

Dan S. Heffez, M.D., F.R.C.S.

CURRICULUM VITAE

NAME: Dan Salomon Heffez, M.D., F.R.C.S.

CITIZENSHIP: U.S.

EDUCATION:

Sept. 1981 Completion Microsurgical Course
Johns Hopkins University School of Medicine

1975 - 1979 Faculty of Medicine, McGill University, Montreal, Quebec,
Canada

Degree: Doctor of Medicine, Master of Surgery
McGill University, Montreal, Quebec, Canada

1975 Pre-Medical Year
McGill University, Montreal, Quebec, Canada

1972 - 1974 Diploma of Collegiate Studies in Biological Science
McGill University, Montreal, Quebec, Canada

**PROFESSIONAL
EXPERIENCE and TRAINING:**

1985 - 1986 Chief Resident, Department of Neurosurgery
The Johns Hopkins Hospital
Baltimore, Maryland

Jan. - June 1985 Chief Resident, Division of Neurosurgery
The Hospital for Sick Children
Toronto, Ontario, CANADA

1983 - 1985 Fogarty Research Fellow

Dan S. Heffez, M.D., F.R.C.S.

Laboratory of Neurochemistry,
National Institute of Neurological and
Communicative Disorders and Stroke
Bethesda, Maryland

1980 - 1983

Resident, Department of Neurosurgery
The Johns Hopkins Hospital
Baltimore, Maryland

1979 - 1980

Surgical Intern, The Royal Victoria Hospital
McGill University, Montreal, Quebec

EMPLOYMENT:

Nov 2008- present

Medical Director, Wisconsin Chiari Clinic

July 2008- 2010

Chairman, Dept. of Neurosurgery, Columbia Saint Mary's
Hospital

Sept. 2004-present

Neurosurgeon, Milwaukee Neurological Institute

April 15, 2003 –Dec. 2009

President, Heffez Neurosurgical Associates

Sept. 2001- 2004

Attending Neurosurgeon St. Joseph Hospital, Chicago IL

Jan.1999 – April 2003

Attending Neurosurgeon, Rush-Presbyterian-St. Luke's
Hospital

Sept 1990-Oct 2001

Attending surgeon, Columbus Hospital

Sept. 1990 -

April 2003

Attending Neurosurgeon, Director of Cerebrovascular
Surgery, The Chicago Institute of Neurosurgery and
Neuroresearch and Rush Presbyterian St. Luke's Medical
Center (1999-April 2003)

June 1986 -

August 1990

Attending Neurosurgeon

The Johns Hopkins Hospital

ACADEMIC APPOINTMENTS:

Jan 2002-present

Associate Professor of Neurosurgery, Rush Medical College

Jan.1999 –Jan 2002

Assistant Professor of Neurosurgery, Rush Medical College

June 1986 -

August 1990

Assistant Professor of Neurosurgery

The Johns Hopkins University School of Medicine

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SOCIETIES AND PROFESSIONAL ORGANIZATIONS:

Fellow Royal College of Physicians and Surgeons (Canada), March 1987- present

Member, Congress of Neurological Surgeons, August 1988-present

Member, Research Society of Neurological Surgeons 1990 - 1996

Fellow, Stroke Council, American Heart Association, June 1990-1998

Member, American Medical Association, 1990-present

Member, Chicago Medical Society, 1990-1995

Member, Illinois State Medical Society, 1990-1995

Member, American Association of Neurological Surgeons, November 1990-present

Member, Cerebrovascular Section of the American Association of Neurological Surgeons, April 1991-2000

Member, Pediatric Section of the American Association of Neurological Surgeons, 1987-1991.

CERTIFICATION and LICENSURE

Diplomate of the National Board of Medical Examiners

Diplomate of the Medical Council of Canada

Licensed Member of the Professional Corporation of Physicians of Quebec(allowed to lapse 1992)

Certified Specialist (Neurosurgery) of The Professional Corporation of Physicians of Quebec, November 1989.

Certified Specialist (Neurosurgery) Royal College of Physicians and Surgeons of Canada, Dec. 1986.

Diplomate of The American Board of Neurological Surgeons, Sept. 1989

Dan S. Heffez, M.D., F.R.C.S.

Licensee of the Board of Medical Examiners of Maryland, (license expired 2006)

Licensed Physician and Surgeon, State of Illinois

Licensed Physician State of Wisconsin

RESEARCH ACTIVITIES:

1. Alternate Methods of Drug Delivery in the Treatment of Cerebral Vasospasm. (Principal investigator) 1987-1991.
2. Experimental Spinal Dysraphism. Supported by Department of Pediatric Neurology Research Fund of the Johns Hopkins Hospital, The Mental Retardation Research Center Grant to the John F. Kennedy Institute, Baltimore, Md., and the Chicago Institute of NeuroSurgery and NeuroResearch. 1987-1991
3. Cerebrovascular smooth muscle physiology in experimental cerebral vasospasm. 1987-1991
4. Three dimensional imaging of cerebrovascular lesions for the planning of definitive surgical treatment. 1990-1995
5. Prospective double blind study of the use of Omega-3 free fatty acids for the prevention or treatment of vasospasm following subarachnoid hemorrhage. (Principal investigator) 1992-1999.
6. Cervicomedullary compression and cervical myelopathy and its relationship to the fibromyalgia syndrome. Prospective outcome study of the results of surgical treatment. \$25,000 grant, National Fibromyalgia Research Association, 1999-2000.
7. Cervicomedullary compression and cervical myelopathy and its relationship to the fibromyalgia syndrome. Prospective outcome study of the results of surgical treatment. \$4500 grant, National Fibromyalgia Research Association, 2000-2001.
8. Cervicomedullary compression and cervical myelopathy and its relationship to the fibromyalgia syndrome. Prospective outcome study of the results of surgical treatment. Grant from Acromed Corp., \$20,000/yr for 2 years. 2002-2003.

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9. Cervicomedullary compression and cervical myelopathy and its relationship to the fibromyalgia syndrome. Prospective outcome study of the results of surgical treatment. Grant from Shelhigh Inc., \$3000. for 1 year, Feb. 2002-Feb. 2003.
10. Three dimensional Imaging as applied to the Chiari 1 malformation.

SELECTED AWARDS and HONORS:

McGill University Scholar, 1972 - 1979
CIBA-GEIGY Research Fellow Award, 1977
Joseph Hils Prize, Pharmacology, 1977
Upjohn Resident of the Year Award, The Johns Hopkins Hospital, 1984
Johns Hopkins School of Medicine, Clinician Scientist Award, 1989, 1990.
Achievement Award 2000 for "Cutting Edge Research and Treatment Application"
awarded by Fibromyalgia Association Created for Education and Self-help (FACES)

PUBLICATIONS:

Selected Journal Articles:

1. Heffez DS, Aryanpur J, Hutchins G, and Freeman JM: The paralysis associated with myelomeningocele: clinical and experimental data implicating a preventable spinal cord injury. Neurosurgery, 26:987-992, June 1990.
2. Heffez DS, Zinreich SJ and Long DM: Surgical resection of intrinsic brainstem lesions, Neurosurgery, 27:789-798, September 1990.
3. Heffez D.S., Hutchins A., Cuello, NA, Aryanpur J. and Freeman J.: Intrauterine repair of experimental surgically created dysraphism. Neurosurgery, 32:1005-1010, 1993.
4. Hutchins GM, Meuli, M, Meuli-Simmen, C, Jordan, MA, Heffez, DS, Blakemore, KJ: Acquired spinal cord injury in human fetuses with myelomeningocele. Pediatric Pathology and Laboratory Medicine 1996 Sept-Oct.;16(5) 701-712.
5. Heffez, DS, Mikhael, M, Jensen, K.: Operative confirmation of three dimensional computed tomographic and magnetic resonance imaging of cerebrovascular pathology. Journal of Image Guided Surgery, 1:179-190, 1995.
6. Heffez, DS: Stereotactic trans-sylvian transinsular approach to deep-seated lesion. Surgical Neurology, 1997; 48:113-124.

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7. Heffez, DS, Osterdock, RJ, Alderete, L, Grutsch, J: The impact of incomplete patient follow-up on the reported results of AVM radiosurgery. Surgical Neurology, 1998; 49:373-384.
8. Heffez DS, Ross RE, Shade-Zeldow Y et al: Clinical Evidence for Cervical Myelopathy in Patients with the Fibromyalgia Syndrome., Eur Spine J. 2004 Oct;13(6):516-23. Epub 2004 Apr 9
9. Heffez DS, Ross RE, Shade-Zeldow Y et al: Treatment of cervical myelopathy in patients with the fibromyalgia syndrome: Outcomes and implications, European Spine J, Eur Spine J. 2007 Sep;16(9):1423-33. Epub 2007 Apr 11.
10. Freeman MD,, Rosa S, Harshfield D, Smith F, Bennett R, Centeno CJ, Kornel E, Nystrom A, Heffez D, Kohles SS:
A case-control study of cerebellar tonsillar ectopia (Chiari) and head/neck trauma (whiplash), Brain Injury, July 2010; 24(7–8): 988–994
11. Robert N. Holdefer, Ph.D.1,3 Daniel S. Heffez, M.D.2 and Bernard A. Cohen, Ph.D: Utility of Evoked EMG Monitoring to Improve Bone Screw Placements in the Cervical Spine, J Spinal Disorders and Techniques, 2013 Jul 26(5):163-169.
12. Heffez DS et al: Is there a relationship between the extent of tonsillar ectopia and the severity of the clinical Chiari syndrome? Under review Acta Neurosurgica.
13. Heffez DS et al: Operative findings in 488 patients with Chiari 1 malformation. relation to extent of tonsillar ectopia. Under review Acta Neurochirurgica.

BOOK CHAPTERS:

1. Heffez DS and Carson B: Congenital hydrocephalus. In Johnson RT (ed): Current therapy in neurologic disease. B.C. Decker, Inc., Toronto and Philadelphia, 1986
2. Heffez DS: The Head Injured Child in Long DM (ed.): Current Therapy in Neurological Surgery. B.C. Decker, Inc., Toronto and Philadelphia, 1989.
3. Heffez DS: Spinal Injury. In Johnson RT (ed): Current Therapy in Neurology. B.C. Decker, Inc., Toronto and Philadelphia, 1990.
4. Heffez DS, and Ducker TB: Fracture and Dislocation of the Pediatric Spine in Pang D (ed): Disorders of the Pediatric Spine, Raven Press, New York, 1995.
5. Ruland S and Heffez DS: Pros and Cons of Screening for and Ablating Asymptomatic

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Intracranial Aneurysms, in Stroke Prevention, Gorelick PB and Alter M eds), Carnforth: Parthenon, 2002..

SELECTED PUBLISHED ABSTRACTS AND PRESENTATIONS:

1. Heffez DS: Surgically created dysraphism in the fetal rat. High Risk Obstetrics Conference, The Johns Hopkins Hospital, October 12, 1988.
2. Heffez DS, Aryanpur J, Freeman JM, Hutchins G: Surgically created dysraphism in the fetal rat: Implications for the cause of paralysis in spina bifida. Abstract presented at the meeting of the Pediatric Section, American Association of Neurological Surgeons, Scottsdale, Arizona, December 1988.
3. Heffez DS, Aryanpur J, Freeman JM, Hutchins G: Surgically created dysraphism in the fetal rat: Implications for the cause of paralysis in spina bifida. Abstract accepted for presentation at the meeting of the American Association of Neurological Surgeons, Washington D. C., April 1989.
4. Heffez DS: Spina Bifida: The promise of fetal surgery. Invited presentation. Johns Hopkins Hospital Centennial Science Writers Seminar, May 23, 1989.
5. Levy L.M., Di Chiro, G., DeSouza B., McCullough D.C., McVeigh E., and Heffez D.S.: The fixed cord: effects of surgery and correlation with MR imaging. Abstract accepted for presentation at the meeting of the Radiological Society of North America, Chicago 1989.
6. Heffez D.S., Aryanpur J., Freeman J.M., and Hutchins G.: Intrauterine repair of experimental dysraphism: implications for the treatment of myelomeningocele. Abstract accepted for presentation to the Pediatric Section, American Association of Neurological Surgeons, Washington D.C., Nov.28, 1989.
7. Heffez D.S., Aryanpur J., Freeman J.M., and Hutchins G.: Intrauterine repair of experimental dysraphism: implications for the treatment of myelomeningocele. Abstract accepted for presentation to the American Association of Neurological Surgeons, Nashville, TN., April 1990.

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8. Heffez DS: Experimental dysraphism: implications for the treatment of myelomeningocele. Presentation to the Research Society of Neurological Surgeons, Boston, MA., June 14, 1990.
9. Heffez D.S., Hutchins G., Aryanpur J., Freeman J.: Intrauterine repair of experimental dysraphism II: Implications for the mechanism of spinal cord injury. Presentation to the meeting of the American Association of Neurological Surgery, April 1991.
10. Heffez, D.S., Cuello, N., Hutchins G, Freeman J: Intrauterine repair of experimental dysraphism in the fetal pig. Presentation, Pediatric Section meeting, American Association of Neurological Surgeons, December 1991.
11. Heffez, D.S., Wang, C., Becker, J.: Acute distention of the basilar artery impairs endothelium dependant relaxation: implications for the pathogenesis of cerebral vasospasm. Accepted for poster presentation, American Association of Neurological Surgeons, San Francisco, April 1992.
12. Heffez, D.S., Wang, C., Becker, J.: Acute distention of the basilar artery impairs endothelium dependant relaxation: implications for the pathogenesis of cerebral vasospasm. Accepted for poster presentation, Second World Congress of Stroke, Washington, D.C., September 1992.
13. Heffez, D.S.: Stereotactic trans-sylvian transinsular approach for deep-seated lesions. Oral presentation, Neurosurgical Society of America, Semi-Ah-Moo, Washington, May 1994.
14. Heffez, D.S., Osterdock, R.J., Alderete, L., Grutsch, J., Helenowski, T.K.: The impact of poor patient follow-up on the results of AVM radiosurgery. Oral presentation, Joint Section, Cerebrovascular Surgery, San Antonio, Texas, January 23-25, 1996.
15. Heffez, D.S., Mikhael, J.A., Elias, D.A., Shepard, A.E., Segura, R., Caron, M.J.: Trivial degrees of tonsillar descent detected by MRI scan may be symptomatic. Oral presentation, Lende Winter Neurosurgery Meeting, Snowbird, Utah, February 4-10, 1996.
16. Heffez, D.S., Osterdock, R.J., Alderete, L., Grutsch, J., Helenowski, T.K.: The published results of AVM radiosurgery are statistically biased. Oral presentation, American Association of Neurological Surgeons Meeting, Minneapolis, MN., April 29-May 2, 1996.
17. Heffez, DS, Clemis, JD, Elias, DA, Mikhael, MA, Cerullo, LJ: Trivial degrees of tonsillar ectopia may be symptomatic. Accepted for presentation at 75 Years of Neurosurgery in Canada, a Symposium of Advances in Neurosurgery and Related Neurosciences, Toronto, Ontario, Canada, October 1998.

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18. Heffez, DS: Tonsillar ectopia: how much is too much? Presented at New Concepts of Chiari Malformation and Cervical Stenosis, Charlotte, N.C., January 23-24, 1999.
19. Heffez, DS: The clinical symptoms of minimal tonsillar ectopia. Presented at New Concepts of Chiari Malformation and Cervical Stenosis, Charlotte, N.C., January 23-24, 1999.
20. Heffez, DS: Neurological findings in patients with fibromyalgia. Presentation at "Subsets in Fibromyalgia" Symposium, September 25-27, 1999, Portland, Oregon.
21. Heffez, DS: Surgical outcome in fibromyalgia patients undergoing cervicomedullary decompression. Presentation at "Subsets in Fibromyalgia" Symposium, September 25-27, 1999, Portland, Oregon.
22. Heffez DS, Ross RE, Shade-Zeldow V et al: Is cervical myelopathy overlooked in patients with fibromyalgia? Poster presentation, meeting of the American Association of Neurological Surgeons, Toronto, Canada, 2001.
23. Heffez DS: Cervicomedullary compression in patients with fibromyalgia and chronic fatigue syndrome. Is myelopathy being overlooked? Oral presentation, FAME 2000, International Fibromyalgia Conference, Universal City, CA, May 20-21, 2000.
24. Heffez DS, Ross RE, Shade-Zeldow V et al: Is there an association between cervical myelopathy and fibromyalgia? Abstract accepted for oral presentation by the Congress of Neurological Surgeons, Oct. 2001.
25. Heffez DS, Ross RE, Shade-Zeldow V et al: Is there an association between cervical myelopathy and fibromyalgia? Accepted for poster presentation Myopain, Portland Oregon, September, 2001.
26. Heffez DS, Ross RE, Shade-Zeldow V et al: Is cervical myelopathy overlooked in patients with fibromyalgia? Accepted for poster presentation Myopain, Portland Oregon, September, 2001.
27. Heffez DS, Ross RE, Shade-Zeldow V et al: Is there an association between cervical myelopathy and fibromyalgia? Oral presentation 18th annual meeting, European Cervical Spine Research Society, Paris, France, June 13-14, 2002.
28. Heffez DS, Ross RE, Shade-Zeldow V et al: Clinical evidence for cervical myelopathy in patients with the fibromyalgia syndrome. Poster presentation 18th annual meeting, European Cervical Spine Research Society, Paris, France, June 13-14, 2002.
29. Heffez DS: Rationale for viewing fibromyalgia as a neurological disorder. Presented at Neurology and New Treatments in Fibromyalgia, Portland, Oregon Oct 4-6, 2002. Sponsored by the National Fibromyalgia Research Association.

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30. Heffez DS: The treatment of cervical myelopathy in patients with fibromyalgia:clinical outcomes in a nonrandomized case control study. Presented at Neurology and New Treatments in Fibromyalgia, Portland, Oregon Oct 4-6, 2002. Sponsored by the National Fibromyalgia Research Association.
31. Heffez DS:Cervical Myelopathy. The new great imitator? Northwest Rheumatism Society Annual Conference. April 29-30,2005, Seattle, Washington.
32. Holdefer, R, Heffez, D, and Cohen,B:Triggered EMG threshold testing for lateral mass and pedicle screw placement in the cervical spine. Accepted for presentation at NASS, Oct,2007.
33. Bernard Allan Cohen, PhD, Robert Holdefer, PhD, Dan Heffez, MD
Triggered EMG Threshold Testing In The Cervical Spine Using Two Different Testing Techniques, Neuromonitoring Congress - ISIN 2007 - Lucerne, Switzerland, November 15-17, 2007.
34. D.S. Heffez, R. Holdefer, B. Cohen; Extent of Exploration Required for Optimal Decompression of Chiari 1 Malformation:Electrophysiological Studies, American Association of Neurological Surgeons, April 2008.
35. Heffez DS et al:Is there a relationship between the extent of tonsillar ectopia and the severity of the clinical Chiari syndrome? Accepted for presentation at meeting of the AANS, San Francisco April, 2014.
36. Heffez DS et al:Is there a relationship between the extent of tonsillar ectopia and the severity of the clinical Chiari syndrome? Accepted for presentation at meeting of the Congress of Neurological Surgeons, Boston, Oct. 2014.
37. Heffez DS et al. Is there a relationship between the extent of tonsillar ectopia and the severity of the clinical Chiari syndrome? Presented at the Lende Neurosurgical meeting. Snowbird, Utah. Feb. 2017.
38. Heffez DS: Chiari 1 malformation. Is intradural exploration ever indicated? Presented at the meeting of the American Syringomyelia and Chiari Alliance Project, Long Island NY, July 2017.
39. Heffez DS. Chiari 1 malformation. Does size matter? Presented at the meeting of the American Syringomyelia and Chiari Alliance Project, Long Island NY, July 2017.

SELECTED PRESENTATIONS AND UNPUBLISHED ABSTRACTS

Dan S. Heffez, M.D., F.R.C.S.

1. Heffez, DS: Cervicomedullary decompression in patients with fibromyalgia and chronic fatigue syndrome. Neurosurgery Grand Rounds presentation, University of Chicago, Dec. 11,1999.
2. Heffez, DS: Cervicomedullary decompression in patients with fibromyalgia and chronic fatigue syndrome. Rheumatology Rounds, Rush College of Medicine, March 9,2000.
3. Heffez, DS: Cervicomedullary compression in patients with fibromyalgia and chronic fatigue syndrome. Is myelopathy being overlooked? Neurology Grand Rounds, Rush College of Medicine, April 6, 2000.
4. Heffez DS: Cervicomedullary compression in patients with fibromyalgia and chronic fatigue syndrome. Oral presentation, Integrative Medicine Symposia 2000, Fibromyalgia and Chronic Fatigue Syndrome, June 10,2000, Chicago IL.
5. Heffez DS: Cervicomedullary compression in patients with fibromyalgia and chronic fatigue syndrome. Is myelopathy being overlooked? Oral presentation, Neurosurgical Society of America, Amelia Island , Fla., June 7, 2001.
6. Heffez DS: The treatment of cervical myelopathy in patients with FM/CFS. FAME 2001, June 23,24, 2001, Chicago IL.
7. Heffez DS: The treatment of cervical myelopathy in patients with FM/CFS. Surgical indications and outcomes. Johns Hopkins Hospital Symposium in Honor of Dr. Donlin Martin Long, June 29, 2001, Baltimore MD.
10. Participant, Canadian Clinical Definition Diagnostic and Treatment Protocols for Fibromyalgia, March 30-April 1, 2001, Toronto, Canada.
11. Heffez DS: Cervical myelopathy masquerading as the fibromyalgia syndrome. Neurosurgical Grand Rounds, The Johns Hopkins Hospital, Baltimore Maryland. June 20, 2002.
12. Speaker Luncheon seminar entitled Chiari 1 malformation and Syringomyelia, Congress of Neurological Surgeons, Philadelphia , Sept., 2002.
13. Heffez DS: Cervical Myelopathy- A Great Masquerader. Keynote presentation at the 12th Annual Oral and Maxillofacial Surgery Resident Research Symposium, University of Illinois, Chicago, June 20, 2003.
14. Heffez, DS: The Chiari malformation: Myelopathy due to brain stem compression at the foramen magnum independent of the position of the cerebellar tonsil, Neurosurgery Grand Rounds presentation, Dana Childrens Hospital, Tel Aviv, Israel, June 25, 2008.

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15. Myelopathy due to brain stem compression at the foramen magnum independent of the position of the cerebellar tonsil, Neurosurgery Grand Rounds presentation, Neurosurgery Grand Rounds presentation, University of Edmonton, Nov. 13, 2009.

16. Myelopathy due to brain stem compression at the foramen magnum independent of the position of the cerebellar tonsil, Neurosurgery Grand Rounds presentation, Neurosurgery Grand Rounds presentation, Stanford University, Dec. 4, 2009.

17. Myelopathy due to brain stem compression at the foramen magnum independent of the position of the cerebellar tonsil, Neurosurgery Grand Rounds presentation, University of Louisville, Louisville, Kentucky, May 6, 2011.

18. Myelopathy due to brain stem compression at the foramen magnum independent of the position of the cerebellar tonsil, Regional Neurosurgery Grand Rounds presentation, University of Montreal, Notre Dame Hospital, April 24, 2012.