

#### CANADIAN CHIROPRACTIC ASSOCIATION

Chair Robert David, BSc, DC

JCCA STAFF

Editor Allan Gotlib, C.M., BSc, DC

Canadian Chiropractic Association, Toronto, Ontario

Associate Editors Jeff Quon, DC, PhD

School of Population & Public Health

Faculty of Medicine, University of British Columbia

Kent Stuber, DC, MSc

Calgary, Alberta

Assistant Editors André Bussières, DC, FCCS(C), PhD

Faculty of Medicine, McGill University

Département chiropratique, Université du Québec à Trois-Rivières

Pierre Côté, DC, PhD

University of Ontario Institute of Technology

Kim Humphreys, DC, PhD

University of Zurich

Gregory N Kawchuk, DC, PhD University of Alberta, Edmonton, Alberta

Dana J. Lawrence, DC, MMedEd, MA Palmer College of Chiropractic Davenport, Iowa

Production Co-ordinator Tami Ehrlich

Advertising Editor, Journal of the Canadian Chiropractic Association

186 Spadina Avenue, Suite 6, Toronto, Ontario M5T 3B2 Tel: 416-585-7902 877-222-9303 Fax: 416-585-2970

Email: Dr. Allan Gotlib<AGotlib@jcca.ca>

Website: www.jcca-online.org

**TYPESETTING** 

Thistle Printing Limited

35 Mobile Drive, Toronto, Ontario M4A 2P6

# JCCA Journal of the Canadian Chiropractic Association

(Formerly the Canadian Chiropractic Association Journal)

Copyright Registered © by the Canadian Chiropractic Association 1961

Copyright: The Canadian Chiropractic Association, 2015

All rights reserved. Without limiting the rights under copyright above, no part of this publication may be reproduced, stored in or introduced into any retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise), without the prior written permission with the copyright owner and the publisher.

Published by the Canadian Chiropractic Association and issued quarterly

EDITORIAL AND EXECUTIVE OFFICES, 186 SPADINA AVENUE, SUITE 6, TORONTO, CANADA M5T 3B2

General Information: The Journal of the Canadian Chiropractic Association is the official quarterly publication by the Canadian Chiropractic Association. The JCCA is published quarterly by the Canadian Chiropractic Association as a medium of communication between the Association and its members and is a forum for fair comment and discussion of all matters of general interest to the chiropractic profession and the Association. Readers are invited to comment and express their opinions on relevant subjects. Views and opinions in editorials and articles are not to be taken as official expression of the Association's policy unless so stated. Publication of contributed articles does not necessarily imply endorsement in any way of the opinions expressed therein and the Journal and its publisher does not accept any responsibility for them. Business correspondence should be addressed to: the Editor of JCCA, 186 Spadina Avenue, Suite 6, Toronto, Canada M5T 3B2.

#### **INDEXING SERVICES**

JCCA is indexed by PubMed Central, Scopus, CINAHL (Cumulative Index to Nursing and Allied Health Literature), MANTIS (formerly CHIROLARS), AMED, PASCAL, Index to Chiropractic Literature, and selectively by SPORTDiscus.

## Contents

JCCA Vol 59 No 2 ISSN 0008-3194 (Print) and ISSN 1715-6181 (Electronic)

#### **Editorial**

90 Chiropractic Techniques & Technologies Brian Gleberzon, DC, MHSc

#### **Original Articles**

Validity of palpation of the C1 transverse process: comparison with a radiographic reference standard

Robert Cooperstein, MA, DC

Morgan Young, DC

Makani Lew, DC

- Improvement in clinical outcomes after dry needling in a patient with occipital neuralgia Bryan M. Bond, BSc, BS, DC, MS Christopher Kinslow, PT, DC
- Sexual harassment of female chiropractors by their patients: a pilot survey of faculty at the Canadian Memorial Chiropractic College

Brian Gleberzon, DC, MHSc

Rachel Statz, DC

Matthew Pym, BA (Hons), DC

What effect does chiropractic treatment have on gastrointestinal (GI) disorders:

a narrative review of the literature

Katherine Angus, BSc(Kin), DC

Sepideh Asgharifar, BSc(Hons), DC

Brian Gleberzon, DC, MHSc

134 R + C Factors and Sacro Occipital Technique Orthopedic Blocking: a pilot study using pre and post VAS assessment

Charles L. Blum, DC

143 Use of spinal manipulation in a rheumatoid patient presenting with acute thoracic pain: a case report

Chadwick L.R. Chung, BSc, DC, FCCS(C)

Silvano A. Mior, DC, FCCS(C), PhD

150 The examination of soft tissue compliance in the thoracic region for the development of a spinal manipulation training mannequin

David J. Starmer, BSc, MHS, DC

Sean A. Duquette, BA, DC

Brynne E. Stainsby, BA, DC, FCCS(C)

Anthony M. Giuliano

157 Inter-examiner reliability of the interpretation of paraspinal thermographic pattern analysis

Barbara A. Mansholt, DC, MS

Robert D. Vining, DC

Cynthia R. Long, PhD

Christine M. Goertz, DC, PhD

# Contents

JCCA Vol 59 No 2 ISSN 0008-3194 (Print) and ISSN 1715-6181 (Electronic)

- Testing an association between baseline resting pulse rate averages and short-term changes in resting pulse rates: A pilot study John Hart, DC, MHSc
- 173 Craniocervical chiropractic procedures, a précis of upper cervical chiropractic H. Charles Woodfield, III, BPhm, DC
  Craig York, DC
  Roderic P. Rochester, DC
  Scott Bales, DC
  Mychal Beebe, DC
  Bryan Salminen, DC
  Jeffrey N. Scholten, DC

#### **Book Reviews**

- 193 Handbook of Neurological Sports Medicine Cameron M. Marshall, BA(Hons.), DC
- 193 Watch Your Back! How the Back Pain Industry Is Costing Us More and Giving Us Less and What You Can Do to Inform and Empower Yourself in Seeking Treatment Stacie A. Salsbury, PhD, RN

## **Editorial Board**

Alan H Adams DC Texas Chiropractic College Pasadena, Texas

Kelly E. Donkers Ainsworth DC, MD, FRCPC Staff Pediatric Radiologist McMaster University Hamilton, Ontario

Carlo Ammendolia DC, PhD University of Toronto

Samuel Bederman MD, PhD, FRCSC Department of Orthopedic Surgery University of California at Irvine Orange, CA

Paul Bruno DC, PhD
Faculty of Kinesiology and Health
Studies
University of Regina

Brian Budgell DC, PhD CMCC

Jason Busse DC, PhD McMaster University

J David Cassidy DC, MSc, PhD, FCCS(C), Dr Med Sc University of Southern Denmark

Raphael K Chow MD, FRCP(C) University of Toronto

Colin M Crawford B App Sc (Chiro), FCCS(C), MSc, Grad Dip Neuro, MB BS Perth, Australia

Martin Descarreaux DC, PhD Université du Québec à Trois-Rivières

John A. Dufton DC, MSc, MD, FRCPC Staff Radiologist University Hospital of Northern British Columbia Prince George, British Columbia

Mark Erwin DC, PhD University of Toronto

Brian Gleberzon DC, MHSc CMCC

Richard Goldford BSc, DC, MBA, FRCCSS(C), FCCPOR(C) Toronto, Ontario Bart Green DC, MSEd, DACBSP Naval Medical Center, San Diego San Diego, California

François Hains DC, FCCS(C), MSc Dorval, Québec

Scott Haldeman DC, MD, PhD, FRCP(C) University of California Irvine, California

Jill Hayden DC, PhD Dalhousie University Halifax, NS

Walter Herzog PhD University of Calgary

*Thomas E Hyde* BA, DC, DACBSP N Miami Beach, Florida

Claire Johnson DC, MSEd, DACBSP National University of Health Sciences Lombard, Illinois

Mohsen Kazemi RN, DC, FRCCSS(C), FCCPOR(C), MSc, PhD(c)
CMCC

Clark R Konczak MSc, DC, DABCO, FCCO(C), FRCCSS(C) Victoria, BC

Deborah Kopansky-Giles DC, FCCS(C), FICC, MSc St. Michael's Hospital Toronto, Ontario

Doug M Lawson BA, DC, MSc D'Youville College

Cynthia Long PhD
Palmer Centre for Chiropractic Research
Davenport, Iowa

Marion McGregor DC, PhD CMCC Toronto, Ontario

William C Meeker DC, MPH
Palmer Chiropractic University System
San Jose, CA

Robert D Mootz DC Associate Medical Director for Chiropractic, State of Washington Department of Labor and Industries Olympia, WA Bernadette Murphy DC, PhD University of Ontario Institute of Technology

Martin Normand DC, PhD UQTR

Steven Passmore DC, PhD Faculty of Medicine University of Manitoba

Stephen Perle DC, MS University of Bridgeport Bridgeport, CT

Reed B Phillips DC, PhD, DACBR Southern California University of Health Sciences

*Mathieu Piché* DC, PhD UQTR

John J Riva DC, MSc Department of Family Medicine McMaster University Hamilton, Ontario

John Z Srbely DC, PhD University of Guelph

Igor Steiman MSc, DC, FCCS(C) CMCC

John S Stites DC, DACBR
Palmer College of Chiropractic
Davenport, Iowa

Donald C Sutherland DC, LLD, FICC CMCC

John A M Taylor DC, DACBR, FCCR(C) D'Youville College Buffalo, NY

Haymo Thiel DC, MSc (Orth), FCCS(C), Dip Med Ed, PhD Anglo-European College of Chiropractic Bournemouth, England

Gabrielle M van der Velde BSc, DC, FCCS(C), PhD Toronto Health Economics and Technology Assessment Collaborative University of Toronto

Marja J Verhoef PhD University of Calgary