



Universiteit
Leiden
The Netherlands

Glucose metabolism in healthy ageing

Wijsman, C.A.

Citation

Wijsman, C. A. (2014, October 8). *Glucose metabolism in healthy ageing*. Retrieved from <https://hdl.handle.net/1887/29017>

Version: Corrected Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/29017>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/29017> holds various files of this Leiden University dissertation

Author: Wijsman, Carolien A.

Title: Glucose metabolism in healthy ageing

Issue Date: 2014-10-08

The background of the cover is white and features several faint, stylized floral motifs in a light gray color. These flowers are scattered across the page, with some appearing larger and more detailed than others. A thin, curved line, also in light gray, sweeps across the lower half of the cover, starting from the left edge and curving towards the right.

Glucose metabolism in healthy ageing

Carolien A. Wijsman

Glucose metabolism in healthy ageing

Proefschrift

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden
op gezag van de Rector Magnificus prof. mr. C.J.J.M. Stolker
volgens besluit van het College voor Promoties
te verdedigen op woensdag 8 oktober 2014
klokke 16.15 uur

door

Carolien A. Wijsman

geboren 20 april 1983
te Den Haag

ISBN: 978-90-9028405-7

© 2014 C.A. Wijsman

Copyright of each chapter is with the publisher of the journal in which the work has appeared. No part of this thesis may be reproduced, stored in a retrieval system or transmitted in any form or by any means, without permission of the author or, when appropriate, of the publisher of publications.

Design & layout: M. Odijk

Printed by: SMG Groep

This research was performed within the framework of the Netherland Consortium for Healthy Ageing, which is financially supported by the Netherlands Genomics Initiative (project number 050-060-810).

Financial support for this thesis by the Netherlands Consortium for Healthy Ageing and Philips Healthcare is gratefully acknowledged.

Promotiecommissie

Promotor

Prof. Dr. R.G.J. Westendorp

Co-promotor

Dr. S.P. Mooijaart

Overige leden

Dr. ir. D. van Heemst

Prof. N. Sattar (University of Glasgow, UK)

Prof. A. Bartke (Southern Illinois University School of Medicine, Springfield, USA)

*Women sit, or move to and fro – some old, some young;
The young are beautiful – but the old are more beautiful than the young.*

(Walt Whitman (1819–1892). Leaves of Grass. 1900)

Index

Chapter 1.	Introduction and outline of thesis	9
 <i>Part 1. Glucose metabolism in human longevity and old age</i>		
Chapter 2.	Familial longevity is marked by enhanced insulin sensitivity	17
Chapter 3.	Proton magnetic resonance spectroscopy shows lower intramyocellular lipid accumulation in middle-aged subjects predisposed to familial longevity.	37
Chapter 4.	Responsiveness of the innate immune system and glucose concentrations in the oldest old	53
Chapter 5.	Ambulant 24-hour glucose rhythms mark calendar and biological age in apparently healthy individuals	63
 <i>Part 2. Improving glucose metabolism in an ageing population</i>		
Chapter 6.	Effects of a web-based intervention on physical activity and metabolism in older adults; randomized controlled trial.	83
Chapter 7.	Dose response effects of a Web-based physical activity program on body composition and metabolic health in inactive older adults: additional analyses of a randomized controlled trial	107
Chapter 8.	Perspectives	125
Chapter 9.	Nederlandse samenvatting	131
	Dankwoord	141
	List of publications	142
	Curriculum Vitae	144