



Universiteit
Leiden

The Netherlands

Haemodynamics in children with a Fontan circulation: effects of afterload reduction

Harteveld, L.M.

Citation

Harteveld, L. M. (2023, October 12). *Haemodynamics in children with a Fontan circulation: effects of afterload reduction*. Retrieved from <https://hdl.handle.net/1887/3643760>

Version: 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/1887/3643760>

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

**Haemodynamics in children
with a Fontan circulation:
*effects of afterload reduction***

Lisette Marjolein Harteveld

Haemodynamics in children with a Fontan circulation: *effects of afterload reduction*

© 2023 – Lisette Harteveld

All rights reserved. No part of this publication may be reproduced, stored or transmitted in any form or by any means without prior permission of the author, or the copyright-owning journals for previously published chapters.

ISBN: 978-94-6483-283-9

Provided by thesis specialist Ridderprint, ridderprint.nl

Printing: Ridderprint

Cover design and Layout: Daisy Zunnebeld, persoonlijkproefschrift.nl

Cover image: Lisette Harteveld en
Daisy Zunnebeld, persoonlijkproefschrift.nl

Illustrations: Lisette Harteveld

Financial support by the Dutch Heart Foundation and the Leiden University Library for publication of this thesis is gratefully acknowledged.

All photos in this thesis in which children are depicted are used with permission of their parents/guardians.

**Haemodynamics in children with a Fontan circulation:
*effects of afterload reduction***

Proefschrift

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van rector magnificus prof. dr. ir. H. Bijl,
volgens besluit van het college voor promoties
te verdedigen op donderdag 12 oktober 2023
klokke 16:15 uur

door

Lisette Marjolein Harteveld

geboren te Voorburg
in 1990

Promotor: Prof. Dr. N.A. Blom

Co-promotor: Dr. A.D.J. ten Harkel

Promotiecommissie: Prof. Dr. J.G. van Dijk

Prof. Dr. R.M.F. Berger, Universitair Medisch Centrum Groningen

Dr. A.A.W. Roest

Dr. A.E. van der Hulst, Amsterdam Universitair Medisch Centrum

Table of contents

Chapter 1	General introduction and outline thesis	7
Chapter 2	Research design and data collection sAFE trial	17
Chapter 3	Maturation of the Cardiac Autonomic Nervous System Activity in Children and Adolescents	39
Chapter 4	Determinants of exercise limitation in contemporary paediatric Fontan patients with an extra cardiac conduit	73
Chapter 5	Fluid responsiveness of paediatric Fontan patients by passive leg raising	97
Chapter 6	Orthostatic stress response in paediatric Fontan patients and the effect of ACE inhibition	111
Chapter 7	3-month Enalapril Treatment in Paediatric Fontan Patients with Moderate to Good Systolic Ventricular Function	139
Chapter 8	Treatment and outcome of plastic bronchitis in single ventricle patients: a systematic review	155
Chapter 9	General discussion and future perspectives	183
Chapter 10	Nederlandse samenvatting	197
Appendices	Abbreviations List of publications Curriculum Vitae Dankwoord	209