

## **A Bibliography of Articles on the Effect of Sleep Loss on Performance**

Compiled by Ingrid Philibert, Updated March 2005

**Articles are arrayed chronologically, beginning with the most recent**

### ***Articles about the effect of sleep loss in resident physicians***

Barger LK, Cade BE, Ayas NT, Cronin JW, Rosner B, Speizer FE, Czeisler CA. Extended work shifts and the risk of motor vehicle crashes among interns. *New England Journal of Medicine*. 2005 Jan 13; 352(2): 125-34.

Puvanendran K, Venkatramani J, Jain A, Farid M. Sleep deprivation in junior doctors--house officers in Singapore. *Indian Health*. 2005 Jan;43(1):129-32.

Wylie CD. Sleep, science, and policy change. *New England Journal of Medicine*. 2005 Jan 13;352(2):196-7.

Jakubowicz DM, Price EM, Glassman HJ, Gallagher AJ, Mandava N, Ralph WP, Fried MP. Effects of a twenty-four hour call period on resident performance during simulated endoscopic sinus surgery in an accreditation council for graduate medical education-compliant training program. *Laryngoscope*. 2005 Jan;115(1):143-6.

Fletcher KE, Davis SQ, Underwood W, Mangrulkar RS, McMahon LF Jr, Saint S. Systematic review: effects of resident work hours on patient safety. *Annals of Internal Medicine*. 2004 Dec 7;141(11):851-7.

Cavallo A, Mallory ML. Sleep deprivation, residency training, and ACGME rules: practical guidelines. *Journal of Pediatrics*. 2004 Dec;145(6):717-8.

Dearlove O, Briggs G. Sleep deprivation and performance. *Anaesthesia*. 2004 Oct;59(10):1036.

Landrigan CP, Rothschild JM, Cronin JW, Kaushal R, Burdick E, Katz JT, Lilly CM, Stone PH, Lockley SW, Bates DW, Czeisler CA. Effect of reducing interns' work hours on serious medical errors in intensive care units. *New England Journal of Medicine*. 2004 Oct 28;351(18):1838-48.

Lockley SW, Cronin JW, Evans EE, Cade BE, Lee CJ, Landrigan CP, Rothschild JM, Katz JT, Lilly CM, Stone PH, Aeschbach D, Czeisler CA. Effect of reducing interns' weekly work hours on sleep and attentional failures. *New England Journal of Medicine*. 2004 Oct 28;351(18):1829-37.

Ellman PI, Law MG, Tache-Leon C, Reece TB, Maxey TS, Peeler BB, Kern JA, Tribble CG, Kron IL. Sleep deprivation does not affect operative results in cardiac surgery. *Annals of Thoracic Surgery*. 2004 Sep;78(3):906-11; discussion 906-11.

Czeisler CA. Work hours and sleep in residency training. *Sleep*. 2004 May 1;27(3):371-2.

Papp KK, Stoller EP, Sage P, Aikens JE, Owens J, Avidan A, Phillips B, Rosen R, Strohl KP. The effects of sleep loss and fatigue on resident-physicians: a multi-institutional, mixed-method study. *Academic Medicine*. 2004 May;79(5):394-406.

- Rosen IM, Bellini LM, Shea JA. Sleep behaviors and attitudes among internal medicine housestaff in a U.S. university-based residency program. *Academic Medicine*. 2004 May;79(5):407-16.
- Friedman WA. Resident duty hours in American neurosurgery. *Neurosurgery*. 2004 Apr; 54(4):925-31; discussion 931-3.
- Jensen A, Milner R, Fisher C, Gaughan J, Rolandelli R, Grewal H. Short-term sleep deficits do not adversely affect acquisition of laparoscopic skills in a laboratory setting. *Surgical Endoscopy*. 2004 Jun;18(6):948-53. Epub 2004 Apr 21.
- Rosen IM, Bellini LM, Shea JA. Sleep behaviors and attitudes among internal medicine housestaff in a U.S. university-based residency program. *Academic Medicine*. 2004 May;79(5):407-16.
- Howard SK, Gaba DM. Trainee fatigue: are new limits on work hours enough? *Canadian Medical Association Journal*. 2004 Mar 16;170(6):975-6.
- Parshuram CS, Dhanani S, Kirsh JA, Cox PN. Fellowship training, workload, fatigue and physical stress: a prospective observational study. *Canadian Medical Association Journal*. 2004 Mar 16;170(6):965-70.
- Mak SK, Spurgeon P. The effects of acute sleep deprivation on performance of medical residents in a regional hospital: prospective study. *Hong Kong Medical Journal*. 2004 Feb;10(1):14-20.
- Bartel P, Offermeier W, Smith F, Becker P. Attention and working memory in resident anesthesiologists after night duty: group and individual effects. *Occupational and Environmental Medicine*. 2004 Feb;61(2):167-70.
- Mak SK, Spurgeon P. The effects of acute sleep deprivation on performance of medical residents in a regional hospital: prospective study. *Hong Kong Medical Journal*. 2004 Feb;10(1):14-20.
- Rollinson DC, Rathlev NK, Moss M, Killiany R, Sassower KC, Auerbach S, Fish SS. The effects of consecutive night shifts on neuropsychological performance of interns in the emergency department: a pilot study. *Annals of Emergency Medicine*. 2003 Mar;41(3):400-6.
- Eastridge BJ, Hamilton EC, O'Keefe GE, Rege RV, Valentine RJ, Jones DJ, Tesfay S, Thal ER. Effect of sleep deprivation on the performance of simulated laparoscopic surgical skill. *American Journal Surgery*. 2003 Aug;186(2):169-74.
- Shmuel S, Shlomo V, Natali B, Ayala L, Eliezer K. [Driver drowsiness--are physicians at a special risk?] *Harefuah*. 2003 May;142(5):338-41, 399, 398.
- Buysse DJ, Barzansky B, Dinges D, Hogan E, Hunt CE, Owens J, Rosekind M, Rosen R, Simon F, Veasey S, Wiest F. Sleep, fatigue, and medical training: setting an agenda for optimal learning and patient care. *Sleep*. 2003 Mar 15;26(2):218-25.
- Philibert I, Barach P. Residents' hours of work. *British Medical Journal*. 2002 Nov 23; 325 (7374):1184-5.
- Howard SK, Gaba DM, Rosekind MR, Zarcone VP. The risks and implications of excessive

- daytime sleepiness in resident physicians. *Academic Medicine*. 2002 Oct;77(10):1019-25.
- Ben-Aroya, Z; Segal, D; Hadar, A; Hallak, M; Friger, M; Katz, M; Mazor, M. Effect of Ob/Gyn residents' fatigue and training level on the accuracy of fetal weight estimation. *Fetal Diagnosis and Therapy*. 2002; 177-181.
- Heins, A; Euerle, B. Application of chronobiology to resident physician work scheduling. *Annals of Emergency Medicine*. 2002; 39:447-450.
- Lewis, KE; Blagrove, M; Ebden, P. Sleep deprivation and junior doctors' performance and confidence. *Postgraduate Medical Journal*. 2002; 3:85-87.
- Veasey S, Rosen R, Barzansky B, Rosen I, Owens J. Sleep Loss and Fatigue in Residency Training: A Reappraisal. *Journal of the American Medical Association*. 2002;288:1116-24.
- Weinger, MB; Ancoli-Israel, S. Sleep Deprivation and Clinical Performance. *Journal of the American Medical Association*. 2002; 287:955-957.
- Frey R, Decker K, Reinfried L, Klosch G, Saletu B, Anderer P, Semlitsch HV, Seidler D, Laggner AN. Effect of rest on physicians' performance in an emergency department, objectified by electroencephalographic analyses and psychometric tests. *Critical Care Medicine*. 2002 Oct;30(10):2322-9.
- Howard SK, Gaba DM, Rosekind MR, Zarcone VP. The risks and implications of excessive daytime sleepiness in resident physicians. *Academic Medicine*. 2002 Oct;77(10):1019-25.
- Dula, DJ; Dula, NL; Hamrick, C; Wood, GC. The effect of working serial night shifts on the cognitive functioning of emergency physicians. *Annals of Emergency Medicine*. 2001; 38:152-155.
- Grantcharov, TP; Bardram, L; Funch-Jensen, P; Rosenberg, J. Laparoscopic performance after one night on call in a surgical department: prospective study. *British Medical Journal*. 2001; 323:1222-1223.
- Kuhn, G. Circadian rhythm, shift work, and emergency medicine. *Annals of Emergency Medicine*. 2001; 37:88-98.
- Medeiros, ALD; Mendes, DBF; Lima, PF; Araujo, JF. The relationships between sleep-wake cycle and academic performance in medical students. *Biological Rhythm Research*. 2001; 32: 263-270.
- Poissonnet CM, Iwatsubo Y, Cosquer M, Quera Salva MA, Caillard JF, Veron M. A cross-sectional study of the health effects of work schedules on 3212 hospital workers in France: implications for the new French work schedules policy. *Journal Human Ergonomics (Tokyo)*. 2001 Dec;30(1-2):387-91.
- Patton DV, Landers DR, Agarwal IT. Legal considerations of sleep deprivation among resident physicians. *Journal of Health Law*. 2001 Summer;34(3):377-417.
- Holzman, IR; Barnett, SH. The Bell Commission: Ethical implications for the training of physicians. *Mount Sinai Journal of Medicine*. 2000; 56:136-139.

Stone, MD; Doyle, J; Bosch, RJ; Bothe, A; Steele, G. Effect of resident call status on ABSITE performance. *Surgery*. 2000; 128:465-471.

Aya, AGM; Mangin, R; Robert, C; Ferrer, JM; Eledjam, JJ. Increased risk of unintentional dural puncture in night-time obstetric epidural anesthesia. *Canadian Journal of Anaesthesiology*. 1999; 46:665-669.

Daugherty SR, Baldwin DC Jr, Rowley BD. Learning, satisfaction, and mistreatment during medical internship: a national survey of working conditions. *Journal of the American Medical Association*. 1998;279:1194-1199.

Leonard, C; Fanning, N; Attwood, J; Buckley, M. The effect of fatigue, sleep deprivation and onerous working hours on the physical and mental well-being of pre-registration house officers. *Irish Journal of Medical Science*. 1998; 167:22-25.

FirthCozens, J; Greenhalgh, J. Doctors' perceptions of the links between stress and lowered clinical care. *Social Science and Medicine*. 1997; 44: 1017-1022.

Howard SK, Smith BE, Gaba DM, Rosekind MR. Performance of well-rested vs. highly-fatigued residents: A simulator study. *Anesthesiology*. 1997; 87:A981.

Kannan, S; Malhotra, SK; Bajaj, A; Pershad, D; Chari, P; Sleep deprivation in anaesthetists: Effect on cognitive functions. *Neurology India*. 1997; 45:250-252.

Andreyka, K; Tell, P. An analysis of continuous performance test scores before and after sleep deprivation in obstetrical resident physicians. *Archives of Clinical Neuropsychology*. 1996; 11:362-363.

Daugherty, SR; Baldwin, DC. Sleep deprivation in senior medical students and first-year residents. *Academic Medicine*. 1996; 71:S93-S95.

Dittus, RS; Klein, RW; DeBrotta, DJ; Dame, MA; Fitzgerald, JF. Medical resident work schedules: Design and evaluation by simulation modeling. *Management Science*. 1996; 42:891-906.

Richardson, GS; Wyatt, JK; Sullivan, JP; Orav, EJ; Ward, AE; Wolf, MA; Czeisler, CA. Objective assessment of sleep and alertness in medical house staff and the impact of protected time for sleep. *Sleep*. 1996; 19:718-726.

Geer R, Jobs D, Gilfor J, Traber K, Dinges D. Reduced psychomotor vigilance in anesthesia residents after 24-hour call. *Anesthesiology*. 1995; 83:A1008.

Haynes, DF; Schwedler, M; Dyslin, DC; Rice, JC; Kerstein, MD. Are postoperative complications related to resident sleep-deprivation? *Southern Medical Journal*. 1995; 88:283-289.

Nelson CS, Dell'Angela K, Jellish WS, Brown IE, Skaredoff M. Residents' performance before and after night call as evaluated by an indicator of creative thought. *Journal of the American Osteopathic Association*. 1995;95:600-603.

Lingenfelter, T; Kaschel, R; Weber, A; Zaiser-Kaschel, H; Jakober, B; Kuper, J. Young hospital doctors after night duty – their task-specific cognitive status and emotional condition. *Medical Education*. 1994; 28:566-572.

Smith-Coggins R, Rosekind MR, Hurd S, Buccino KR. Relationship of day versus night sleep to physician performance and mood. *Annals of Emergency Medicine*. 1994;24:928-934.

Gottlieb, DJ; Peterson, CA; Parenti, CM; Lofgren, RP. Effect of a night float system on housestaff neuropsychological function. *Journal of General Internal Medicine*. 1993; 8:146-148.

Leung, L; Becker, CE. Sleep-deprivation and house staff performance – Update 1984-1991. *Journal of Occupational and Environmental Medicine*. 1992; 34:1153-1160.

Stamler, JS; Goldman, ME; Gomes, J; Matza, D; Horowitz, SF. The effect of stress and fatigue on cardiac-rhythm in medical interns. *Journal of Electro-cardiology*. 1992; 24: 333-338.

Brennan TA, Leape LA, Laird NM, et al. Incidence of adverse events and negligence in hospitalized patients: results of the Harvard Medical Practice Study I. *New England Journal of Medicine*. 1991;324:370-376.

Gottlieb DJ, Parenti CM, Peterson CA, Lofgren RP. Effect of a change in housestaff work schedule on resource utilization and patient care. *Archives of Internal Medicine*. 1991;151:2065-2070.

Rubin, R; Orris, P; Lau, SL; Hryhorczuk, DO; Furner, S; Letz, R. The neurobehavioral effects of the on-call experience of housestaff physicians. *Journal of Occupational and Environmental Medicine*. 1991; 33:13-18.

Samkoff, JS; Jacques, CHM. A review of studies concerning effects of sleep-deprivation and fatigue on residents' performance. *Academic Medicine*. 1991; 66:687-693.

Akerstadt T, Arnetz BB, Anderzen I. Physicians during and following night call duty—41 hour ambulatory recording of sleep. *Electroencephalography and Clinical Neurophysiology*. 1990;76:193-196.

Robbins J, Gottlieb F. Sleep deprivation and cognitive testing in internal medicine house staff. *Western Journal of Medicine*. 1990;12:82-86.

Light AI, Sun JH, McCool C, Thompson L, Heaton S, Bartle EJ. The effects of acute sleep deprivation on the level of resident training. *Current Surgery*. 1989;46:29-30.

Orton, DI; Gruzelier, JH. Adverse changes in mood and cognitive performance of house officers after night duty. *British Medical Journal*. 1989; 298:21-23.

Storer, JS; Floyd, HH; Gill WL, et al. Effects of sleep deprivation on cognitive ability and skills of paediatric residents. *Academic Medicine*. 1989; 64:29-32.

Asch DA, Parker RM: The Libby Zion case: one step forward or two steps backward? *New England Journal of Medicine* 1988; 318:771-775

Bartle, EJ; Sun, JH; Thompson, L. The effects of acute sleep deprivation during residency

training. *Surgery*. 1988; 104:311-316.

Deaconson, TF; O'Hair, DP; Levy, MF; Lee MBF; Schueneman, AL; Condon, RE. Sleep-deprivation and resident performance. *Journal of the American Medical Association*. 1988; 260:1721-1727.

Olson, LG; Ambrogetti, A. Working harder - working dangerously? Fatigue and performance in hospitals. *Medical Journal of Australia*. 1988; 168:614-616.

Page L: Long work weeks typical for residents--survey. *American Medical News*, February 5, 1988, pp 10-12

Deary IJ, Tait QR. Effects of sleep disruption on cognitive performance and mood in medical house officers. *British Medical Journal*. 1987;295:1513-1516.

Denisco RA, Drummond JN, Gravenstein JS: The effect of fatigue on the performance of a simulated anesthetic monitoring task. *Journal of Clinical Monitoring* 1987; 3:22-24

Engel, W; Seine, R; Powell, V; D'Alessandri R. Clinical performance of interns after being on-call. *Southern Medical Journal*. 1987; 80:761-763.

Garcia EE: Sleep deprivation in physician training. *New York State Journal of Medicine* 1987; 87:637-638

Hart RP, Buchsbaum DG, Wade JB, Hamer RM, Kwentus JA. Effect of sleep deprivation on first-year residents' response times, memory, and mood. *Journal of Medical Education*. 1987;52:940-942.

Parker JB. The effects of fatigue on physician performance — an underestimated cause of physician impairment and increased patient risk. *Canadian Journal of Anaesthesiology*. 1987;34:489-495.

Reznick, RK; Folse, JR. The effects of sleep-deprivation on performance of surgical residents. *American Journal of Surgery*. 1987; 154:520-525.

Schwartz AJ, Black ER, Goldstein MG, et al: Levels and causes of stress among residents. *Journal of Medical Education* 1987; 62:744-753

Hawkins MR, Vichick DA, Silsby HD, Kruzich DJ, Butler R. Sleep deprivation and performance of house officers. *Journal of Medical Education*. 1985;60:530-535.

Klose KJ, Wallace-Barnhill GL, Craythorne NWB: Performance test results for anesthesia residents over a five day week including on-call duty. *Anesthesiology* 1985; 63:A485

Asken, MJ; Raham, DC. Resident performance and sleep deprivation – A review. *Journal of Medical Education*. 1983; 58:382-388.

Poulton EC, Hunt GM, Carpenter A, et al: The performance of junior hospital doctors following reduced sleep and long hours of work. *Ergonomics* 1978; 21:279-295

Christensen EE, Dietz GW, Murry RC, et al: The effect of fatigue on resident performance.

Radiology 1977; 125:103-105

Goldman LI, McDonough MT, Rosemond GP. Stresses affecting surgical performance and learning: correlation of heart rate, electrocardiogram and operation simultaneously recorded on videotapes. *Journal of Surgical Research*. 1972;12:83-86.

Wilkinson RT, Tyler PD, Varey CA. Duty hours of young hospital doctors: effects on the quality of work. *Journal of Occupational Psychology*. 1975;48:219-229.

Friedman, RC; Bigger, JT; Kornfield, DS. The intern and sleep loss. *New England Journal of Medicine*. 1971; 285:201-203.

***Articles about alertness management, scheduling models and quantitative models for estimating the effect of sleep deprivation***

Stoller EP, Papp KK, Aikens JE, Erokwu B, Strohl KP. Strategies Resident-Physicians Use to Manage Sleep Loss and Fatigue E-published in *Medical Education Online*, March 2005.

Kostreva M, McNelis E, Clemens E. Using a circadian rhythms model to evaluate shift schedules. *Ergonomics*. 2002 Sep 15;45(11):739-63.

Rosekind MR, Boyd JN, Gregory KB, Glotzbach SF, Blank RC. Alertness management in 24/7 settings: lessons from aviation. *Occup Med*. 2002 Apr-Jun;17(2):247-59, iv.

Dawson, D; Fletcher, A. A quantitative model of work-related fatigue: background and definition. *Ergonomics*. 2001; 44:144-163.

Dorrian, J; Lamond, N; Dawson, D. The ability to self-monitor performance when fatigued. *Journal of Sleep Research*. 2000; 9:137-144.

Lamond, N; Dawson, D. Quantifying the performance impairment associated with fatigue. *Journal of Sleep Research*. 1999; 8:255-262.

Akerstedt, T; Landstrom, U. Work place countermeasures of night shift fatigue. *International Journal of Industrial Ergonomics*. 1998; 21:167-178.

SmithCoggins, R; Rosekind, MR; Buccino, KR; Dinges, DF; Moser, RP. Rotating shiftwork schedules: Can we enhance physician adaptation to night shifts? *Academic Emergency Medicine*. 1997; 4:951-961.

***Articles about the effect of sleep loss on learning***

Dubiela FP, de Oliveira MG, Moreira KD, Nobrega JN, Tufik S, Hipolide DC. Learning deficits induced by sleep deprivation and recovery are not associated with altered [(3)H]muscimol and [(3)H]flunitrazepam binding. *Brain Research*. 2005 Mar 10;1037(1-2):157-63.

Gais S, Born J. Declarative memory consolidation: mechanisms acting during human sleep. *Learning and Memory*. 2004 Nov-Dec;11(6):679-85.

Walker MP, Stickgold R. Sleep-dependent learning and memory consolidation. *Neuron*. 2004 Sep 30;44(1):121-33.

Browne, BJ; VanSusteren, T; Onsager, DR; Simpson, D; Salaymeh, B; Condon, RE. Influence of sleep-deprivation on learning among surgical house staff and medical students. *Surgery*. 1994; 115:604-610.

***Articles about the effect of sleep loss in non-physicians***

Babkoff H, Zukerman G, Fostick L, Ben-Artzi E. Effect of the diurnal rhythm and 24 h of sleep deprivation on dichotic temporal order judgment. *Journal of Sleep Research*. 2005 Mar;14(1):7-15.

Nilsson JP, Soderstrom M, Karlsson AU, Lekander M, Akerstedt T, Lindroth NE, Axelsson J. Less effective executive functioning after one night's sleep deprivation. *Journal of Sleep Research*. 2005 Mar;14(1):1-6.

LaJambe CM, Kamimori GH, Belenky G, Balkin TJ. Caffeine effects on recovery sleep following 27 h total sleep deprivation. *Aviation, Space and Environmental Medicine*. 2005 Feb;76(2):108-13.

Beaumont M, Batejat D, Coste O, Doireau P, Chauffard F, Enslen M, Lagarde D, Pierard C. Recovery after prolonged sleep deprivation: residual effects of slow-release caffeine on recovery sleep, sleepiness and cognitive functions. *Neuropsychobiology*. 2005;51(1):16-27.

Gosselin A, De Koninck J, Campbell KB. Total sleep deprivation and novelty processing: implications for frontal lobe functioning. *Clinical Neurophysiology*. 2005 Jan;116(1):211-22.

Mu Q, Nahas Z, Johnson KA, Yamanaka K, Mishory A, Koola J, Hill S, Horner MD, Bohning DE, George MS. Decreased cortical response to verbal working memory following sleep deprivation. *Sleep*. 2005 Jan 1;28(1):55-67.

Frey DJ, Badia P, Wright KP Jr. Inter- and intra-individual variability in performance near the circadian nadir during sleep deprivation. *Journal of Sleep Research*. 2004 Dec;13(4):305-15.

Sallinen M, Harma M, Akila R, Holm A, Luukkonen R, Mikola H, Muller K, Virkkala J. The effects of sleep debt and monotonous work on sleepiness and performance during a 12-h dayshift. *Journal of Sleep Research* . 2004 Dec;13(4):285-94.

De Valck E, Cluydts R, Pirrera S. Effect of cognitive arousal on sleep latency, somatic and cortical arousal following partial sleep deprivation. *J Sleep Res*. 2004 Dec;13(4):295-304.

Dinges DF. Sleep debt and scientific evidence. *Sleep*. 2004 Sep 15;27(6):1050-2.

Philip P, Taillard J, Sagaspe P, Valtat C, Sanchez-Ortuno M, Moore N, Charles A, Bioulac B. Age, performance and sleep deprivation. *Journal of Sleep Research*. 2004 Jun;13(2):105-10.

Cajochen C, Knoblauch V, Wirz-Justice A, Krauchi K, Graw P, Wallach D. Circadian modulation of sequence learning under high and low sleep pressure conditions. *Behavioral Brain Research*. 2004 May 5;151(1-2):167-76.

- Chee MW, Choo WC. Functional imaging of working memory after 24 hr of total sleep deprivation. *Journal of Neuroscience*. 2004 May 12;24(19):4560-7.
- Drummond SP, Brown GG, Salamat JS, Gillin JC. Increasing task difficulty facilitates the cerebral compensatory response to total sleep deprivation. *Sleep*. 2004 May 1;27(3):445-51.
- Van Dongen HP, Baynard MD, Maislin G, Dinges DF. Systematic interindividual differences in neurobehavioral impairment from sleep loss: evidence of trait-like differential vulnerability. *Sleep*. 2004 May 1;27(3):423-33.
- Wyatt JK, Cajochen C, Ritz-De Cecco A, Czeisler CA, Dijk DJ. Low-dose repeated caffeine administration for circadian-phase-dependent performance degradation during extended wakefulness. *Sleep*. 2004 May 1;27(3):374-81.
- Maquet P. A role for sleep in the processing of memory traces. Contribution of functional neuroimaging in humans. *Bulletin Mem Acad R Med Belg*. 2004;159(Pt 2):167-70.
- Horowitz TS, Cade BE, Wolfe JM, Czeisler CA. Searching night and day: a dissociation of effects of circadian phase and time awake on visual selective attention and vigilance. *Psychological Science*. 2003 Nov;14(6):549-57.
- Hull JT, Wright KP Jr, Czeisler CA. The influence of subjective alertness and motivation on human performance independent of circadian and homeostatic regulation. *Journal of Biological Rhythms*. 2003 Aug;18(4):329-38.
- Czeisler CA. Quantifying consequences of chronic sleep restriction. *Sleep*. 2003 May 1;26(3):247-8; discussion 249.
- Babkoff, H; French, J; Whitmore, J; Sutherlin, R. Single-dose bright light and/or caffeine effect on nocturnal performance. *Aviation, Space and Environmental Medicine*. 2002; 73:341-350.
- Van Dongen, HP; Baynard, MD; Nosker, GS; Dinges, DF. Repeated exposure to total sleep deprivation: Substantial trait differences in performance impairment among subjects. *Sleep*. 2002; 25:121-123.
- Babkoff, H; Kelly, TL; Naitoh, P. Trial-to-trial variance in choice reaction time as a measure of the effect of stimulants during sleep deprivation. *Military Psychology*. 2001; 16:1-16.
- Wright KP Jr, Hughes RJ, Kronauer RE, Dijk DJ, Czeisler CA. Intrinsic near-24-h pacemaker period determines limits of circadian entrainment to a weak synchronizer in humans. *Proceedings of the National Academy of Science U S A*. 2001 Nov 20;98(24):14027-32.
- Beaumont, M; Batejat, D; Pierard, C; Coste, O; Doireau, P; Van Beers, P; Chauffard, F; Chassard, D; Enslin, M; Denis, JB; Lagarde, D. Slow-release caffeine and prolonged (64-h) continuous wakefulness: effects on vigilance and cognitive performance. *Journal of Sleep Research*. 2001; 10:265-276.
- Dinges D, Maislin G, Van Dongen H. Chronic sleep restriction: relation of sleep structure to daytime sleepiness and performance. *Sleep*. 2001;24:A28.

- Doran, SM; Van Dongen, HPA; Dinges, DF. Sustained attention performance during sleep deprivation: Evidence of state instability. *Archives Italiennes de Biologie*. 2001; 139:253-267.
- Drummond, SPA; Gillin, JC; Brown, GG. Increased cerebral response during a divided attention task following sleep deprivation. *Journal of Sleep Research*. 2001; 10:85-92.
- Duffy JF, Rimmer DW, Czeisler CA. Association of intrinsic circadian period with morningness-eveningness, usual wake time, and circadian phase. *Behavioral Neurosciences*. 2001 Aug; 115(4):895-9.
- Kim, DJ; Lee, HP; Kim, MS; Park, YJ; Go, HJ; Kim, KS; Lee, SP; Chae, JH; Lee, CT. The effect of total sleep deprivation on cognitive functions in normal adult male subjects. *International Journal of Neuroscience*. 2001; 109:127-137.
- Weaver, TE. Outcome measurement in sleep medicine practice and research. Part 2: assessment of neurobehavioral performance and mood. *Sleep Medicine Reviews*. 2001; 5:223-236.
- Anderson CM, Maislin G, Van Dongen HP, et al. Effect of chronically reduced nocturnal sleep, with and without daytime naps, on neurobehavioral performance. *Sleep*. 2000;23:A74.
- Blagrove M. Akehurst L. Effects of sleep loss on confidence-accuracy relationships for reasoning and eyewitness memory. *Journal of Experimental Psychology Applied*. 2000; 6:59-73.
- Forest, G; Godbout, R. Effects of sleep deprivation on performance and EEG spectral analysis in young adults. *Brain and Cognition*. 2000; 43:195-200.
- Harrison, Y; Horne, JA. The impact of sleep deprivation on decision making: A review. *Journal of Experimental Psychology-Applied*. 2000; 6:236-249.
- Harrison, Y; Horne, JA. Sleep loss and temporal memory. *Quarterly Journal of Experimental Psychology Section A-Human Experimental Psychology*. 2000; 53:271-279.
- Kamimori, GH; Penetar, DM; Headley, DB; Thorne, DR; Otterstetter, R; Belenky, G. Effect of three caffeine doses on plasma catecholamines and alertness during prolonged wakefulness. *European Journal of Clinical Pharmacology*. 2000; 56:537-544.
- Patat, A; Rosenzweig, P; Enslin, M; Trocherie, S; Miget, N; Bozon, MC; Allain, H; Gandon, JM. Effects of a new slow release formulation of caffeine on EEG, psychomotor and cognitive functions in sleep-deprived subjects. *Human Psychopharmacology-Clinical and Experimental*. 2000; 15:153-170.
- Quigley, N; Green, JF; Morgan, D; Idzikowski, C; King, DJ. The effect of sleep deprivation on memory and psychomotor function in healthy volunteers. *Human Psychopharmacology-Clinical and Experimental*. 2000; 15:171-177.
- Williamson, AM; Feyer, AM. Moderate sleep deprivation produces impairments in cognitive and motor performance equivalent to legally prescribed levels of alcohol intoxication. *Occupational and Environmental Medicine*. 2000; 57:659-655.
- Binks, PG; Waters, WF; Hurry, M. Short-term Total Sleep Deprivation Does Not Selectively Impair Higher Cortical Functioning. *Sleep*. 1999; 22:328-334.

- Bruck D, Pisani DL. The effects of sleep inertia on decision-making performance. *J Sleep Res.* 1999;8:95-103.
- Czeisler CA, Duffy JF, Shanahan TL, Brown EN, Mitchell JF, Rimmer DW, Ronda JM, Silva EJ, Allan JS, Emens JS, Dijk DJ, Kronauer RE. Stability, precision, and near-24-hour period of the human circadian pacemaker. *Science.* 1999 Jun 25;284(5423):2177-81.
- Drummond, SPA; Brown, GG; Stricker, JL; Buxton, RB; Wong, EC; Gillin, JC. Sleep deprivation-induced reduction in cortical functional response to serial subtraction. *Neuroreport.* 1999; 10:3745-3748.
- Jewett ME, Dijk DJ, Kronauer RE, Dinges DF. Dose-response relationship between sleep duration and human psychomotor vigilance and subjective alertness. *Sleep.* 1999;22:171-179.
- Jewett ME, Wyatt JK, Ritz-De Cecco A, Khalsa SB, Dijk DJ, Czeisler CA. Time course of sleep inertia dissipation in human performance and alertness. *Journal of Sleep Research .* 1999 Mar;8(1):1-8.
- Linde, L; Edland, A; Bergstrom, M. Auditory attention and multiattribute decision-making during a 33 h sleep-deprivation period: mean performance and between-subject dispersions. *Ergonomics.* 1999; 42:696-713.
- Stivalet, P; Esquivie, D; Barraud, PA; Leiffen, D; Raphel, C; Effects of modafinil on attentional processes during 60 hours of sleep deprivation. *Human Psychopharmacology-Clinical and Experimental.* 1999; 13:501-507.
- Baranski, JV; Cian, C; Esquivie, D; Pigeau, RA; Raphel, C. Modafinil during 64 hr of sleep deprivation: Dose-related effects on fatigue, alertness, and cognitive performance. *Military Psychology.* 1998; 10:173-193.
- Caldwell, JA; Ramspott, S. Effects of task duration on sensitivity to sleep deprivation using the multi-attribute task battery. *Behavioral Research Methods Instrument and Computers.* 1998; 30: 651-660.
- Heuer, H; Spijkers, W; Kiesswetter, E; Schmidtke, V. Effects of sleep loss, time of day, and extended mental work on implicit and explicit learning of sequences. *Journal of Experimental Psychology – Applied.* 1998; 4:139-162.
- Hockey, GRJ; Wastell, DG; Sauer, J. Effects of sleep deprivation and user interface on complex performance: A multilevel analysis of compensatory control. *Human Factors.* 1998; 40:233-253.
- Baranski, JV; Pigeau, RA. Self-monitoring cognitive performance during sleep deprivation: Effects of modafinil, d-amphetamine and placebo. *Journal of Sleep Research.* 1997; 6:84-91.
- Boivin DB, Czeisler CA, Dijk DJ, Duffy JF, Folkard S, Minors DS, Totterdell P, Waterhouse JM. Complex interaction of the sleep-wake cycle and circadian phase modulates mood in healthy subjects. *Archives of General Psychiatry.* 1997 Feb;54(2):145-52.
- Casagrande, M; Violani, C; Curcio, G; Bertini, M. Assessing vigilance through a brief pencil and paper letter cancellation task (LCT): Effects of one night of sleep deprivation and of the time of

day. *Ergonomics*. 1997; 40:613-630.

Coenen, AML; vanLuijelaar, ELJM. Effects of benzodiazepines, sleep and sleep deprivation on vigilance and memory. *Acta Neurologica Belgica*. 1997; 7:123-129.

Dawson, D; Reid, K. Fatigue, alcohol and performance impairment, *Nature*. 1997; 388:235.

Dinges, DF; Pack, F; Williams, K; Gillen, KA; Powell, JW; Ott, GE; Aptowicz, C; Pack, AI. Cumulative sleepiness, mood disturbance, and psychomotor vigilance performance decrements during a week of sleep restricted to 4-5 hours per night. *Sleep*. 1997; 20:267-277.

Jaskowski, P; Wlodarczyk, D. Effect of sleep deficit, knowledge of results, and stimulus quality on reaction time and response force. *Perceptual and Motor Skills*. 1997; 84:563-572.

Kelly, TL; Ryman, DH; Schlangen, K; Gomez, SA; Elsmore, TF. The effects of a single dose of pemoline on performance and mood during sleep deprivation. *Military Psychology*. 1997; 9:213-225.

Leproult, R; VanReeth, O; Byrne, MM; Sturis, J; VanCauter, E. Sleepiness, performance, and neuroendocrine function during sleep deprivation: Effects of exposure to bright light or exercise. *Journal of Biological Rhythms*. 1997; 12:245-258.

McCarthy, ME; Waters, WF. Decreased attentional responsivity during sleep deprivation: Orienting response latency, amplitude, and habituation. *Sleep*. 1997; 20:115-123.

Pilcher, JJ; Walters, AS. How sleep deprivation affects psychological variables related to college students' cognitive performance. *Journal of American College Health*. 1997; 45:121-126.

Wright, KP; Badia, P; Myers, BL; Plenzler, SC. Combination of bright light and caffeine as a countermeasure for impaired alertness and performance during extended sleep deprivation. *Journal of Sleep Research*. 1997; 6:526-35.

CorsiCabrera, M; Arce, C; Ramos, J; Lorenzo, I; Guevara, MA. Time course of reaction time and EEG while performing a vigilance task during total sleep deprivation. *Sleep*. 1996; 19:563-569.

Duffy JF, Kronauer RE, Czeisler CA. Phase-shifting human circadian rhythms: influence of sleep timing, social contact and light exposure. *Journal of Physiology*. 1996 Aug 15;495 ( Pt 1):289-97.

Pilcher, JJ; Huffcutt, AI. Effects of sleep deprivation on performance: A meta-analysis. *Sleep*. 1996; 19:318-326.

Acherman P, Werth E, Dijk D, Borbely AA. Time course of sleep inertia after nighttime and daytime sleep episodes. *Arch Ital Biol*. 1995;134:109-119.

Blagrove AU; Blagrove, M; Alexander, C; Horne, JA. The effects of chronic sleep reduction on the performance of cognitive tasks sensitive to sleep-deprivation. *Applied Cognitive Psychology*. 1995; 9:21-40.

Bonnet, MH; Gomez, S; Arand, DL. The use of caffeine vs prophylactic naps in sustained performance. *Sleep*. 1995; 18:97-104.

Czeisler CA, Dijk DJ. Use of bright light to treat maladaptation to night shift work and circadian rhythm sleep disorders. *Journal of Sleep Research*. 1995 Dec;4(S2):70-73.

Johnson, NE; Saccuzzo, DP; Larson, GE. Self-reported effort versus actual performance in information processing paradigms. *Journal of General Psychology*. 1995; 122:195-210.

Neri, DF; Wiegmann, D; Shappell, SA; McCardie, A; McKay, DL. The effects of Tyrosine on cognitive performance during extended wakefulness. *Aviation Space and Environmental Medicine*. 1995; 66: 313- 319.

Pigeau, R; Naitoh, P; Buguet, A; McCann, C. Modafinil, d-amphetamine and placebo during 64 hours of sustained mental work .1. Effects on mood, fatigue, cognitive performance and body temperature. *Journal of Sleep Research*. 1995; 4:212-228.

Bohnen, HGM; Gaillard, AWK. The effects of sleep loss in a combined tracking and time-estimation task. *Ergonomics*. 1994; 37:1021-1030.

Dijk DJ, Duffy JF, Czeisler CA. Circadian and sleep/wake dependent aspects of subjective alertness and cognitive performance. *Journal of Sleep Research* . 1992 Jun;1(2):112-7.

Dinges, DF; Kribbs, NB; Steinberg, KN; Powell, JW. Do we lose the willingness to perform during sleep deprivation? *Sleep Research*. 1992; 21:318.

Hawkins, J; Shaw P. Self-reported sleep quality in college students: A repeated measures approach. *Sleep*. 1992; 15:545-549.

Koslowsky, M; Babkoff, H. Metaanalysis of the relationship between total sleep deprivation and performance. *Chronobiology International*. 1992; 9:132-136.

Linde, L; Bergstrom, M. The effect of one night without sleep on problem-solving and immediate recall, *Psychological Research*. 1992; 54:127-136.

Smith C, MacNeill C. Memory for motor task is impaired by stage 2 sleep loss. *Sleep Res*. 1992;21:139.

Webb, WB. Problems in measuring performance: dangers in difference scores, in R. J. Broughton and R. D. Ogilvie (eds), *Sleep, Arousal and Performance* (Boston, MA: Birkhauser). 1992, pp 154-163.

Wimmer F; Hoffmann, RF; Bonato, RA; Moffitt, AR. The effects of sleep-deprivation on divergent thinking and attention processes. *Journal of Sleep Research*. 1992; 1:223-230.

Babkoff, H; Caspy, T; Mikulincer, M. Subjective Sleepiness Ratings – the effects of sleep-deprivation, circadian rhythmicity and cognitive performance. *Sleep*. 1991; 14:534-539.

Bonnet, MH. The effect of varying prophylactic naps on performance. *Sleep*. 1991; 14:307-315.

Rosenthal L, Roehrs T, Zwyghuizen-Doorenbos A, Plath D, Roth T. Alerting effects of caffeine after normal and restricted sleep. *Neuropsychopharmacology*. 1991;4:103-108.

- Mikulincer M, Babkoff H, Caspy T, Weiss H. The impact of cognitive interference on performance during prolonged sleep loss. *Psychological Research* 1990; 52:80-86.
- Mitler, MM. Two-peak 24-hour patterns in sleep, mortality and error. *Sleep Research*. 1990;19:399.
- Nakano, T; Araki, K; Michimori, A; Inbe, H; Hagiwara, H; Koyama, E. Temporal order of sleepiness, performance and physiological indices during 19-h sleep deprivation. *Psychiatry and Clinical Neurosciences*. 2000; 54:280-282.
- Broughton RJ. Chronobiological aspects and models of sleep and napping. In: Dinges DE Broughton RJ, eds. *Sleep and Alertness: Chronobiological, Behavioral and Medical Aspects of Napping*. 1989. New York: Raven:71-98.
- Mikulincer, M; Babkoff, H; Caspy, T; Sing, H. The effects of 72 hours of sleep loss on psychological variables. *British Journal of Psychology*. 1989; 80:145-162.
- Richardson GS, Miner JD, Czeisler CA. Impaired driving performance in shift workers: the role of the circadian system in a multifactorial model. *Alcohol Drugs and Driving*. 1989-90;5-6(4-1):265-73.
- Babkoff, H; Mikulincer; M, Caspy T; Kempinski, D; Sing, H. The topology of performance curves during 72 hours of sleep loss: a memory and search task. *Quarterly Journal of Experimental Psychology*. 1988; 40A:737-756.
- Horne JA. Sleep loss and "divergent thinking" ability. *Sleep*. 1988;11:528-536.
- Mitler, MM; Carskadon, MA; Czeisler, CA; Dement, WC; Dinges, DE; Graeber, RC. Catastrophes, sleep, and public policy: Consensus report. *Sleep*. 1988; 11:100-109.
- Angus, RG; Heslegrave, RJ. Effects of sleep loss on sustained cognitive performance during a command and control simulation. *Behavioral Research Methods Instruments and Computers*. 1985; 17: 55-67.
- Carskadon MA, Dement WC. Nocturnal determinants of daytime sleepiness. *Sleep*. 1982; 5:S73-S81.
- Johnson LC. Sleep deprivation and performance. In: Webb WW, ed. *Biological Rhythms, Sleep, and Performance*. New York: Wiley; 1982.
- Meddis R. Cognitive dysfunction following loss of sleep. In: Burton E, ed. *The Pathology and Psychology of Cognition*. London: Methuen; 1982.
- Carskadon MA, Dement WC. Cumulative effects of sleep restriction on daytime sleepiness. *Psychophysiology*. 1981; 18: 107-113.
- Polzella DJ. Effects of sleep deprivation on short-term recognition memory. *Journal of Experimental Psychology Human Learning and Memory*. 1975;104:194-200.
- Patkai, P. Interindividual differences in diurnal variations in alertness, performance, and adrenaline excretion, *Acta Physiologica Scandinavica*. 1971; 81:35-46.

Blake, MJF. Time of days effects on performance on a range of tasks, *Psychonomic Science*. 1967; 9:422-427.

Broughton RJ. Biorhythmic variations in consciousness and psychological functions. *Canadian Psychological Reviews* 1975. 16. 217-230.

Lee M, Kleitman N. Studies on the physiology of sleep, II: attempts to demonstrate functional changes in the nervous system during experimental insomnia. *American Journal of Physiology*. 1923;67:141-152.