



Neurology[®]

April 02, 2013; 80 (14) ARTICLE

Increased childhood incidence of narcolepsy in western Sweden after H1N1 influenza vaccination

Attila Szakács, Niklas Darin, Tove Hallböök

First published March 13, 2013, DOI: <https://doi.org/10.1212/WNL.0b013e31828ab26f>

FULL PDF	CITATION	PERMISSIONS
MAKE COMMENT		SEE COMMENTS

Check for updates

score { 27

Downloads { 425

Add to Cart (\$39)

SHARE

[Article](#)[Figures & Data](#)[Info & Disclosures](#)

This article requires a subscription to view the full text. If you have a subscription you may use the login form below to view the article. Access to this article can also be purchased.

Abstract

Objectives: To assess the incidence of narcolepsy between January 2000 and December 2010 in children in western Sweden and its relationship to the Pandemrix vaccination, and to compare the clinical and laboratory features of these children.

Methods: The children were identified from all local and regional pediatric hospitals, child rehabilitation centers, outpatient pediatric clinics, and regional departments of neurophysiology. Data collection was performed with the aid of a standardized data collection form, from medical records and telephone interviews with patients and parents. The laboratory and investigational data were carefully scrutinized.

Results: We identified 37 children with narcolepsy. Nine of them had onset of symptoms before the H1N1 vaccination and 28 had onset of symptoms in relationship to the vaccination. The median age at onset was 10 years. All patients in the postvaccination group were positive for human leukocyte antigen (HLA)–DQB1*0602. Nineteen patients in the postvaccination group, compared with one in the prevaccination group, had a clinical onset that could be dated within 12 weeks.

Conclusion: Pandemrix vaccination is a precipitating factor for narcolepsy, especially in combination with HLA-DQB1*0602. The incidence of narcolepsy was 25 times higher after the vaccination compared with the time period before. The children in the postvaccination group had a lower age at onset and a more sudden onset than that generally seen.

GLOSSARY

AAN.COM (HTTPS://WWW.AAN.COM)

AAN PUBLICATIONS

CI = confidence interval; **HLA** = human leukocyte antigen; **MSLT** = multiple sleep latency test; **OSA** = obstructive sleep apnea; **PLMS** = periodic limb movements during sleep; **PSG** = polysomnography

Footnotes

Go to Neurology.org for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the article.

Editorial, page 1276

Received April 4, 2012.

Accepted November 16, 2012.

© 2013 American Academy of Neurology

[View Full Text](#)

AAN Members


We have changed the login procedure to improve access between AAN.com and the Neurology journals. If you are experiencing issues, please log out of AAN.com and clear history and cookies. (For instructions by browser, please click the instruction pages below). After clearing, choose preferred Journal and select login for AAN Members. You will be redirected to a login page where you can log in with your AAN ID number and password. When you are returned to the Journal, your name should appear at the top right of the page.

[CLICK HERE TO LOGIN](#)

AAN Non-Member Subscribers

[CLICK HERE TO LOGIN](#)

Purchase access

 Add to Cart (\$39)

For assistance, please contact:

AAN Members (800) 879-1960 or (612) 928-6000 (International)

Non-AAN Member subscribers (800) 638-3030 or (301) 223-2300 option 3, select 1 (international)

Sign Up

Information on how to subscribe to Neurology and Neurology: Clinical Practice can be found here

Purchase

Individual access to articles is available through the Add to Cart option on the article page. Access for 1 day (from the computer you are currently using) is US\$ 39.00. Pay-per-view content is for the use of the payee only, and content may not be further distributed by print or electronic means. The payee may view, download, and/or print the article for his/her personal, scholarly, research, and educational use. Distributing copies (electronic or otherwise) of the article is not allowed.

Disputes & Debates: Rapid online correspondence

No comments have been published for this article.
AAN.COM (HTTPS://WWW.AAN.COM) AAN PUBLICATIONS

 COMMENT

YOU MAY ALSO BE INTERESTED IN

EDITORIAL

Better biomarkers for childhood narcolepsy-cataplexy Are we there?

Sanjeev V. Kothare, Suresh Kotagal
August 12, 2019

EDITORIAL

Association between H1N1 vaccination and narcolepsy–cataplexy Flu to sleep

Sanjeev V. Kothare, Max Wiznitzer
March 13, 2013

ARTICLE

Narcolepsy and influenza A(H1N1) pandemic 2009 vaccination in the United States

Jonathan Duffy, Eric Weintraub, Claudia Vellozzi, et al.
October 15, 2014

SUNDAY, APRIL 26

Autoimmunity to Hypocretin/Orexin and Molecular Mimicry to Flu in Type 1 Narcolepsy (4989)

Guo Luo, Aditya Ambati, Ling Lin, et al.
April 14, 2020

EDITORIAL

Vaccination Not a trigger for MS

E. Ann Yeh, Jennifer Graves
July 30, 2019

[^ Back to top](#)

MORE ONLINE
AAN.COM (HTTPS://WWW.AAN.COM)

AAN PUBLICATIONS

 CME Course

RELATED ARTICLES

Association between H1N1 vaccination and narcolepsy–cataplexy
Flu to sleep

TOPICS DISCUSSED

All Pediatric

Narcolepsy

Risk factors in epidemiology

ALERT ME

Alert me when eletters are published

AAN.COM (HTTPS://WWW.AAN.COM)

AAN PUBLICATIONS



Articles

[Ahead of Print](#)

[Current Issue](#)

[Past Issues](#)

[Popular Articles](#)

[Translations](#)

About

[About the Journals](#)

[Ethics Policies](#)

[Editors & Editorial Board](#)

[Contact Us](#)

[Advertise](#)

Submit

[Author Center](#)

Submit a Manuscript
[AAN.COM \(HTTPS://WWW.AAN.COM\)](https://www.aan.com)

AAN PUBLICATIONS

Information for Reviewers

AAN Guidelines

Permissions

Subscribers

Subscribe

Activate a Subscription

Sign up for eAlerts

RSS Feed



Neurology

Neurology: Clinical Practice

Neurology: Genetics

Neurology: Neuroimmunology & Neuroinflammation

AAN.com

AANnews

Continuum

Brain & Life



Neurology | Print ISSN:0028-3878

Online ISSN:1526-632X

© 2020 American Academy of Neurology

[Privacy Policy](#) [Feedback](#) [Advertise](#)