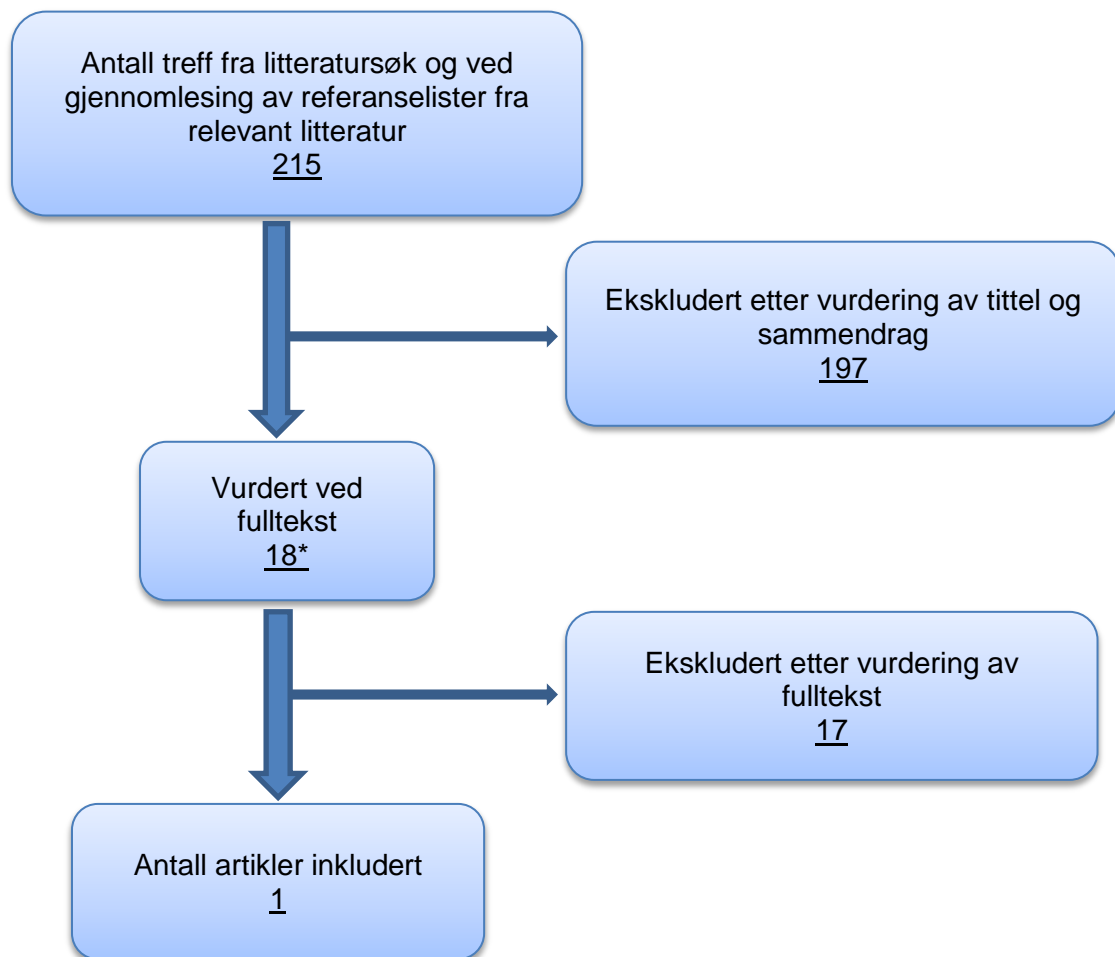


Dokumentasjonsark: Nasjonal faglig retningslinje for hjerneslag

Problemstilling 2.2: Bør pasienter med gjennomgått intracerebral blødning behandles med lipidsenkende legemidler?

P	Pasienter med gjennomgått hjerneblødning	
I	Lipidsenkende legemidler	Dato for søk: 04.10.2016
C	Ingen lipidsenkende legemidler	Søk oppdatert dato: -
O	Hjerneslag (ischemisk,hemorrhagisk),hjerteinfarkt, død	Biblioteket for helseforvaltning



*Fulltekstartikkel (Lei et al., 2014) av et abstract (Wu et al., 2013) ble inkludert av andrescreenere.

Figur 1. Flytskjema over identifiserte treff og utvelgelse av relevante referanser. (modifisert/hentet fra Kunnskapscenteret for helsetjenesten i Folkehelseinstituttet)

Tabell 1. Inkludert systematisk oversikt (oversiktsartikler)

Forfatter, år, tittel	Metodisk kvalitet*	Egne kommentarer
Tapia Perez JH, Yildiz OC, Schneider T, Nimsky C. Meta-analysis of Statin Use for the Acute Therapy of Spontaneous Intracerebral Hemorrhage. J Stroke Cerebrovasc Dis 2015;24(11):2521-6.	Moderat	Nedgradert kvalitet pga. mangelfulle opplysninger om litteratursøket og validering av inkluderte studier.

* Vurdert med FHI/Kunnskapscenterets sjekklister for systematiske oversikter

Tabell 2. Ekskluderte referanser. Sammendraget/tittel er funnet relevant, men artikkel ekskludert etter gjennomlesing

Forfatter, år	Kommentar/begrunnelse for eksklusjon
Van Matre et al., 2016	Narrativ oversiktsartikkel
Pandit et al., 2016	Møter ikke P i PICO 2.2
Ma et al., 2013	Narrativ oversiktsartikkel
Sikora Newsome et al., 2015	Narrativ oversiktsartikkel
Lauer et al., 2015	Narrativ oversiktsartikkel
Jung et al., 2015	Analysene møter ikke I eller C i PICO 2.2 pga. manglende informasjon (skiller ikke mellom fortsatt statinbruk eller ikke, etter hjerneblødning).
Zheng et al., 2014	Narrativ oversiktsartikkel
Wu et al., 2013	abstract
Lei et al., et al., 2014	Møter verken P, I eller C i PICO 2.2.
Laloux P., 2013	Narrativ oversiktsartikkel
McKinney & Kostis, 2012	Møter ikke P i PICO 2.2. Fokus er risiko for hjerneblødning som følge av statinbruk
Herrington WG, 2011	Kommentar til Biffi et al., 2011
Hackam et al., 2011	Møter ikke P i PICO 2.2
Biffi et al., 2011	Analysene møter ikke P, I eller C i PICO 2.2 pga. manglende informasjon (skiller ikke mellom fortsatt statinbruk eller ikke, etter hjerneblødning).
Vergouwen et al., 2010	Abstract

Forfatter, år	Kommentar/begrunnelse for eksklusjon
Athyros et al., 2010	Narrativ oversiktsartikkel
Vergouwen et al., 2008	Publisert før 2010.

Fullstendig referanseliste (inkluderte og ekskluderte referanser)

- Aguilar, M. I., & Freeman, W. D. (2008). Warfarin-related intracerebral hemorrhage: How to proceed. *Aging Health, 4*(3), 299-310.
- Alberts, M. J. (2003). Update on the treatment and prevention of ischaemic stroke. *Current Medical Research and Opinion, 19*(5), 438-441.
- Alessandro, S., Erica, R., Francesco, D., & Walter, A. (2011). Statins for acute ischemic stroke. *Cochrane Database of Systematic Reviews*(8), CD007551. doi: 10.1002/14651858.CD007551.pub2
- Amarenco, P., & Labreuche, J. (2009). Lipid management in the prevention of stroke: review and updated meta-analysis of statins for stroke prevention. *Lancet Neurology, 8*(5), 453-463. doi: [http://dx.doi.org/10.1016/S1474-4422\(09\)70058-4](http://dx.doi.org/10.1016/S1474-4422(09)70058-4)
- Amarenco, P., Labreuche, J., Lavalley, P., & Touboul, P. J. (2004). Statins in stroke prevention and carotid atherosclerosis: systematic review and up-to-date meta-analysis (Structured abstract). *Stroke, 35*(12), 2902-2909. <http://onlinelibrary.wiley.com/doi/10.1161/01.STR.0000142000.00000.00>
- Amarenco, P., & Tonkin, A. M. (2004). Statins for stroke prevention: disappointment and hope. *Circulation, 109*(23 Suppl 1), III44-49.
- Anderson, D. C. (2012). 2011 - Review: Statins do not increase risk for intracerebral hemorrhage. *ACP Journal Club, 156*(3), 1-1.
- Anderson, D. C. (2012a). ACP Journal Club. Review: Statins do not increase risk for intracerebral hemorrhage. *Annals of Internal Medicine, 156*(6), JC3-6. doi: 10.7326/0003-4819-156-6-201203200-02006
- Anderson, D. C. (2012b). Review: Statins do not increase risk for intracerebral hemorrhage. *Annals of Internal Medicine, 156*(6), JC3-06.
- Anonymous. (2012). Emerging Science Abstracts 2012 AAN Annual Meeting. *Neurology Conference: 64th American Academy of Neurology Annual Meeting. New Orleans, LA United States. Conference Start, 79*(11).
- Athyros, V. G., Tziomalos, K., Karagiannis, A., Wierzbicki, A. S., & Mikhailidis, D. P. (2010). Aggressive statin treatment, very low serum cholesterol levels and haemorrhagic stroke: is there an association? *Current Opinion in Cardiology, 25*(4), 406-410. doi: <http://dx.doi.org/10.1097/HCO.0b013e3283393c1a>
- Bajnok, L. (2011). [Examples of results of pharmaceutical cerebrovascular protection, with special emphasis on the statins]. *Ideggyogyaszati Szemle, 64*(5-6), 151-156.
- Bauer, A. M., & Rasmussen, P. A. (2014). Treatment of intracranial vasospasm following subarachnoid hemorrhage. *Frontiers in Neurology, 5* MAY (no pagination)(Article 72).
- Behrouz, R., & Sadat-Hosseiny, Z. (2015). Pharmacological agents in aneurysmal subarachnoid hemorrhage: successes and failures. *Clinical Neuropharmacology, 38*(3), 104-108. doi: <http://dx.doi.org/10.1097/WNF.0000000000000085>
- Bejot, Y., Caillier, M., Rouaud, O., Benatru, I., Maugras, C., Osseby, G. V., & Giroud, M. (2007). [Epidemiology of strokes. Impact on the treatment decision]. *Presse Medicale, 36*(1 Pt 2), 117-127.

- Belur, P. K., Chang, J. J., He, S., Emanuel, B. A., & Mack, W. J. (2013). Emerging experimental therapies for intracerebral hemorrhage: targeting mechanisms of secondary brain injury. *Neurosurgical Focus*, 34(5), E9. doi: <http://dx.doi.org/10.3171/2013.2.FOCUS1317>
- Bereczki, D. (2008). [Stroke in chronic renal failure]. *Orvosi Hetilap*, 149(15), 691-696. doi: <http://dx.doi.org/10.1556/OH.2008.28292>
- Bereczki, D. (2009). [Pharmacotherapy of stroke]. *Neuropsychopharmacologia Hungarica*, 11(1), 7-13.
- Bereczki, D., Liu, M., do Prado, G. F., & Fekete, I. (2001). Mannitol for acute stroke. *Cochrane Database of Systematic Reviews*(1), CD001153.
- Biffi, A., Devan, W. J., Anderson, C. D., Ayres, A. M., Schwab, K., Cortellini, L., . . . Rosand, J. (2011). Statin use and outcome after intracerebral hemorrhage: case-control study and meta-analysis. *Neurology*, 76(18), 1581-1588. doi: <http://dx.doi.org/10.1212/WNL.0b013e3182194be9>
- Biondi-Zoccai, G. G., Agostoni, P., Testa, L., Abbate, A., Parisi, Q., Burzotta, F., . . . Biasucci, L. M. (2004). Increased mortality after coronary stenting in patients treated with clopidogrel without loading dose: evidence from a meta-analysis (Structured abstract). *Minerva Cardioangiologica*, 52(3), 195-208. <http://onlinelibrary.wiley.com/o/cochrane/cldare/articles/DARE-12004009973/frame.html>
- Brindis, R. G., Fischer, E., Besinque, G., Gjedsted, A., Lee, P. C., Padgett, T., . . . Strohmeier, A. (2006). Acute coronary syndromes clinical practice guidelines. *Critical Pathways in Cardiology*, 5(2), 69-102.
- Buckley, B. M. (2003). Lipids and stroke. *British Journal of Diabetes & Vascular Disease*, 3(3), 170-176.
- Cai, B., Zheng, Y. Q., & Wang, N. (2015). Intracerebral hemorrhages in CADASIL: A family report of four cases and a brief review. *Journal of the Neurological Sciences*, 357, e368.
- Carrizzo, A., Forte, M., Lembo, M., Formisano, L., Puca, A. A., & Vecchione, C. (2014). Rac-1 as a new therapeutic target in cerebro- and cardio-vascular diseases. *Current Drug Targets*, 15(13), 1231-1246.
- Castilla-Guerra, L., Fernandez-Moreno, M. C., Lopez-Chozas, J. M., & Jimenez-Hernandez, M. D. (2007). [Statins and cerebrovascular disease: new perspectives in stroke prevention]. *Revista de Neurología*, 44(2), 95-100.
- Chan Edwin, S. Y., Bautista, D., You, Y., Long Jian, T., Ling, L., Li, W., & Chen, C. (2013). Traditional Chinese herbal medicine for vascular dementia. *Cochrane Database of Systematic Reviews*, (1). <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010284/abstract> doi:10.1002/14651858.CD010284
- Chertow, B. (2004). Advances in diabetes for the millennium: vitamins and oxidant stress in diabetes and its complications. *Medgenmed [Computer File]: Medscape General Medicine*, 6(3 Suppl), 4.
- Chopp, M., & Li, Y. (2008). Treatment of stroke and intracerebral hemorrhage with cellular and pharmacological restorative therapies. *Acta Neurochirurgica - Supplement*, 105, 79-83.
- Colman, J. (2005). Why our arteries become clogged as we age. *Life Extension*, 11(10), 24-33.
- Cordenier, A., De Smedt, A., Brouns, R., Uyttenboogaart, M., De Raedt, S., Luijckx, G. J., & De Keyser, J. (2011). Pre-stroke use of statins on stroke outcome: a meta-analysis of observational studies. *Acta Neurologica Belgica*, 111(4), 261-267.
- Coull, B. M. (2004). Statin therapy after acute ischemic stroke in the heart protection study: is the role in recurrent stroke prevention now defined? *Stroke*, 35(9), 2233-2234.
- Crowley, R. W., Medel, R., Kassell, N. F., & Dumont, A. S. (2008). New insights into the causes and therapy of cerebral vasospasm following subarachnoid hemorrhage. *Drug*

- Discovery Today*, 13(5-6), 254-260. doi:
<http://dx.doi.org/10.1016/j.drudis.2007.11.010>
- Czosnyka, M., Brady, K., Reinhard, M., Smielewski, P., & Steiner, L. A. (2009). Monitoring of cerebrovascular autoregulation: facts, myths, and missing links. *Neurocritical Care*, 10(3), 373-386. doi: <http://dx.doi.org/10.1007/s12028-008-9175-7>
- D'Souza, S. (2015). Aneurysmal subarachnoid hemorrhage. *Journal of Neurosurgical Anesthesiology*, 27(3), 222-240.
- Dalal, J., Bhawe, A., Oomman, A., Vora, A., Saxena, A., Kahali, D., . . . Kaul, U. (2015). The Indian consensus guidance on stroke prevention in atrial fibrillation: An emphasis on practical use of nonvitamin K oral anticoagulants. *Indian Heart Journal*, 67, S13-S34.
- Danelich, I. M., Reed, B. N., Hollis, I. B., Cook, A. M., & Rodgers, J. E. (2013). Clinical update on the management of atrial fibrillation. *Pharmacotherapy: The Journal of Human Pharmacology & Drug Therapy*, 33(4), 422-446. doi: <http://dx.doi.org/10.1002/phar.1217>
- Danton, G., Watson, B. D., Prado, R., & Dietric, W. D. (2002). Endothelium-targeted pharmacotherapeutics for the treatment of stroke. *Current Opinion in Investigational Drugs*, 3(6), 896-904.
- Dardis, C., & Sharfstein, S. (2011). An unusual complication of hypertensive hemorrhage - Delayed oculomotor palsy: Case report and literature review. *Case Reports in Neurology*, 3(3), 214-218.
- Deplanque, D., & Amarenco, P. (2011). Blood lipids and stroke: what more can we do besides reducing low-density lipoprotein cholesterol? *Current Atherosclerosis Reports*, 13(4), 306-313. doi: <http://dx.doi.org/10.1007/s11883-011-0186-z>
- Deshaies, E. M., Boulos, A. S., Drazin, D., & Popp, A. J. (2009). Evidence-based pharmacotherapy for cerebral vasospasm. *Neurological Research*, 31(6), 615-620. doi: <http://dx.doi.org/10.1179/174313209X382377>
- Deshaies, E. M., Boulos, A. S., & Popp, A. J. (2009). Peri-operative medical management of cerebral vasospasm. *Neurological Research*, 31(6), 644-650. doi: <http://dx.doi.org/10.1179/174313209X382340>
- Dhar, R., & Dinger, M. (2012). Statins and anti-inflammatory therapies for subarachnoid hemorrhage. *Current Treatment Options in Neurology*, 14(2), 164-174.
- Di Legge, S., Koch, G., Diomedi, M., Stanzione, P., & Sallustio, F. (2012). Stroke prevention: Managing modifiable risk factors. *Stroke Research and Treatment, (no pagination)*(391538).
- Dickinson, C. J. (2003). Strokes and their relationship to hypertension. *Current Opinion in Nephrology and Hypertension*, 12(1), 91-96.
- Dietrich, E., & Davis, K. (2014). A Statin a Day to Keep the Doctor Away? Comparing Aspirin and Statins for Primary Prevention of Cardiovascular Disease. *Annals of Pharmacotherapy*, 48(9), 1238-1241.
- Dimmitt, S. B., Stampfer, H. G., & Warren, J. B. (2015). Common statin side effects explain poor compliance. *British Journal of Clinical Pharmacology*, 80(1), 170-171.
- Dusick, J. R., & Gonzalez, N. R. (2013). Management of arterial vasospasm following aneurysmal subarachnoid hemorrhage. *Seminars in Neurology*, 33(5), 488-497. doi: <http://dx.doi.org/10.1055/s-0033-1364216>
- Dziedzic, T. (2015). Systemic inflammation as a therapeutic target in acute ischemic stroke. *Expert Review of Neurotherapeutics*, 15(5), 523-531.
- Eisenhut, M. (2014). Vasospasm in cerebral inflammation. *International Journal of Inflammation*, 2014, 509707. doi: <http://dx.doi.org/10.1155/2014/509707>
- El Husseini, N., Kaskar, O., & Goldstein, L. B. (2014). Chronic kidney disease and stroke. *Advances in Chronic Kidney Disease*, 21(6), 500-508. doi: <http://dx.doi.org/10.1053/j.ackd.2014.09.001>
- Emsley, H. C., & Tyrrell, P. J. (2002). Inflammation and infection in clinical stroke. *Journal of Cerebral Blood Flow and Metabolism*, 22(12), 1399-1419.
- Fagan, S. C., Hess, D. C., Machado, L. S., Hohnadel, E. J., Pollock, D. M., & Ergul, A. (2005). Tactics for vascular protection after acute ischemic stroke.

- Pharmacotherapy: The Journal of Human Pharmacology & Drug Therapy*, 25(3), 387-395.
- Fandino, J., Fathi, A. R., Graupner, T., Jacob, S., & Landolt, H. (2007). [Perspectives in the treatment of subarachnoid-hemorrhage-induced cerebral vasospasm]. *Neurocirugía (Asturias, Spain)*, 18(1), 16-27.
- Fisher, M., & Davalos, A. (2004). Emerging therapies for cerebrovascular disorders. *Stroke*, 35(2), 367-369.
- Flaster, M., Morales-Vidal, S., Schneck, M. J., & Biller, J. (2011). Statins in hemorrhagic stroke. *Expert Review of Neurotherapeutics*, 11(8), 1141-1149. doi: <http://dx.doi.org/10.1586/ern.11.101>
- Fodor, G. J., Kotrec, M., & Turton, P. (2006). Novel aspects of cardiovascular prevention as of 2005. *Kardiologia*, 15(2), 89-95.
- Fox, K. A. A. (2012). Atrial fibrillation: Current status and challenges. *Dialogues in Cardiovascular Medicine*, 17(3), 171-186.
- Goldschlager, N. F., & Deo, R. (2006). Update on pharmacologic strategies for atrial fibrillation: rate, rhythm, and beyond. *Johns Hopkins Advanced Studies in Medicine*, 6(5), 213-223.
- Goldstein, L. B. (2007). Statins for stroke prevention. *Current Atherosclerosis Reports*, 9(4), 305-311.
- Goldstein, L. B., Adams, R., Alberts, M. J., Appel, L. J., Brass, L. M., Bushnell, C. D., . . . Sacco, R. L. (2006). Primary prevention of ischemic stroke. A guideline from the American Heart Association/American Stroke Association Stroke Council: Cosponsored by the Atherosclerotic Peripheral Vascular Disease Interdisciplinary Working Group; Cardiovascular Nursing Council; Clinical Cardiology Council; Nutrition, Physical Activity, and Metabolism Council. *Stroke*, 37(6), 1583-1633.
- Goldszmidt, A. (2006). Antiplatelet therapy and secondary stroke prevention - Part II. *Clinical Geriatrics*, 14(10), 35-44.
- Gross, B. A., Lai, P. M., Frerichs, K. U., & Du, R. (2013). Angiotensin-converting enzyme-inhibitors, statins and the risk of hemorrhage from cerebral dural arteriovenous fistulae. *Journal of Clinical Neuroscience*, 20(9), 1228-1231. doi: <http://dx.doi.org/10.1016/j.jocn.2013.01.005>
- Hackam, D. G., Woodward, M., Newby, L. K., Bhatt, D. L., Shao, M., Smith, E. E., . . . Mrkobrada, M. (2011). Statins and intracerebral hemorrhage: collaborative systematic review and meta-analysis. *Circulation*, 124(20), 2233-2242. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.111.055269>
- Hackam, D. G., Woodward, M., Newby, L. K., Bhatt, D. L., Shao, M., Smith, E. E., . . . Mrkobrada, M. (2012). Statins and intracerebral hemorrhage: collaborative systematic review and meta-analysis. *Database of Abstracts of Reviews of Effects (DARE)*.
- Hamann, G. F., & Rother, J. (2010). [Secondary stroke prevention - an update]. *Fortschritte der Neurologie-Psychiatrie*, 78(10), 572-581. doi: <http://dx.doi.org/10.1055/s-0029-1245554>
- Hankey, G. J., Wong, K. S., Chankrachang, S., Chen, C., Crimmins, D., Frayne, J., . . . Lipids Management in Asia Consensus, P. (2010). Management of cholesterol to reduce the burden of stroke in Asia: consensus statement. *International Journal of Stroke*, 5(3), 209-216. doi: <http://dx.doi.org/10.1111/j.1747-4949.2010.00429.x>
- Haq, S. A., Heitner, J. F., Sacchi, T. J., & Brenner, S. J. (2010). Long-term effect of chronic oral anticoagulation with warfarin after acute myocardial infarction (Structured abstract). *American Journal of Medicine*, 123(3), 250-258. <http://onlinelibrary.wiley.com/doi/10.1111/j.1747-4949.2010.00429.x>
- Harbin, M., Amadio, A., & Tejani, A. (2014). Critical appraisal of the SHARP trial: The results may be dull. *Clinical Therapeutics*, 36(12), 2112-2117.
- Henry, N. N., Riche, D. M., East, H. E., & Gann, P. N. (2007a). Impact of statins on risk of stroke: a meta-analysis. *The Annals of pharmacotherapy*, 41(12), 1937-1945. doi: 10.1345/aph.1K280

- Henyan, N. N., Riche, D. M., East, H. E., & Gann, P. N. (2007b). Impact of statins on risk of stroke: a meta-analysis (Structured abstract). *Annals of Pharmacotherapy*, 41(12), 1937-1945. <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2008.2007.128.frame.html>
- Henyan, N. N., Riche, D. M., East, H. E., & Gann, P. N. (2009). Impact of statins on risk of stroke: a meta-analysis. *Database of Abstracts of Reviews of Effects (DARE)*.
- Herrington, W. G. (2011). Statin use and outcome after intracerebral hemorrhage: case-control study and meta-analysis.[Erratum appears in *Neurology*. 2012 Feb 7;78(6):442]. *Neurology*, 77(23), 2073; author reply 2073-2074. doi: <http://dx.doi.org/10.1212/WNL.0b013e318239be24>
- HMG-CoA reductase inhibitors: useful in stroke prevention? (2001). *Drugs & Therapy Perspectives*, 17(2), 10-12.
- Inagawa, T. (2016). Risk Factors for Cerebral Vasospasm Following Aneurysmal Subarachnoid Hemorrhage: A Review of the Literature. *World Neurosurgery*, 85, 56-76.
- Jacobson, T. A., Maki, K. C., Orringer, C. E., Jones, P. H., Kris-Etherton, P., Sikand, G., . . . Brown, W. V. (2015). National lipid association recommendations for patient-centered management of dyslipidemia: Part 2. *Journal of Clinical Lipidology*, 9(6), S1-S122.
- Johnston, S. C. (2005). Review: Statins reduce stroke but not stroke mortality. *Evidence-Based Medicine*, 10(3), 73.
- Jung, J. M., Choi, J. Y., Kim, H. J., & Seo, W. K. (2015). Statin use in spontaneous intracerebral hemorrhage: a systematic review and meta-analysis. *International Journal of Stroke*, 10 Suppl A100, 10-17. doi: <http://dx.doi.org/10.1111/ijss.12624>
- Kalaria, R. N., Akinyemi, R., & Ihara, M. (2016). Stroke injury, cognitive impairment and vascular dementia. *Biochimica et Biophysica Acta - Molecular Basis of Disease*, 1862(5), 915-925.
- Karp, R., & Potter, J. (2011). Vertebral artery dissection: Acute stroke in a young physician. *Journal of General Internal Medicine*, 26, S373.
- Katsuki, H. (2010). Exploring neuroprotective drug therapies for intracerebral hemorrhage. *Journal of Pharmacological Sciences*, 114(4), 366-378.
- Kelleher, R. J., & Soiza, R. L. (2013). Evidence of endothelial dysfunction in the development of Alzheimer's disease: Is Alzheimer's a vascular disorder? *American Journal of Cardiovascular Disease*, 3(4), 197-226.
- Keyrouz, S. G., & Diring, M. N. (2012). Year in review 2011: Critical Care--Neurocritical care. *Critical Care (London, England)*, 16(6), 245. doi: <http://dx.doi.org/10.1186/cc11825>
- Khan, M. T., Murray, A., & Smith, M. (2016). Successful Use of Intravenous Tissue Plasminogen Activator as Treatment for a Patient with Cerebral Autosomal Dominant Arteriopathy with Subcortical Infarcts and Leukoencephalopathy: A Case Report and Review of Literature. *Journal of Stroke and Cerebrovascular Diseases*, 25(4), e53-e57.
- Kirshner, H. S. (2008). Therapeutic Interventions for Prevention of Recurrent Ischemic Stroke. *American Journal of Managed Care*, 14(7 Supp), S212-226.
- Koennecke, H. C. (2004). Secondary prevention of stroke: a practical guide to drug treatment. *CNS Drugs*, 18(4), 221-241.
- Korczyn, A. D., & Vakhapova, V. (2007). The prevention of the dementia epidemic. *Journal of the Neurological Sciences*, 257(1-2), 2-4.
- Kotlega, D., Golab-Janowska, M., Masztalewicz, M., Ciecwiez, S., & Nowacki, P. (2015). Potential role of statins in the intracerebral hemorrhage and subarachnoid hemorrhage. *Neurologia i Neurochirurgia Polska*, 49(5), 322-328. doi: <http://dx.doi.org/10.1016/j.pjnns.2015.07.007>
- Kramer, A. H., & Fletcher, J. J. (2010). Statins in the management of patients with aneurysmal subarachnoid hemorrhage: a systematic review and meta-analysis. *Neurocritical Care*, 12(2), 285-296. doi: 10.1007/s12028-009-9306-9

- Laflamme, M., Haghbayan, H., Boutin, A., Shemilt, M., Douville, V., Lauzier, F., . . . Turgeon, A. F. (2015). Statins and delayed cerebral ischemia in patients with aneurysmal subarachnoid hemorrhage: A systematic review and meta-analysis update. *Neurocritical Care*, 1), S219.
- Lakhan, S. E., Bagchi, S., & Hofer, M. (2010). Statins and clinical outcome of acute ischemic stroke: A systematic review. *International Archives of Medicine*, 3 (1) (no pagination)(22).
- Laloux, P. (2013). Risk and benefit of statins in stroke secondary prevention. *Current Vascular Pharmacology*, 11(6), 812-816.
- Lapchak, P. A., & Araujo, D. M. (2007). Advances in hemorrhagic stroke therapy: conventional and novel approaches. *Expert Opinion on Emerging Drugs*, 12(3), 389-406.
- Lauer, A., Greenberg, S. M., & Gurol, M. E. (2015). Statins in Intracerebral Hemorrhage. *Current Atherosclerosis Reports*, 17(8), 46. doi: <http://dx.doi.org/10.1007/s11883-015-0526-5>
- Lavallee, P., & Amarenco, P. (2014). Stroke subtypes and interventional studies for transient ischemic attack. *Frontiers of Neurology and Neuroscience*, 33, 135-146. doi: <http://dx.doi.org/10.1159/000351914>
- Lavallee, P., Labreuche, J., Touboul, P. J., & Amarenco, P. (2005). Statins in the prevention of cardiovascular accidents and carotid atherosclerosis: Meta-analysis. [French]. [Statines en prevention des accidents vasculaires cerebraux et de l'atherosclerose carotidienne: Meta-analyse.]. *Revue Neurologique*, 161(SUPPL. 1), 1S26-21S27.
- Law, M. R., Wald, N. J., & Rudnicka, A. R. (2003). Quantifying effect of statins on low density lipoprotein cholesterol, ischaemic heart disease, and stroke: systematic review and meta-analysis. *BMJ (Clinical research ed.)*, 326(7404), 1423. doi: 10.1136/bmj.326.7404.1423
- Law, M. R., Wald, N. J., & Rudnicka, A. R. (2004). Quantifying effect of statins on low density lipoprotein cholesterol, ischaemic heart disease, and stroke: systematic review and meta-analysis. *Database of Abstracts of Reviews of Effects (DARE)*.
- Lee, K., Pineda, C., Brock, D. G., & Bell, R. (2007). Update on pharmacologic therapy for secondary stroke prevention with a focus on antiplatelet strategies. *Hospital Physician*, 43(12), 14-48.
- Lee, Y., Zuckerman, S. L., & Mocco, J. (2013). Current controversies in the prediction, diagnosis, and management of cerebral vasospasm: where do we stand? *Neurology Research International*, 2013, 373458. doi: <http://dx.doi.org/10.1155/2013/373458>
- Lei, C., Wu, B., Liu, M., & Chen, Y. (2014). Association between statin use and intracerebral hemorrhage: a systematic review and meta-analysis. *European Journal of Neurology*, 21(2), 192-198. doi: <http://dx.doi.org/10.1111/ene.12273>
- Lei, Q., Peng, W. N., You, H., Hu, Z. P., & Lu, W. (2014). Statins in nervous system-associated diseases: angels or devils? *Pharmazie*, 69(6), 448-454.
- Li, D. Y., & Whitehead, K. J. (2010). Evaluating strategies for the treatment of cerebral cavernous malformations. *Stroke*, 41(10 Suppl), S92-94. doi: <http://dx.doi.org/10.1161/STROKEAHA.110.594929>
- Liu, J., & Chen, Q. (2015). Effect of statins treatment for patients with aneurysmal subarachnoid hemorrhage: A systematic review and meta-analysis of observational studies and randomized controlled trials. *International Journal of Clinical and Experimental Medicine*, 8(5), 7198-7208.
- Liu, Z., Liu, L., Zhang, Z., Chen, Z., & Zhao, B. (2013). Cholesterol-reducing agents for aneurysmal subarachnoid haemorrhage. *Cochrane Database of Systematic Reviews*, (4). <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD008184.pub2/abstract> doi:10.1002/14651858.CD008184.pub2
- Llinas, R. H., Aldrich, E., & Wityk, R. (2003). Update on stroke prevention and treatment. *Johns Hopkins Advanced Studies in Medicine*, 3(2), 93-101.

- Lonni, E., & Grewal, J. (2005). The ABC of secondary cardiovascular prevention: The successes and what we need to obtain now. *Dialogues in Cardiovascular Medicine*, 10(4), 209-232.
- Ma, Y., Li, Z., Chen, L., & Li, X. (2016). Blood lipid levels, statin therapy and the risk of intracerebral hemorrhage. *Lipids in Health and Disease*, 15 (1) (no pagination)(213).
- Macdonald, R. L. (2014). Delayed neurological deterioration after subarachnoid haemorrhage. *Nature Reviews Neurology*, 10(1), 44-58. doi: <http://dx.doi.org/10.1038/nrneurol.2013.246>
- Macdonald, R. L., Leung, M., & Tice, T. (2012). Intracranial drug delivery for subarachnoid hemorrhage. *Therapeutic Delivery*, 3(1), 91-103.
- Mahagne, M. H. (2007). [Acute management and secondary prevention of ischemic stroke]. *Presse Medicale*, 36(1 Pt 2), 128-133.
- Makela, P., Hammerbeck, U., & Rushton, D. N. (2006). Rehabilitation of the younger adult stroke patient. *Therapy*, 3(2), 273-289.
- Mancini, G. B. J., Baker, S., Bergeron, J., Fitchett, D., Frohlich, J., Genest, J., . . . Tashakkor, A. Y. (2016). Diagnosis, Prevention, and Management of Statin Adverse Effects and Intolerance: Canadian Consensus Working Group Update (2016). *Canadian Journal of Cardiology*, 32(7 Supplement), S35-S65.
- Manktelow Bradley, N., & Potter John, F. (2009). Interventions in the management of serum lipids for preventing stroke recurrence. *Cochrane Database of Systematic Reviews*, (3). <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD002091.pub2/abstract> doi:10.1002/14651858.CD002091.pub2
- Marsh, J. D., & Keyrouz, S. G. (2010). Stroke prevention and treatment. *Journal of the American College of Cardiology*, 56(9), 683-691. doi: <http://dx.doi.org/10.1016/j.jacc.2009.12.072>
- Martinez-Ramirez, S., Delgado-Mederos, R., Marin, R., Suarez-Calvet, M., Sainz, M. P., Alejaldre, A., . . . Marti-Fabregas, J. (2012). Statin pretreatment may increase the risk of symptomatic intracranial haemorrhage in thrombolysis for ischemic stroke: results from a case-control study and a meta-analysis. *Journal of Neurology*, 259(1), 111-118. doi: <http://dx.doi.org/10.1007/s00415-011-6137-3>
- Massel, D., & Little, S. H. (2003). Risks and benefits of adding anti-platelet therapy to warfarin among patients with prosthetic heart valves: a meta-analysis. *Database of Abstracts of Reviews of Effects (DARE)*.
- May, S., & Park, S. (2013). Risk factors and strategies for prevention of medication errors in patients with subarachnoid hemorrhage. *Hospital Pharmacy*, 48(SUPPL.5), S10-S20.
- McGirt, M. J., Garces Ambrossi, G. L., Huang, J., & Tamargo, R. J. (2009). Simvastatin for the prevention of symptomatic cerebral vasospasm following aneurysmal subarachnoid hemorrhage: a single-institution prospective cohort study. *Journal of Neurosurgery*, 110(5), 968-974. doi: <http://dx.doi.org/10.3171/2008.10.JNS08901>
- McKinney, J. S., & Kostis, W. J. (2012). Statin therapy and the risk of intracerebral hemorrhage: a meta-analysis of 31 randomized controlled trials. *Stroke*, 43(8), 2149-2156. doi: <http://dx.doi.org/10.1161/STROKEAHA.112.655894>
- McKinney, J. S., & Kostis, W. J. (2013). Statin therapy and the risk of intracerebral hemorrhage: a meta-analysis of 31 randomized controlled trials. *Database of Abstracts of Reviews of Effects (DARE)*.
- Mendonca, M. D., Caetano, A., Pinto, M., Cruz, E. S. V., & Viana-Baptista, M. (2015). Stroke-Like Episodes heralding a Reversible Encephalopathy: Microbleeds as the Key to the Diagnosis of Cerebral Amyloid Angiopathy-Related Inflammation - A Case Report and Literature Review. *Journal of Stroke and Cerebrovascular Diseases*, 24(9), e245-e250.
- Meseguer, E., Mazighi, M., Lapergue, B., Labreuche, J., Sirimarco, G., Gonzalez-Valcarcel, J., . . . Amarenco, P. (2012). Outcomes after thrombolysis in AIS according to prior statin use: a registry and review. *Neurology*, 79(17), 1817-1823. doi: <http://dx.doi.org/10.1212/WNL.0b013e318270400b>

- Mihos, C. G., Salas, M. J., & Santana, O. (2010). The pleiotropic effects of the hydroxymethyl-glutaryl-CoA reductase inhibitors in cardiovascular disease: a comprehensive review. *Cardiology in Review*, 18(6), 298-304. doi: <http://dx.doi.org/10.1097/CRD.0b013e3181f52a7f>
- Mohammed, R., & Sumner, A. (2010). Merits and flaws of anticoagulants use in the setting of cervical artery dissection. *Journal of Investigative Medicine*, 58 (2), 375-376.
- Mok, V., & Kim, J. S. (2015). Prevention and Management of Cerebral Small Vessel Disease. *Journal of Stroke*, 17(2), 111-122. doi: <http://dx.doi.org/10.5853/jos.2015.17.2.111>
- Molden, E., & Westergren, T. (2007). [Interaction risk with statin switch]. *Tidsskrift for den Norske Laegeforening*, 127(4), 428-431.
- Monod, H., Blanche, P., Crabol, Y., Legendre, P., & Moachon, L. (2013). Is actual statin treatment at risk for excessively low cholesterol levels and what are their potential adverse clinical consequences? *Fundamental and Clinical Pharmacology*, 27, 123.
- Nassief, A., & Marsh, J. D. (2008). Statin therapy for stroke prevention. *Stroke*, 39(3), 1042-1048. doi: <http://dx.doi.org/10.1161/STROKEAHA.107.501361>
- Navi, B. B., & Segal, A. Z. (2009). The role of cholesterol and statins in stroke. *Current Cardiology Reports*, 11(1), 4-11.
- Neelamegam, M., Looi, I., Ng Kee, S., & Malavade Sharad, S. (2013). Vitamin E supplementation for preventing recurrent stroke and other vascular events in patients with stroke or transient ischaemic attack. *Cochrane Database of Systematic Reviews*, (10). <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010797/abstract> doi:10.1002/14651858.CD010797
- Nielsen Emil, E., Feinberg, J., Wetterslev, J., Gluud, C., & Jakobsen Janus, C. (2016). Non-acute percutaneous coronary intervention versus medical therapy in patients with ischaemic heart disease. *Cochrane Database of Systematic Reviews*, (1). <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD012068/abstract> doi:10.1002/14651858.CD012068
- Notaro, L. A., Usman, M. H., Burke, J. F., Siddiqui, A., Superdock, K. R., & Ezekowitz, M. D. (2009). Secondary prevention in concurrent coronary artery, cerebrovascular, and chronic kidney disease: focus on pharmacological therapy. *Cardiovascular Therapeutics*, 27(3), 199-215. doi: <http://dx.doi.org/10.1111/j.1755-5922.2009.00087.x>
- O'Regan, C., Wu, P., Arora, P., Perri, D., & Mills, E. J. (2008). Statin therapy in stroke prevention: a meta-analysis involving 121,000 patients. *The American journal of medicine*, 121(1), 24-33. doi: 10.1016/j.amjmed.2007.06.033
- Paciaroni, M., & Bogouslavsky, J. (2009). Statins and stroke prevention. *Expert Review of Cardiovascular Therapy*, 7(10), 1231-1243. doi: <http://dx.doi.org/10.1586/erc.09.106>
- Paciaroni, M., Hennerici, M., Agnelli, G., & Bogouslavsky, J. (2007). Statins and stroke prevention. *Cerebrovascular Diseases*, 24(2-3), 170-182.
- Pandit, A. K., Kumar, P., Kumar, A., Chakravarty, K., Misra, S., & Prasad, K. (2016). High-dose statin therapy and risk of intracerebral hemorrhage: a meta-analysis. *Acta Neurologica Scandinavica*, 134(1), 22-28. doi: <http://dx.doi.org/10.1111/ane.12540>
- Park, S. J., & Lee, S. W. (2007). Optimal management of platelet function after coronary stenting. *Current Treatment Options in Cardiovascular Medicine*, 9(1), 37-45.
- Pedely, L., & Nyenhuis, D. L. (2006). Vascular cognitive impairment. *Current Treatment Options in Cardiovascular Medicine*, 8(3), 243-250.
- Pendlebury, S. T., & Rothwell, P. M. (2006). Management of stroke. *Foundation Years*, 2(5), 199-206.
- Peng, W., Yang, J., Wang, Y., Wang, W., Xu, J., Wang, L., & Xing, Z. (2014). Systematic review and meta-analysis of randomized controlled trials of xingnaojing treatment for stroke. *Evidence-Based Complementary and Alternative Medicine*, 2014 (no pagination)(210851).
- Pham, H., Nguyen, J., Ge, L., & Nguyen, T. (2006). Evidence based medicine: Clinical trials that guide the management of ST-elevation myocardial infarction of elderly patients. *Journal of Geriatric Cardiology*, 3(2), 120-127.

- Phipps, M. S., Jastreboff, A. M., Furie, K., & Kernan, W. N. (2012). The diagnosis and management of cerebrovascular disease in diabetes. *Current Diabetes Reports*, 12(3), 314-323. doi: <http://dx.doi.org/10.1007/s11892-012-0271-x>
- Pignone, M., Earnshaw, S., Tice, J. A., & Pletcher, M. J. (2006). Aspirin, statins, or both drugs for the primary prevention of coronary heart disease events in men: a cost-utility analysis (Structured abstract). *Annals of Internal Medicine*, 144(2), 326-336. <http://onlinelibrary.wiley.com/o/cochrane/cleed/articles/NHSEED-22006008112/frame.html>
- Prinz, V., & Endres, M. (2009). The acute (cerebro)vascular effects of statins. *Anesthesia and Analgesia*, 109(2), 572-584. doi: <http://dx.doi.org/10.1213/ane.0b013e3181a85d0e>
- Prospective Studies, C., Lewington, S., Whitlock, G., Clarke, R., Sherliker, P., Emberson, J., . . . Collins, R. (2007). Blood cholesterol and vascular mortality by age, sex, and blood pressure: a meta-analysis of individual data from 61 prospective studies with 55,000 vascular deaths. *Lancet*, 370(9602), 1829-1839. doi: 10.1016/S0140-6736(07)61778-4
- Reiss, A. B., & Wirkowski, E. (2009). Statins in neurological disorders: mechanisms and therapeutic value. *TheScientificWorldJournal*, 9, 1242-1259. doi: <http://dx.doi.org/10.1100/tsw.2009.141>
- Rinkel, G. J. (2008). Medical management of patients with aneurysmal subarachnoid haemorrhage. *International Journal of Stroke*, 3(3), 193-204. doi: <http://dx.doi.org/10.1111/j.1747-4949.2008.00210.x>
- Rinkel, G. J. (2016). Management of patients with aneurysmal subarachnoid haemorrhage. *Current Opinion in Neurology*, 29(1), 37-41. doi: <http://dx.doi.org/10.1097/WCO.0000000000000282>
- Rinnoci, V., Nannucci, S., Valenti, R., Donnini, I., Bianchi, S., Pescini, F., . . . Pantoni, L. (2013). Cerebral hemorrhages in CADASIL: report of four cases and a brief review. *Journal of the Neurological Sciences*, 330(1-2), 45-51. doi: <http://dx.doi.org/10.1016/j.jns.2013.04.002>
- Romero Krauchi, O., & Verger Bennisar, A. M. (2011). [Protective measures against cerebral ischemia following subarachnoid hemorrhage: Part 1]. *Revista Espanola de Anestesiologia y Reanimacion*, 58(4), 230-235.
- Rowland, M. J., Hadjipavlou, G., Kelly, M., Westbrook, J., & Pattinson, K. T. (2012). Delayed cerebral ischaemia after subarachnoid haemorrhage: looking beyond vasospasm. *British Journal of Anaesthesia*, 109(3), 315-329. doi: <http://dx.doi.org/10.1093/bja/aes264>
- Rubboli, A., Capecchi, A., & Di Pasquale, G. (2007). Utilizing enoxaparin in the management of STEMI. *Vascular Health & Risk Management*, 3(5), 691-700.
- Sakowitz, O. W., & Unterberg, A. W. (2006). Detecting and treating microvascular ischemia after subarachnoid hemorrhage. *Current Opinion in Critical Care*, 12(2), 103-111.
- Sandercock, P. (2010). 'Yes' or 'no' to routine statins after subarachnoid hemorrhage to prevent delayed cerebral ischaemia, vasospasm, and death? A cautionary tale of 2 meta-analyses. *Stroke*, 41(1), e1-2. doi: <http://dx.doi.org/10.1161/STROKEAHA.109.565986>
- Santos-Garcia, D., Rodriguez-Yanez, M., Arias-Rivas, S., & Blanco, M. (2011). [Brachial arterial flow mediated dilation: utility in clinical and experimental practice]. *Revista de Neurología*, 53(6), 351-360.
- Sasaki, T., & Kikkawa, Y. (2013). Proposed mechanism of cerebral vasospasm: our hypothesis and current topics. *Acta Neurochirurgica - Supplement*, 115, 53-56. doi: http://dx.doi.org/10.1007/978-3-7091-1192-5_12
- Schmit, K., Dolor, R. J., Schuyler Jones, W., Vemulapalli, S., Hasselblad, V., Subherwal, S., . . . Patel, M. R. (2014). Comparative effectiveness review of antiplatelet agents in peripheral artery disease. *Journal of the American Heart Association*, 3 (6) (no pagination)(001330).

- Schulz, U. G. (2013). Drug treatments in the secondary prevention of ischaemic stroke. *Maturitas*, 76(3), 267-271. doi: <http://dx.doi.org/10.1016/j.maturitas.2013.05.009>
- Sehdev, A., & O'Neil, B. H. (2015). The Role of Aspirin, Vitamin D, Exercise, Diet, Statins, and Metformin in the Prevention and Treatment of Colorectal Cancer. *Current Treatment Options in Oncology*, 16 (9) (no pagination)(43).
- Shimamura, N., & Ohkuma, H. (2014). Phenotypic transformation of smooth muscle in vasospasm after aneurysmal subarachnoid hemorrhage. *Translational Stroke Research*, 5(3), 357-364. doi: <http://dx.doi.org/10.1007/s12975-013-0310-1>
- Sikora Newsome, A., Casciere, B. C., Jordan, J. D., Rhoney, D. H., Sullivan, K. A., Morbitzer, K. A., . . . Durr, E. A. (2015). The Role of Statin Therapy in Hemorrhagic Stroke. *Pharmacotherapy: The Journal of Human Pharmacology & Drug Therapy*, 35(12), 1152-1163. doi: <http://dx.doi.org/10.1002/phar.1674>
- Sillberg, V. A., Wells, G. A., & Perry, J. J. (2008). Do statins improve outcomes and reduce the incidence of vasospasm after aneurysmal subarachnoid hemorrhage: a meta-analysis. *Stroke; a journal of cerebral circulation*, 39(9), 2622-2626. doi: 10.1161/STROKEAHA.107.508341
- Sillberg, V. A., Wells, G. A., & Perry, J. J. (2009). Do statins improve outcomes and reduce the incidence of vasospasm after aneurysmal subarachnoid hemorrhage: a meta-analysis. *Database of Abstracts of Reviews of Effects (DARE)*.
- Skeik, N., Porten, B. R., Delgado Almandoz, J. E., Uittenbogaard, K. M., & McDonald, W. (2014). A unique case report of cerebral amyloid angiopathy with literature review. *Annals of Vascular Surgery*, 28(5), 1316.e1311-1316.e1316.
- Slavin, H., McManus, J., & Stott, D. J. (2012). Small vessel cerebrovascular disease in older adults. *Reviews in Clinical Gerontology*, 22(3), 184-194.
- Song, J. X., Ren, J. Y., & Chen, H. (2010). [Primary and secondary hypocholesterolemia]. *Beijing da Xue Xue Bao. Yi Xue Ban/Journal of Peking University. Health Sciences*, 42(5), 612-615.
- Squizzato, A., Romualdi, E., Dentali, F., & Ageno, W. (2009). Statins for acute ischemic stroke. *Cochrane Database of Systematic Reviews*, (1) (no pagination)(CD007551).
- Stavrikis, S., Stoner, J. A., Azar, M., Wayangankar, S., & Thadani, U. (2011). Low-dose aspirin for primary prevention of cardiovascular events in patients with diabetes: a meta-analysis (Structured abstract). *American Journal of the Medical Sciences*, 341(1), 1-9. <http://onlinelibrary.wiley.com/o/cochrane/cldare/articles/DARE-12011001129/frame.html>
- Su, S. H., Xu, W., Hai, J., Wu, Y. F., & Yu, F. (2014). Effects of statins-use for patients with aneurysmal subarachnoid hemorrhage: a meta-analysis of randomized controlled trials. *Scientific Reports*, 4, 4573. doi: <http://dx.doi.org/10.1038/srep04573>
- Sutcliffe, P., Connock, M., Gurung, T., Freeman, K., Johnson, S., Kandala, N. B., . . . Clarke, A. (2013). Aspirin for prophylactic use in the primary prevention of cardiovascular disease and cancer: A systematic review and overview of reviews. *Health Technology Assessment*, 17(43), V-252.
- Tabereaux, P. B., Brass, L. M., & Bravata, D. M. (2004). The secondary prevention of ischemic stroke. *Journal of Clinical Outcomes Management*, 11(6), 371-384.
- Takagi, S. (2003). [Neurological complication due to the drug and the maneuver for the treatment and prevention of cerebrovascular diseases: iatrogenic neurology]. *Rinsho Shinkeigaku - Clinical Neurology*, 43(11), 877-879.
- Tanaka, T., & Okamura, T. (2012). Blood cholesterol level and risk of stroke in community-based or worksite cohort studies: a review of Japanese cohort studies in the past 20 years. *Keio Journal of Medicine*, 61(3), 79-88.
- Tapia-Perez, H., Sanchez-Aguilar, M., Torres-Corzo, J., Rodriguez-Leyva, I., & Herrera-Gonzalez, L. B. (2007). [Statins and brain protection mechanisms]. *Revista de Neurología*, 45(6), 359-364.
- Tapia-Perez, J. H., Sanchez-Aguilar, M., & Schneider, T. (2010). The role of statins in neurosurgery. *Neurosurgical Review*, 33(3), 259-270; discussion 270. doi: <http://dx.doi.org/10.1007/s10143-010-0259-4>

- Tapia Perez, J. H., Yildiz, O. C., Schneider, T., & Nimsky, C. (2015). Meta-analysis of Statin Use for the Acute Therapy of Spontaneous Intracerebral Hemorrhage. *Journal of Stroke and Cerebrovascular Diseases*, 24(11), 2521-2526. doi: <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2015.06.036>
- Thalmann, R., Gensicke, H., Burow, A., Bonati, L. H., Lyrer, P. A., & Engelter, S. T. (2012). Thrombolysis in stroke patients: Prognostic significance of prior statin treatment and cholesterol profile. [German]. [Thrombolyse bei hirschnlagpatienten: Prognostische bedeutung von statinvorbehandlung und cholesterinprofil.]. *Schweizer Archiv für Neurologie und Psychiatrie*, 163(4), 130-137.
- Thomason, L. A., Stefanovic, B., & McLaurin, J. (2013). Cerebrovascular contributions to Alzheimer's disease pathophysiology and potential therapeutic interventions in mouse models. *European Journal of Neuroscience*, 37(12), 1994-2004. doi: <http://dx.doi.org/10.1111/ejn.12181>
- Thompson, P. D., Panza, G., Zaleski, A., & Taylor, B. (2016). Statin-associated side effects. *Journal of the American College of Cardiology*, 67(20), 2395-2410.
- Tomlinson, B., Chan, P., & Lan, W. (2001). How well tolerated are lipid-lowering drugs? *Drugs and Aging*, 18(9), 665-683.
- Topcuoglu, M. A., & Singhal, A. B. (2006). Effects of common medications on cerebral vasospasm after subarachnoid haemorrhage. *Expert Opinion on Drug Safety*, 5(1), 57-65.
- Torikoshi, S., & Akiyama, Y. (2016). A concealed intracranial aneurysm detected after recanalization of an occluded vessel: A case report and literature review. *Interventional Neurology*, 4(3-4), 90-95.
- Trimble, J. L., & Kockler, D. R. (2007). Statin treatment of cerebral vasospasm after aneurysmal subarachnoid hemorrhage. *Annals of Pharmacotherapy*, 41(12), 2019-2023.
- Tsivgoulis, G., Kadlecova, P., Kobayashi, A., Czlonkowska, A., Brozman, M., Svigelj, V., . . . Mikulik, R. (2015). Safety of Statin Pretreatment in Intravenous Thrombolysis for Acute Ischemic Stroke. *Stroke*, 46(9), 2681-2684. doi: <http://dx.doi.org/10.1161/STROKEAHA.115.010244>
- Valenca, M. M. (2013). "Sit back, observe, and wait." Or is there a pharmacologic preventive treatment for cerebral aneurysms? *Neurosurgical Review*, 36(1), 1-9; discussion 9-10. doi: <http://dx.doi.org/10.1007/s10143-012-0429-7>
- van Lier, F., Schouten, O., & Poldermans, D. (2011). Statins in Intensive Care Medicine: Still too early to tell. *Netherlands Journal of Critical Care*, 15(3), 137-142.
- Van Matre, E. T., Sherman, D. S., & Kiser, T. H. (2016). Management of intracerebral hemorrhage--use of statins. *Vascular Health & Risk Management*, 12, 153-161. doi: <http://dx.doi.org/10.2147/VHRM.S75399>
- Varol, E., & Ozaydin, M. (2015). Aortic stiffness in patients with deep and lobar intracerebral hemorrhage: Role of antihypertensive drugs and statins. *Journal of Stroke*, 17(1), 89.
- Veldeman, M., Hollig, A., Clusmann, H., Stevanovic, A., Rossaint, R., Coburn, M., & Hardman, J. G. (2016). Delayed cerebral ischaemia prevention and treatment after aneurysmal subarachnoid haemorrhage: A systematic review. *British Journal of Anaesthesia*, 117(1), 17-40.
- Verger Bennasar, A. M., & Romero Krauchi, O. (2011). [Protective measures against cerebral ischemia following subarachnoid hemorrhage: Part 2]. *Revista Espanola de Anestesiologia y Reanimacion*, 58(4), 236-242.
- Vergouwen, M. D., de Haan, R. J., Vermeulen, M., & Roos, Y. B. (2008). Statin treatment and the occurrence of hemorrhagic stroke in patients with a history of cerebrovascular disease. *Stroke*, 39(2), 497-502. doi: <http://dx.doi.org/10.1161/STROKEAHA.107.488791>
- Vergouwen, M. D., de Haan, R. J., Vermeulen, M., & Roos, Y. B. (2010a). Effect of statin treatment on vasospasm, delayed cerebral ischemia, and functional outcome in patients with aneurysmal subarachnoid hemorrhage: a systematic review and meta-

- analysis update. *Stroke; a journal of cerebral circulation*, 41(1), e47-52. doi: 10.1161/STROKEAHA.109.556332
- Vergouwen, M. D., de Haan, R. J., Vermeulen, M., & Roos, Y. B. (2010b). Statin treatment and the occurrence of hemorrhagic stroke in patients with a history of cerebrovascular disease. *Database of Abstracts of Reviews of Effects (DARE)*.
- Versmissen, J., Scheele, M., Dippel, D. W., & van den Meiracker, A. H. (2015). [Statins after intracerebral haemorrhage: is this safe?]. *Nederlands Tijdschrift voor Geneeskunde*, 159, A8563.
- Wan, H., AlHarbi, B. M., & Macdonald, R. L. (2014). Mechanisms, treatment and prevention of cellular injury and death from delayed events after aneurysmal subarachnoid hemorrhage. *Expert Opinion on Pharmacotherapy*, 15(2), 231-243. doi: <http://dx.doi.org/10.1517/14656566.2014.865724>
- Wang, X., Dong, Y., Qi, X., Huang, C., & Hou, L. (2013). Cholesterol levels and risk of hemorrhagic stroke: a systematic review and meta-analysis (Structured abstract). *Stroke*, 44(7), 1833-1839. <http://onlinelibrary.wiley.com/cochrane/cldare/articles/DARE-12013029788/frame.html>
- Weant, K. A., & Cook, A. M. (2007). Potential roles for statins in critically ill patients. *Pharmacotherapy: The Journal of Human Pharmacology & Drug Therapy*, 27(9), 1279-1296.
- Weinberger, J., Frishman, W. H., & Terashita, D. (2003). Drug therapy of neurovascular disease. *Cardiology in Review*, 11(3), 122-146.
- Welch, K. M. (2009). Review of the SPARCL trial and its subanalyses. *Current Atherosclerosis Reports*, 11(4), 315-321.
- Weyer, G. W., Nolan, C. P., & Macdonald, R. L. (2006). Evidence-based cerebral vasospasm management (Provisional abstract). *Neurosurgical Focus*, 21(3), E8. <http://onlinelibrary.wiley.com/cochrane/cldare/articles/DARE-12006004002/frame.html>
- Wible, E. F., & Laskowitz, D. T. (2010). Statins in traumatic brain injury. *Neurotherapeutics*, 7(1), 62-73. doi: <http://dx.doi.org/10.1016/j.nurt.2009.11.003>
- Wong, R., Shah, N., & Fotherby, M. (2004). Cholesterol and stroke. *Reviews in Clinical Gerontology*, 14(1), 25-36.
- Woo, D., Deka, R., Falcone, G. J., Flaherty, M. L., Haverbusch, M., Martini, S. R., . . . Woo, J. G. (2013). Apolipoprotein E, statins, and risk of intracerebral hemorrhage. *Stroke*, 44(11), 3013-3017. doi: <http://dx.doi.org/10.1161/STROKEAHA.113.001304>
- Wu, B., Lei, C., Chen, Y., & Liu, M. (2013). Association of statins use and intracerebral hemorrhage. *Cerebrovascular Diseases*, 35, 817.
- Yaghi, S., & Elkind, M. S. (2015). Lipids and Cerebrovascular Disease: Research and Practice. *Stroke*, 46(11), 3322-3328. doi: <http://dx.doi.org/10.1161/STROKEAHA.115.011164>
- Yan, Z., Yu, T., Wang, Y., Wang, M., & Liang, H. (2015). Literature Review and Case Report of Intravenous Thrombolysis in Acute Cerebral Infarction Attributed to Cervical Arterial Dissection. *Journal of Stroke and Cerebrovascular Diseases*, 24(9), e265-e269.
- Yuet, W. C., Khine, H., & Ahmad, Z. (2015). Statin-associated adverse events. *Clinical Medicine Insights: Therapeutics*, 7, 17-24.
- Zahrán Mohamed, E., Alreshq Rabah, S., Kolkailah Ahmed, A., Abdelazeem Mohamed, A., & Nabhan Ashraf, F. (2016). Transradial versus transfemoral approach for diagnostic coronary angiography and percutaneous coronary intervention in patients with coronary artery disease. *Cochrane Database of Systematic Reviews*, (8). <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD012318/abstract> doi:10.1002/14651858.CD012318
- Zhang, B. F., Song, J. N., Luo, X. H., Bai, L. X., Zhai, H. C., Huang, T. Q., & Ma, X. D. (2013). Acute statins treatment for aneurysmal subarachnoid hemorrhage might be

- limited: A systematic review and meta-analysis. *Journal of the Neurological Sciences*, 333, e259.
- Zhang, B. F., Song, J. N., Wang, J., Ma, X. D., Zhang, S. T., Zhao, J. J., . . . Zhao, Y. L. (2015). Effect of Statins on Aneurysmal Subarachnoid Hemorrhage: A Meta-Analysis of Randomized Controlled Trials. *Turkish Neurosurgery*, 25(6), 850-857.
- Zhang, L., Zhang, Z. G., & Chopp, M. (2012). The neurovascular unit and combination treatment strategies for stroke. *Trends in Pharmacological Sciences*, 33(8), 415-422. doi: <http://dx.doi.org/10.1016/j.tips.2012.04.006>
- Zheng, H., Hu, Z., & Lu, W. (2014). Statins and intracerebral hemorrhage. *Chinese Medical Journal*, 127(13), 2531-2536.
- Zhu, R. L., Chen, Z. J., Li, S., Lu, X. C., Tang, L. J., Huang, B. S., . . . Li, L. X. (2016). Statin-treated patients with aneurysmal subarachnoid haemorrhage: A meta-analysis. *European Review for Medical and Pharmacological Sciences*, 20(10), 2090-2098.
- Zoerle, T., Ilodigwe, D., Wan, H., Lakovic, K., Sabri, M., Ai, J., & Macdonald, R. L. (2013). Pharmacologic reduction of angiographic vasospasm in experimental subarachnoid hemorrhage: Systematic review. *Cerebral Vasospasm: Neurovascular Events After Subarachnoid Hemorrhage, Acta Neurochirurgica, Supplementum*.(115), 247-251.