on the targets of weight regain after weight loss should be assessed after a period of weight stability. (Adapted from Johansson et al., *The American Journal of Clinical Nutrition*, 2012)
3. Factors involved in the risk for weight regain are more frequently found in the weeks after weight loss, when people return to energy balance, rather than during weight loss itself. (This thesis)
4. Weight loss awakens the body's defence system in a manner that is persistent, saturated with redundancies and well-focused on the objective of restoring the body's depleted energy reserves. (MacLean et al., *Obesity Reviews*, 2015)
5. Genetic variants of extracellular matrix genes are related to a higher risk for weight regain after weight loss in a sex-specific manner. (This thesis)
6. The diameter of subcutaneous abdominal adipocytes increases independently of changes in body weight in the first weeks after weight loss. (This thesis)
7. The contribution of the findings of this thesis to a specific application for prevention of weight regain is limited. Nevertheless, each and every small contribution to better understanding the process involved in the seemingly inevitable weight regain is one step forward to combating a major health issue.
8. Separating genetic factors from other factors is difficult because genes are part of a dynamic system that is constantly in flux in response to environmental cues. (Zlot et al., *Preventing Chronic Disease*, 2007)
9. If people are not making mistakes, they are not trying new things. If they are making the same mistake twice, they are not learning new things! (Walter C. Wright)
10. If you choose not to decide, you still have made a choice. (Rush, Freewill)
11. The complexity of an object depends not on itself, but of the degree to which it is investigated, and the questions we ourselves raise in investigating it. (Johan Hjort)

**Nadia Roumans, 23 Juni 2017**