



Robert Cowan, MD, FAAN

- Clinical Professor, Neurology & Neurological Sciences
- Clinical Professor (By courtesy), Anesthesiology, Perioperative and Pain Medicine

CLINICAL OFFICES

- **Stanford Headache Clinic at Hoover Pavilion**

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ACADEMIC CONTACT INFORMATION

- **Alternate Contact**

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Bio

BIO

Robert Cowan, MD, FAAN is Professor of Neurology and Chief of the Division of Headache Medicine at Stanford University. Prior to coming to Stanford he was a senior clinical research scientist in molecular neurobiology at Huntington Medical Research Institutes (Pasadena, CA). Dr. Cowan attended University of Southern California, Keck Medical School, completed a residency program at USC Department of Neurology and served on faculty there until 2000. He is Board Certified in the areas of: Psychiatry and Neurology and Pain Medicine. He also holds subspecialty certification in Headache Medicine. Dr. Cowan is widely published in various scientific journals, including the Journal of the American Medical Association Cephalgia, and Headache. He has authored book chapters lectures both nationally and internationally on a variety of headache topics, and has appeared on NBC, CBS and has been featured in articles ranging from the San Francisco Chronicle to Vogue Magazine.

Dr. Cowan has held several nationally elected positions, including chair of the sections on Chronic Daily Headache and In-office Patient Education for the American Headache Society. He is immediate past President of the Headache Cooperative of the Pacific, is a fellow of the American Academy of Neurology and the American Headache Society. He is on the boards of the Alliance for Headache Diseases Advocacy, the Headache Cooperative of the Pacific, the American Headache and Migraine Association, and the American Council for Headache Education. He is a reviewer for several peer-reviewed journals, including Headache and Cephalgia. He is an editor for Headache Currents. Dr. Cowan is the author of The Keeler Migraine Method (Penguin/Avery, 2008).

Along with Dr. Alan Rapoport, Professor of Neurology at UCLA School of Medicine, Dr. Cowan co-founded BonTriage which develops computer-based tools to aid in the diagnosis, education, and care of people with chronic medical conditions. Dr. Cowan's primary research interest is the pathophysiology of chronic daily headache, utilizing functional imaging, body fluid analysis and deep phenotyping. He has been the recipient of NIH, foundation, industry and individual grants and gifts for his research, .

CLINICAL FOCUS

- Headache Medicine
- Neurology

ACADEMIC APPOINTMENTS

- Clinical Professor, Neurology & Neurological Sciences
- Clinical Professor (By courtesy), Anesthesiology, Perioperative and Pain Medicine

ADMINISTRATIVE APPOINTMENTS

- Betty Higgins Family Foundation Director, Neurology, (2017- present)
- Chair, Refractory Headache Special Interest Section, American Headache Society, American Headache Society, (2012- present)
- President, Headache Cooperative of the Pacific, (2012- present)
- Director, Stanford Headache Program, Stanford University School of Medicine, (2011- present)
- Vice President, Headache Cooperative of the Pacific, (2007-2012)
- Program Director, Headache Cooperative of the Pacific, (2007-2011)

HONORS AND AWARDS

- Magna Cum Laude, Clark University, Worcester, Massachusetts (1972)
- Woodrow Wilson Scholar, Clark University, Worcester, Massachusetts (1972)
- Chief Resident, LAC/USC, Los Angeles, California (1989)
- Fellow, American Academy of Neurology (2006)
- Fellow, American Headache Society (2010)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Board of Directors, Alliance for Headache Disorders Advocacy (2009 - present)
- Member, Board of Directors, Headache Cooperative of the Pacific (2007 - present)
- Member, Advisory Committee, NCAA Select committee on headache in collegiate athletes (2013 - present)
- Member,, American Headache Society (1995 - present)
- Member, American Academy of Neurology (1990 - present)
- Member, International Headache Society (2010 - present)

PROFESSIONAL EDUCATION

- Medical Education: University of Southern California Keck School of Medicine (1986) CA
- Residency: LACplusUSC Neurology Residency (1990) CA
- Internship: LACplusUSC Medical Center Internal Medicine Residency (1987) CA
- Board Certification: Neurology, American Board of Psychiatry and Neurology (1994)
- Board Certification, Unified Council of Neurologic Subspecialties , Headache Medicine (2008)
- Board Certification, American Academy of Pain Medicine (2000)

COMMUNITY AND INTERNATIONAL WORK

- AHDA
- AHMA

LINKS

- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Current interest focus on patient education technology and patient/physician communication with a particular emphasis on tools which increase encounter efficiency and improve outcomes. Basic research focuses on mechanisms of action in Chronic Daily Headache, with a particular emphasis on New Daily Persistent Headache. Techniques include fMRI, biomarker investigation and evoked potentials. Clinical research includes clinical trials of novel treatments for episodic and chronic headache forms.

PROJECTS

- Chronic Daily Headache Project - SunStar Foundation (8/15/2013)

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Anesthesia (Fellowship Program)
- Neurosciences (Phd Program)

Publications

PUBLICATIONS

- **Three Dimensions of Association Link Migraine Symptoms and Functional Connectivity.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
Krimmel, S. R., DeSouza, D. D., Keaser, M. L., Sanjanwala, B. M., Cowan, R. P., Lindquist, M. A., Haythornthwaite, J. A., Seminowicz, D. A.
2022
- **Diagnostic accuracy of an artificial intelligence online engine in migraine: A multi-center study.** *Headache*
Cowan, R. P., Rapoport, A. M., Blythe, J., Rothrock, J., Knievel, K., Peretz, A. M., Ekpo, E., Sanjanwala, B. M., Woldeamanuel, Y. W.
2022
- **PREDICTIVE ENRICHMENT TO IDENTIFY RESPONSE TO SLEEP INTERVENTION IN CANCER SURVIVORS WITH HEADACHE - A PRECISION MEDICINE STUDY**
Woldeamanuel, Y. W., Kushida, C. A., Kesler, S., Jo, B., Neri, E., Edwards, K. S., Gore-Felton, C., Blayney, D. W., Cowan, R. P., Palesh, O.
OXFORD UNIV PRESS INC.2022: S523
- **Computerized migraine diagnostic tools: a systematic review** *Therapeutic Advances in Chronic Disease.*
Woldeamanuel, Y. W., Cowan, R. P.
2022
- **Preventive migraine treatment with eptinezumab reduced acute headache medication and headache frequency to below diagnostic thresholds in patients with chronic migraine and medication-overuse headache.** *Headache*
Marmura, M. J., Diener, H., Cowan, R. P., Tepper, S. J., Diamond, M. L., Starling, A. J., Hirman, J., Mehta, L., Brevig, T., Cady, R.
2021
- **A new hypothesis linking oxytocin to menstrual migraine.** *Headache*
Bharadwaj, V. N., Porreca, F., Cowan, R. P., Kori, S., Silberstein, S. D., Yeomans, D. C.
2021
- **Understanding the Impact of Sex and Race on the Migraine Patient's Journey in the United States: Analyses From an Annual Cross-Sectional Patient Chart Audit**
Cowan, R., Stabb, M., Robinson, N., Schobel, V.
LIPPINCOTT WILLIAMS & WILKINS.2021
- **Altered Functional Network Connectivity in Chronic Migraine: a Replication-Extension Study**
DeSouza, D., Hindiyeh, N., Sanjanwala, B., Krimmel, S., Seminowicz, D., Cowan, R.

LIPPINCOTT WILLIAMS & WILKINS.2021

- **A patient perspective of complementary and integrative medicine (CIM) for migraine treatment: a social media survey.** *BMC complementary medicine and therapies*
Kuruvilla, D. E., Mehta, A., Ravishankar, N., Cowan, R. P.
2021; 21 (1): 58
- **Evaluation of the 6-item Identify Chronic Migraine screener in a large medical group.** *Headache*
Pavlovic, J. M., Yu, J. S., Silberstein, S. D., Reed, M. L., Cowan, R. P., Dabbous, F., Pulicharam, R., Viswanathan, H. N., Lipton, R. B.
2021
- **Evidence that blood-CSF barrier transport, but not inflammatory biomarkers, change in migraine, while CSF sVCAM1 associates with migraine frequency and CSF fibrinogen.** *Headache*
Cowan, R. P., Gross, N. B., Sweeney, M. D., Sagare, A. P., Montagne, A. n., Arakaki, X. n., Fonteh, A. N., Zlokovic, B. V., Pogoda, J. M., Harrington, M. G.
2021
- **Plasma Lipolysis and Changes in Plasma and Cerebrospinal Fluid Signaling Lipids Reveal Abnormal Lipid Metabolism in Chronic Migraine.** *Frontiers in molecular neuroscience*
Castor, K., Dawlaty, J., Arakaki, X., Gross, N., Woldeamanuel, Y. W., Harrington, M. G., Cowan, R. P., Fonteh, A. N.
2021; 14: 691733
- **Neuropathic pain in Mali: The current situation, comprehensive hypothesis, which therapeutic strategy for Africa?** *eNeurologicalSci*
Maiga, Y. n., Sangho, O. n., Konipo, F. n., Diallo, S. n., Coulibaly, S. D., Sangare, M. n., Péréon, Y. n., Giumelli, B. n., Sanou, M. n., Coulibaly, A. n., Diallo, S. n., Daou, M. n., Traoré, et al
2021; 22: 100312
- **Efficacy, tolerability, and safety of eptinezumab in patients with a dual diagnosis of chronic migraine and medication-overuse headache: Subgroup analysis of PROMISE-2.** *Headache*
Diener, H., Marmura, M. J., Tepper, S. J., Cowan, R., Starling, A. J., Diamond, M. L., Hirman, J., Mehta, L., Brevig, T., Sperling, B., Cady, R.
2020
- **Estimating the Economic Burden of Migraine on US Employers** *AMERICAN JOURNAL OF MANAGED CARE*
Yucel, A., Thach, A., Kumar, S., Loden, C., Bensink, M., Goldfarb, N., Cowan, R.
2020; 26 (12): E403-+
- **Reimagining Headache Fellowships.** *Headache*
Zhang, N., Chan, T. L., Cowan, R.
2020
- **Improvements across a range of patient-reported domains with fremanezumab treatment: results from a patient survey study.** *The journal of headache and pain*
Buse, D. C., Gandhi, S. K., Cohen, J. M., Ramirez-Campos, V., Cloud, B., Yang, R., Cowan, R. P.
2020; 21 (1): 109
- **Endogenous glucocorticoids may serve as biomarkers for migraine chronification.** *Therapeutic advances in chronic disease*
Woldeamanuel, Y. W., Sanjanwala, B. M., Cowan, R. P.
2020; 11: 2040622320939793
- **Insights into chronic migraine pathophysiology - what measures of gray matter reveal.** *Cephalalgia : an international journal of headache*
DeSouza, D. D., Cowan, R. P.
2020: 333102420933263
- **Calcitonin Gene-Related Peptide Receptor Antagonists (Gepants) for the Acute Treatment of Nausea in Episodic Migraine: A Systematic Review and Meta-Analysis.** *Headache*
Chan, T. L., Cowan, R. P., Woldeamanuel, Y. W.
2020
- **Cerebrospinal Fluid Leak in the context of Pars Interarticularis Fracture: A Case Series**
Chan, L., Cowan, R., Hindiyeh, N., Hashmi, S., Lanzman, B., Carroll, I.
LIPPINCOTT WILLIAMS & WILKINS.2020

- **Patient Preference for Dosing Regimen and Perception of Dosing Flexibility With Fremanezumab for Migraine: Results From a Patient Survey Following Completion of a 1-Year Extension Study**
Cowan, R. P., Gandhi, S. K., Cloud, B., Cohen, J. M., Buse, D. C., Ramirez-Campos, V., Ahn, A. H., Lipton, R. B.
LIPPINCOTT WILLIAMS & WILKINS.2020
- **ACEP Guidelines on Acute Nontraumatic Headache Diagnosis and Management in the Emergency Department, Commentary on Behalf of the Refractory, Inpatient, Emergency Care Section of the American Headache Society.** *Headache*
Peretz, A. n., Dujari, S. n., Cowan, R. n., Minen, M. n.
2020
- **Spinal cerebrospinal fluid leak in the context of pars interarticularis fracture.** *BMC neurology*
Chan, T. L., Cowan, R. n., Hindiyeh, N. n., Hashmi, S. n., Lanzman, B. n., Carroll, I. n.
2020; 20 (1): 162
- **Exploring Natural Clusters of Chronic Migraine Phenotypes: A Cross-Sectional Clinical Study.** *Scientific reports*
Woldeamanuel, Y. W., Sanjanwala, B. M., Peretz, A. M., Cowan, R. P.
2020; 10 (1): 2804
- **Endogenous glucocorticoids may serve as biomarkers for migraine chronification** *Therapeutic Advances in Chronic Disease*
Woldeamanuel, Y. W., Sanjanwala, B. M., Cowan, R. P.
2020; 11
- **Moving the Needle: Desiloing the Stakeholders in the Headache Space.** *Headache*
Cowan, R. P.
2020; 60 (9): 2041
- **Electrophysiology and Structural Connectivity of the Posterior Hypothalamic Region: Much to Learn From a Rare Indication of Deep Brain Stimulation.** *Frontiers in human neuroscience*
Kakusa, B. n., Saluja, S. n., Dadey, D. Y., Barbosa, D. A., Gattas, S. n., Miller, K. J., Cowan, R. P., Kouyoumdjian, Z. n., Pouratian, N. n., Halpern, C. H.
2020; 14: 164
- **Patient preference for and satisfaction with fremanezumab following completion of a 1-year extension study**
Cowan, R. P., Gandhi, S. K., Cohen, J. M., Cloud, B., Buse, D. C., Ramirez-Campos, V., Ahn, A. H., Lipton, R. B.
SAGE PUBLICATIONS LTD.2019: 264–65
- **Aberrant Structural Network Architecture in Chronic Migraine**
DeSouza, D. D., Woldeamanuel, Y. W., Sanjanwala, B. M., Bissell, D., Bishop, J. H., Cowan, R. P.
SAGE PUBLICATIONS LTD.2019: 392
- **Endogenous Glucocorticoids may be Potential Biomarkers for Migraine Chronification**
Woldeamanuel, Y. W., Sanjanwala, B. M., Cowan, R. P.
SAGE PUBLICATIONS LTD.2019: 379–80
- **Evaluation of the 6-Item Identify Chronic Migraine (ID-CM) Screener in a Large Medical Group**
Pavlovic, J. M., Yu, J. S., Silberstein, S. D., Reed, M. L., Kawahara, S. H., Cowan, R. P., Dabbous, F., Campbell, K. L., Pulicharam, R., Viswanathan, H. N., Lipton, R. B.
SAGE PUBLICATIONS LTD.2019: 283–84
- **Patient preference for dosing regimen and perception of dosing flexibility with fremanezumab for migraine: results from a patient survey following completion of a 1-year extension study**
Cowan, R. P., Gandhi, S. K., Cloud, B., Cohen, J. M., Buse, D. C., Ramirez-Campos, V., Ahn, A. H., Lipton, R. B.
SAGE PUBLICATIONS LTD.2019: 263–64
- **Remote electrical neuromodulation (REN) in the acute treatment of migraine: a comparison with usual care and acute migraine medications.** *The journal of headache and pain*
Rapoport, A. M., Bonner, J. H., Lin, T., Harris, D., Gruper, Y., Ironi, A., Cowan, R. P.
2019; 20 (1): 83
- **Deep Brain Stimulation for Chronic Cluster Headache: A Review** *NEUROMODULATION*
Vyas, D. B., Ho, A. L., Dadey, D. Y., Pendharkar, A. V., Sussman, E. S., Cowan, R., Halpern, C. H.

2019; 22 (4): 388–97

- **Subarachnoid Hemorrhage and Headache.** *Current pain and headache reports*
Ogunlaja, O. I., Cowan, R.
2019; 23 (6): 44
- **Physician and patient preferences for dosing options in migraine prevention** *JOURNAL OF HEADACHE AND PAIN*
Cowan, R., Cohen, J. M., Rosenman, E., Iyer, R.
2019; 20
- **Altered Permeability Blood-CSF of Barriers in Migraine**
Cowan, R., Sweeney, M., Sagare, A., Ekpo, E., Sanjanwala, B., Gross, N., Arakaki, X., Fonteh, A., Zlokovic, B., Harrington, M.
LIPPINCOTT WILLIAMS & WILKINS.2019
- **The Impact of Offering Monthly and Quarterly Dosing Options for a New Class of Migraine Preventive Therapy on Likelihood of Acceptance and Adherence in Adults With Migraine**
Cowan, R., Cohen, J., Rosenman, E., Iyer, R.
LIPPINCOTT WILLIAMS & WILKINS.2019
- **Exploring Natural Cohorts of Chronic Migraine Phenotype**
Woldeamanuel, Y., Sanjanwala, B., Peretz, A., Cowan, R.
LIPPINCOTT WILLIAMS & WILKINS.2019
- **Toward a Philosophy of Migraine** *HEADACHE*
Cowan, R. P.
2019; 59 (4): 481–83
- **Development of a claims-based algorithm to identify potentially undiagnosed chronic migraine patients** *CEPHALALGIA*
Pavlovic, J. M., Yu, J. S., Silberstein, S. D., Reed, M. L., Kawahara, S. H., Cowan, R. P., Dabbous, F., Campbell, K. L., Shewale, A. R., Pulicharam, R., Kowalski, J. W., Viswanathan, H. N., Lipton, et al
2019; 39 (4): 465-476
- **Toward a Philosophy of Migraine.** *Headache*
Cowan, R. P.
2019; 59 (4): 481–83
- **Development of a claims-based algorithm to identify potentially undiagnosed chronic migraine patients.** *Cephalalgia : an international journal of headache*
Pavlovic, J. M., Yu, J. S., Silberstein, S. D., Reed, M. L., Kawahara, S. H., Cowan, R. P., Dabbous, F., Campbell, K. L., Shewale, A. R., Pulicharam, R., Kowalski, J. W., Viswanathan, H. N., Lipton, et al
2019: 333102418825373
- **Clinical Features Contributing to Cortical Thickness Changes in Chronic Migraine - A Pilot Study** *HEADACHE*
Woldeamanuel, Y. W., DeSouza, D. D., Sanjanwala, B. M., Cowan, R. P.
2019; 59 (2): 180–91
- **Altered structural brain network topology in chronic migraine.** *Brain structure & function*
DeSouza, D. D., Woldeamanuel, Y. W., Sanjanwala, B. M., Bissell, D. A., Bishop, J. H., Peretz, A. n., Cowan, R. P.
2019
- **On Making a Headache Medicine Rotation Mandatory in Neurology Training.** *Headache*
Zhang, N. n., Cowan, R. P.
2019
- **Endogenous Na⁺, K⁺-ATPase inhibitors and CSF [Na⁺] contribute to migraine formation.** *PloS one*
Gross, N. B., Abad, N. n., Lichtstein, D. n., Taron, S. n., Aparicio, L. n., Fonteh, A. N., Arakaki, X. n., Cowan, R. P., Grant, S. C., Harrington, M. G.
2019; 14 (6): e0218041
- **Physician and patient preferences for dosing options in migraine prevention.** *The journal of headache and pain*
Cowan, R. n., Cohen, J. M., Rosenman, E. n., Iyer, R. n.
2019; 20 (1): 50

- **The impact of offering monthly and quarterly dosing options for a new class of migraine preventive therapy on likelihood of acceptance and adherence in adults with migraine (vol 19, pg P137, 2018)** *JOURNAL OF HEADACHE AND PAIN*
Cowan, R., Cohen, J., Rosenman, E., Fitzgerald, T., Iyer, R.
2018; 19
- **The Future of Migraine Prevention** *HEADACHE*
Cowan, R. P.
2018; 58: 291–97
- **The Future of Migraine Prevention.** *Headache*
Cowan, R. P.
2018
- **Deep Brain Stimulation for Chronic Cluster Headache: A Review.** *Neuromodulation : journal of the International Neuromodulation Society*
Vyas, D. B., Ho, A. L., Dadey, D. Y., Pendharkar, A. V., Sussman, E. S., Cowan, R., Halpern, C. H.
2018
- **Obesity-Related Cortical Thickness Changes in Chronic Migraine**
Woldeamanuel, Y. W., DeSouza, D. D., Sanjanwala, B. M., Cowan, R. P.
WILEY.2018: S83
- **American Headache Society Survey About Urgent and Emergency Management of Headache Patients** *HEADACHE*
Minen, M. T., Ortega, E., Lipton, R. B., Cowan, R.
2018; 58 (9): 1389–96
- **The impact on physician prescribing of monthly and quarterly dosing options for a new class of migraine preventive therapy**
Cowan, R., Rosenman, E., Fitzgerald, T., Cohen, J., Iyer, R.
SPRINGEROPEN.2018
- **Evaluation of the 6-Item Identify Chronic Migraine (ID-CM) Screener in a Large Medical Group**
Pavlovic, J. M., Yu, J. S., Silberstein, S. D., Reed, M. L., Kawahara, S. H., Cowan, R. P., Dabbous, F., Campbell, K. L., Pulicharam, R., Viswanathan, H. N., Lipton, R. B.
SPRINGEROPEN.2018
- **The impact of offering monthly and quarterly dosing options for a new class of migraine preventive therapy on likelihood of acceptance and adherence in adults with migraine**
Cowan, R., Cohen, J., Rosenman, E., Fitzgerald, T., Iyer, R.
SPRINGEROPEN.2018
- **Evaluation of the Identify Chronic Migraine (ID-CM) Screener in a Large Medical Group**
Yu, J. S., Pavlovic, J. M., Silberstein, S. D., Reed, M. L., Kawahara, S. H., Cowan, R. P., Dabbous, F., Campbell, K., Pulicharam, R., Viswanathan, H. N., Lipton, R. B.
LIPPINCOTT WILLIAMS & WILKINS.2018
- **Migraine Treatment Patterns and Opioid Use Among Chronic and Episodic Migraine Patients Identified by a Clinician-Administered Semi-Structured Diagnostic Interview**
Pavlovic, J. M., Yu, J. S., Silberstein, S. D., Reed, M. L., Kawahara, S. H., Cowan, R. P., Dabbous, F., Campbell, K., Pulicharam, R., Viswanathan, H. N., Lipton, R. B.
LIPPINCOTT WILLIAMS & WILKINS.2018
- **Development of a Claims-Based Algorithm for Use in Patients with Migraine to Identify Potentially Undiagnosed Chronic Migraine Patients**
Pavlovic, J., Yu, J. S., Silberstein, S. D., Reed, M. L., Kawahara, S. H., Cowan, R. P., Dabbous, F., Campbell, K., Shewale, A. R., Pulicharam, R., Kowalski, J. W., Viswanathan, H. N., Lipton, et al
LIPPINCOTT WILLIAMS & WILKINS.2018
- **American Headache Society Survey about Urgent and Emergency Management of Headache Patients**
Minen, M., Ortega, E., Lipton, R., Cowan, R.
LIPPINCOTT WILLIAMS & WILKINS.2018
- **Migraine Action Plan (MAP).** *Headache*
Peretz, A. M., Minen, M. T., Cowan, R., Strauss, L. D.

2018; 58 (2): 355–56

- **Introducing the Migraine Action Plan** *HEADACHE*
Peretz, A. M., Minen, M. T., Cowan, R., Strauss, L. D.
2018; 58 (2): 195
- **Clinical Features Contributing to Cortical Thickness Changes in Chronic Migraine - A Pilot Study.** *Headache*
Woldeamanuel, Y. W., DeSouza, D. D., Sanjanwala, B. M., Cowan, R. P.
2018
- **Development of a claims-based algorithm for use in patients with migraine to identify potentially undiagnosed chronic migraine patients**
Pavlovic, J. M., Yu, J. S., Silberstein, S. D., Reed, M. L., Kawahara, S. H., Cowan, R. P., Dabbous, F., Campbell, K. L., Shewale, A. S., Pulicharam, R., Kowalski, J. W., Viswanathan, H. N., Lipton, et al
SPRINGER-VERLAG ITALIA SRL.2017
- **Migraine Treatment Patterns and Opioid Use Among Chronic and Episodic Migraine Patients Identified by a Clinician-Administered Semi-Structured Diagnostic Interview**
Yu, J. S., Pavlovic, J. M., Silberstein, S. D., Reed, M. L., Kawahara, S. H., Cowan, R. P., Dabbous, F., Campbell, K. L., Pulicharam, R., Viswanathan, H. N., Lipton, R. B.
SAGE PUBLICATIONS LTD.2017: 365–66
- **Interactions between affective measures and amygdala volume in chronic migraine: associations in the absence of group volumetric differences**
Desouza, D. D., Woldeamanuel, Y. W., Peretz, A. M., Sanjanwala, B. M., Cowan, R. P.
SAGE PUBLICATIONS LTD.2017: 47–48
- **Evaluation of the Identify Chronic Migraine (ID-CM) screener in an accountable care organization**
Yu, J. S., Pavlovic, J. M., Silberstein, S. D., Reed, M. L., Kawahara, S. H., Cowan, R. P., Dabbous, F., Campbell, K., Pulicharam, R., Viswanathan, H. N., Lipton, R. B.
SAGE PUBLICATIONS LTD.2017: 188–89
- **Use of Most Bothersome Symptom as a Co-Primary Endpoint in an Acute Treatment of Migraine Trial**
Dodick, D. W., Tepper, S. J., Friedaman, D., Gelfand, A., Cowan, R. P., Schmidt, P., Engels, J., Rapoport, A., Kellerman, D. J.
SAGE PUBLICATIONS LTD.2017: 361–62
- **Effect of Educating the Primary Care Physician About Headache to Help Reduce "Trivial" Referrals and Improve the Number and Quality of "Substantial" Referrals that Truly Need Subspecialty Headache Medicine Care.** *Current treatment options in neurology*
Cowan, R., Barad, M.
2017; 19 (7): 25-?
- **Comprehensive Headache Experience in Collegiate Student-Athletes: An Initial Report From the NCAA Headache Task Force** *HEADACHE*
Seifert, T., Sufirinko, A., Cowan, R., Black, W., Watson, D., Edwards, B., Livingston, S., Webster, K., Akers, D., Lively, M., Kontos, A. P.
2017; 57 (6): 877–86
- **Migraine affects 1 in 10 people worldwide featuring recent rise: A systematic review and meta-analysis of community-based studies involving 6 million participants** *JOURNAL OF THE NEUROLOGICAL SCIENCES*
Woldeamanuel, Y. W., Cowan, R. P.
2017; 372: 307-315
- **Migraine and Complex Regional Pain Syndrome: A Case-Referent Clinical Study.** *BioMed research international*
Woldeamanuel, Y. W., Cooley, C. n., Foley-Saldena, K. n., Cowan, R. P.
2017; 2017: 5714673
- **Spontaneous extracranial hemorrhagic phenomena in primary headache disorders: A systematic review of published cases** *CEPHALALGIA*
Peretz, A. M., Woldeamanuel, Y. W., Rapoport, A. M., Cowan, R. P.
2016; 36 (13): 1257-1267
- **Journal Club: Change in brain network connectivity during PACAP38-induced migraine attacks.** *Neurology*
DeSouza, D. D., O'Hare, M., Woldeamanuel, Y. W., Cowan, R. P.
2016; 87 (16): e199-e202
- **Journal Club: Exacerbation of headache during dihydroergotamine for chronic migraine does not alter outcome.** *Neurology*

- Woldeamanuel, Y. W., O'Hare, M., DeSouza, D. D., Cowan, R. P.
2016; 87 (16): e196-e198
- **Migraine and Complex Regional Pain Syndrome: A Case-Referent Clinical Study**
Woldeamanuel, Y. W., Cooley, C., Foley-Saldana, K., Cowan, R. P.
WILEY-BLACKWELL.2016: S169
 - **Severe Headache or Migraine History Is Inversely Correlated With Dietary Sodium Intake: NHANES 1999-2004: A Response** *HEADACHE*
Pogoda, J. M., Gross, N. B., Arakaki, X., Fonteh, A. N., Cowan, R. P., Harrington, M. G.
2016; 56 (7): 1216-18
 - **Worldwide Migraine Epidemiology: Systematic Review and Meta-Analysis of 302 Community-Based Studies Involving 6,216,995 Participants**
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