# Systematic review of interventions for treating or preventing antipsychotic-induced tardive dyskinesia

Hanna Bergman,<sup>1</sup> Dawn-Marie Walker,<sup>2</sup> Adriani Nikolakopoulou,<sup>3</sup> Karla Soares-Weiser<sup>4</sup> and Clive E Adams<sup>5</sup>\*

**Declared competing interests of authors:** Hanna Bergman worked for Enhance Reviews Ltd during the preparation of this report and during the preparation of Cochrane reviews related to this report, and was paid for her contribution in doing so. Enhance Reviews Ltd is a private company that performs systematic reviews of literature and currently does not take commissions from industry. Hanna Bergman works for Cochrane Response, an evidence consultancy that takes commissions from health-care guideline developers and policy-makers. Adriani Nikolalopoulou was paid for contributing to the statistical analysis for this report. Karla Soares-Weiser was the managing director of Enhance Reviews Ltd. Karla Soares-Weiser has since moved to work for Cochrane, has not drawn a salary from this project, and had limited involvement in co-ordinating the activities of this project.

Published August 2017 DOI: 10.3310/hta21430

# **Plain English summary**

Treating or preventing antipsychotic-induced tardive dyskinesia

Health Technology Assessment 2017; Vol. 21: No. 43

DOI: 10.3310/hta21430

NIHR Journals Library www.journalslibrary.nihr.ac.uk

<sup>&</sup>lt;sup>1</sup>Cochrane Response, Cochrane, London, UK

<sup>&</sup>lt;sup>2</sup>Faculty of Health Sciences, University of Southampton, Southampton, UK <sup>3</sup>Institute of Social and Preventative Medicine, University of Bern, Bern, Switzerland

<sup>&</sup>lt;sup>4</sup>Cochrane Editorial Unit and Cochrane Innovations, Cochrane, London, UK <sup>5</sup>Institute of Mental Health, University of Nottingham, Nottingham, UK

<sup>\*</sup>Corresponding author clive.adams@nottingham.ac.uk

# **Plain English summary**

A ntipsychotic medication can cause involuntary, repetitive body movements, frequently involving the face and tongue. This condition is known as tardive (because it is a side effect that usually does not appear until after you have been taking medication for a while) dyskinesia (meaning abnormal or unusual movements), or TD.

It has been estimated that TD occurs in about one-fifth of people using antipsychotics. Other studies have found that closer to 1% find it sufficiently severe or persistent to change antipsychotics as a result. Management varies and is particularly problematic where discontinuation or change of treatment is not desired or easily achieved. This work updates past reviews with new evidence and methods. There is frequently an advantage in revisiting old work to see if information that was previously impossible to use can now be employed in building a more complete picture. In recent years, newer methods of presenting and analysing the information in reviews has helped make reviews more accessible and useful.

Although there are many new relevant studies, it appears that little has been learnt from past work. The conduct, analysis and reporting of trials of these treatments continue to be of such poor quality that it is impossible to really trust the results.

#### This work found that:

- researchers continue to do trials, but take little heed of calls for increased quality and relevance to everyday care
- some new methods used within sophisticated reviews of care really do not work if the building blocks
  of the reviews (the trials) are of very limited quality
- people with TD feel disappointed and angry at the length of time it has taken for researchers to address the issue of how to treat TD
- we still do not know how to treat people with/at risk of TD effectively.

All information from the reports of past trials, reliably and painstakingly extracted, is fully, freely accessible to anyone online.

#### HTA/HTA TAR

# **Health Technology Assessment**

ISSN 1366-5278 (Print)

ISSN 2046-4924 (Online)

Impact factor: 4.236

Health Technology Assessment is indexed in MEDLINE, CINAHL, EMBASE, The Cochrane Library and the Clarivate Analytics Science Citation Index

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

Editorial contact: journals.library@nihr.ac.uk

The full HTA archive is freely available to view online at www.journalslibrary.nihr.ac.uk/hta. Print-on-demand copies can be purchased from the report pages of the NIHR Journals Library website: www.journalslibrary.nihr.ac.uk

#### Criteria for inclusion in the Health Technology Assessment journal

Reports are published in *Health Technology Assessment* (HTA) if (1) they have resulted from work for the HTA programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

Reviews in *Health Technology Assessment* are termed 'systematic' when the account of the search appraisal and synthesis methods (to minimise biases and random errors) would, in theory, permit the replication of the review by others.

### **HTA** programme

The HTA programme, part of the National Institute for Health Research (NIHR), was set up in 1993. It produces high-quality research information on the effectiveness, costs and broader impact of health technologies for those who use, manage and provide care in the NHS. 'Health technologies' are broadly defined as all interventions used to promote health, prevent and treat disease, and improve rehabilitation and long-term care.

The journal is indexed in NHS Evidence via its abstracts included in MEDLINE and its Technology Assessment Reports inform National Institute for Health and Care Excellence (NICE) guidance. HTA research is also an important source of evidence for National Screening Committee (NSC) policy decisions.

For more information about the HTA programme please visit the website: http://www.nets.nihr.ac.uk/programmes/hta

#### This report

The research reported in this issue of the journal was funded by the HTA programme as project number 14/27/02. The contractual start date was in June 2015. The draft report began editorial review in November 2016 and was accepted for publication in February 2017. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this report.

This report presents independent research funded by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health.

© Queen's Printer and Controller of HMSO 2017. This work was produced by Bergman et al. under the terms of a commissioning contract issued by the Secretary of State for Health. This issue may be freely reproduced for the purposes of private research and study and extracts (or indeed, the full report) may be included in professional journals provided that suitable acknowledgement is made and the reproduction is not associated with any form of advertising. Applications for commercial reproduction should be addressed to: NIHR Journals Library, National Institute for Health Research, Evaluation, Trials and Studies Coordinating Centre, Alpha House, University of Southampton Science Park, Southampton SO16 7NS, UK.

Published by the NIHR Journals Library (www.journalslibrary.nihr.ac.uk), produced by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk).

## Health Technology Assessment Editor-in-Chief

**Professor Hywel Williams** Director, HTA Programme, UK and Foundation Professor and Co-Director of the Centre of Evidence-Based Dermatology, University of Nottingham, UK

## **NIHR Journals Library Editor-in-Chief**

Professor Tom Walley Director, NIHR Evaluation, Trials and Studies and Director of the EME Programme, UK

## **NIHR Journals Library Editors**

**Professor Ken Stein** Chair of HTA and EME Editorial Board and Professor of Public Health, University of Exeter Medical School, UK

Professor Andrée Le May Chair of NIHR Journals Library Editorial Group (HS&DR, PGfAR, PHR journals)

Dr Martin Ashton-Key Consultant in Public Health Medicine/Consultant Advisor, NETSCC, UK

**Professor Matthias Beck** Chair in Public Sector Management and Subject Leader (Management Group), Queen's University Management School, Queen's University Belfast, UK

Dr Tessa Crilly Director, Crystal Blue Consulting Ltd, UK

Dr Eugenia Cronin Senior Scientific Advisor, Wessex Institute, UK

Ms Tara Lamont Scientific Advisor, NETSCC, UK

**Dr Catriona McDaid** Senior Research Fellow, York Trials Unit, Department of Health Sciences, University of York, UK

Professor William McGuire Professor of Child Health, Hull York Medical School, University of York, UK

**Professor Geoffrey Meads** Professor of Health Sciences Research, Health and Wellbeing Research Group, University of Winchester, UK

Professor John Norrie Chair in Medical Statistics, University of Edinburgh, UK

Professor John Powell Consultant Clinical Adviser, National Institute for Health and Care Excellence (NICE), UK

**Professor James Raftery** Professor of Health Technology Assessment, Wessex Institute, Faculty of Medicine, University of Southampton, UK

Dr Rob Riemsma Reviews Manager, Kleijnen Systematic Reviews Ltd, UK

Professor Helen Roberts Professor of Child Health Research, UCL Institute of Child Health, UK

Professor Jonathan Ross Professor of Sexual Health and HIV, University Hospital Birmingham, UK

**Professor Helen Snooks** Professor of Health Services Research, Institute of Life Science, College of Medicine, Swansea University, UK

**Professor Jim Thornton** Professor of Obstetrics and Gynaecology, Faculty of Medicine and Health Sciences, University of Nottingham, UK

**Professor Martin Underwood** Director, Warwick Clinical Trials Unit, Warwick Medical School, University of Warwick, UK

Please visit the website for a list of members of the NIHR Journals Library Board: www.journalslibrary.nihr.ac.uk/about/editors

Editorial contact: journals.library@nihr.ac.uk