



Universiteit
Leiden
The Netherlands

Trigger factors and mechanisms in migraine

Schoonman, G.G.

Citation

Schoonman, G. G. (2008, September 11). *Trigger factors and mechanisms in migraine*. Retrieved from <https://hdl.handle.net/1887/13094>

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/1887/13094>

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

TRIGGER FACTORS AND MECHANISMS IN MIGRAINE

Geurt Gerhard Schoonman (roepnaam: Guus)

Geurt Gerhard Schoonman

Trigger factors and mechanisms in migraine

PhD thesis, Leiden University Medical Center, Leiden 2008

ISBN: 978-90-71382-47-5

Layout by: Gildeprint Drukkerijen B.V., Enschede, The Netherlands

Printed by: Gildeprint Drukkerijen B.V., Enschede, The Netherlands

Cover image courtesy: US Geological Survey/Cascades Volcano Observatory, USA

Copyright of individual chapters lies with the publisher of the journal listed at the beginning of each respective chapter. No part of this thesis may be reproduced in any form, by print, photocopy, digital file, internet or any other means without permission from the author.

The investigations described in this thesis were performed at the department of Neurology of the Leiden University Medical Centre, Leiden, the Netherlands and the department of Neurology of the Zurich University Hospital, Zurich, Switzerland. This work was supported by the Netherlands Organisation for Scientific Research (NWO), grantnumber: 940-38-029

Financial support for the printing of this thesis has been generously provided by: Leiden University, Astra Zeneca B.V., Stichting Het Remmert Adriaan Laan Fonds, Janssen-Cilag B.V., Menarini Farma Nederland, Glaxo Smith Kline, Teva Pharma NL, Sanofi Aventis, Nederlandse Hoofdpijn Vereniging, JE Jurriaanse Stichting

TRIGGER FACTORS AND MECHANISMS IN MIGRAINE

Proefschrift

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof.mr. P.F. van der Heijden,
volgens besluit van het College voor Promoties
te verdedigen op donderdag 11 september 2008
klokke 16:15 uur

door

Geurt Gerhard Schoonman
geboren te Deventer in 1974

PROMOTIECOMMISSIE

Promotor: Prof.dr. M.D. Ferrari

Copromotores: Dr. G.M. Terwindt
Dr. J. van der Grond

Referent: Prof.dr. P.R. Saxena

Overige leden Prof.dr. J.G. van Dijk
Prof.dr. M.A. van Buchem

CONTENTS

General introduction and aims of this thesis	7
1. The Prevalence of Premonitory Symptoms in Migraine; A Questionnaire Study in 461 Patients. <i>Cephalalgia 2006; 26: 1209-13.</i>	19
2. Is stress a trigger factor for migraine? <i>Psychoneuroendocrinology 2007;32: 532-538.</i>	27
3. Normobaric hypoxia and nitroglycerin as trigger factors for migraine. <i>Cephalalgia 2006; 26: 816-9.</i>	37
4. Mild Cerebral Edema in Acute Mountain Sickness After Isobaric Hypoxia. A 3 Tesla Magnetic Resonance Imaging Study. <i>Journal of Cerebral Blood Flow and Metabolism. 2008; 28:198-206.</i>	45
5. Magnetic Resonance Angiography of the Human Middle Meningeal Artery: Implications for Migraine. <i>Journal of Magnetic Resonance Imaging. 2006; 24: 918-21.</i>	59
6. Cerebral blood flow response to nitroglycerin predicts the occurrence of a provoked migraine attack <i>Submitted</i>	67
7. Migraine headache is not associated with cerebral or meningeal vasodilatation - a 3T magnetic resonance angiography study. <i>Brain. 2008 May 23 (epub ahead of print)</i>	83
General discussion and conclusions	103
Samenvatting en conclusies	109
References	115
Bibliography	129
Curriculum vitae	131

