Mag. Dr.med. Eva Schernhammer, PhD


Foto: Alois Endl

Channing Laboratory, Harvard Medical School, Boston, MA

Ausbildung/Education

1992	M.D.	University of Vienna Medical School, Austria
2000	M.P.H.	Harvard School of Public Health, Boston, MA (Quantitative Methods)
2003	M.S.	University of Vienna (Psychology)
2003	Dr.P.H.	Harvard School of Public Health, Boston, MA (Epidemiology)

Berufslaufbahn / Postdoctoral training

Internships and Residencies

1994-1997	Resident in General Internal Medicine, Kaiser Franz-Josef Spital und Donauspital, Wien, Österreich
1997-1999	Clinical Fellow in Hemato/Oncology, Kaiser-Franz-Josef Hospital, Vienna, Austria

Research Fellowships

1992-1994	Research Fellow in Hermato/Oncology, Hospital Rudolfsstiftung, Wien
2001-2003	Research Fellow in Epidemiology, Harvard Medical School

Zulassungen / Licensure and Certification

1997	Full Professional License as Medical Doctor in Austria
1997	Emergency Medicine License, Austria
1999	Psychoterapeutic 'Propädeutikum'

Academic Appointments

2001-2003	Research Associate in Medicine, Harvard Medical School
2003-2005	Instructor in Medicine, Harvard Medical School
2005	Habilitation ("Privat-Dozent"), Public Health, University of Vienna Medical School
2005-	Assistant Professor in Medicine, Harvard Medical School

Hospital Appointments

1997-2004	Associate Physician, Hemato/Oncology Unit and General Internal Medicine Unit, Kaiser Franz-Josef Hospital, Vienna
2001-	Associate Epidemiologist, Department of Medicine, Brigham and Women's Hospital

Professional Positions

1999-2000	Consultant, Dana Farber Cancer Institute, Center for Community-Based Research, Boston, MA
1997-2005	Research Staff, Ludwig Boltzmann-Institute for Applied Cancer Research, KFJ-Spital, Vienna, Austria
2005-	Member, Applied Cancer Research - Institute for Translational Research Vienna (ACR–ITR VIEnna)

Tätigkeiten in Arbeitsgruppen / Major Committee Assignments

1998-1999	Hospital Waste Minimization Committee, Physician Representative, Kaiser Franz-Josef Hospital, Vienna
1999-2000	Student Coordinating Committee, Master of Public Health Student Representative, Harvard School of Public Health
2002-2004	Network Austrian Scientists in North America (ASciNA), Co-Founder and Deputy Chairman Boston
2003-	Institutional Review Board Committee, Member Panel C, Brigham and Women's Hospital
2003-	Co-operative Group, External Referee Grant Application G0300454, Medical Research Council, U.K.
2004-	ASciNA, Board Member and Coordinator for Women's Issues
2004-2005	Integrated Projects and Networks of Excellence, Grant Evaluator FP6-2004-FOOD-3A, European Commission, Research Directorate, Brussels
2005-	ASciNA, Chairman Boston

Berufsverbände / Professional Societies

2001-	European Society for Medical Oncology, member
2001-	International Society of Cancer Prevention, member
2001-	Society for Epidemiologic Research, member
2003-	American Association for Cancer Research, member

Editorial Boards

1992-94	Scientific contributor, Doctor's (Medical Journal, Austria)
2001-	Ad hoc reviewer, Cancer Epidemiology, Biomarkers and Prevention
2001-	Ad hoc reviewer, Journal of Clinical Oncology
2001-	Ad hoc reviewer, International Journal of Cancer
2002-	Ad hoc reviewer, Annals of Epidemiology
2003-	Ad hoc reviewer, Journal of the National Cancer Institute
2003-	Ad hoc reviewer, Cancer Causes Control
2004-	Ad hoc reviewer, Cancer
2004-	Ad hoc reviewer, Gut
2004-	Ad hoc reviewer, BMC Cancer
2004-	Ad hoc reviewer, Cancer Detection and Prevention
2005-	Ad hoc reviewer, Journal of Occupational and Environmental Medicine
2005-	Ad hoc reviewer, Lancet Oncology
2005-	Ad hoc reviewer, Cancer Research

Stipendien und Auszeichnungen

1999-2000	Postgraduate Grant to Foster the Training of Highly Qualified Young Scientists, Austrian Ministry of Education
2000-2001	Research Scholarship to Recognize Early Career Scientists in Austria for Excellence in Research, Austrian Ministry of Science
2001-2003	Scholarship to Support the Completion of an Outstanding Dissertation Work, Austrian Research Centers Seibersdorf
2001-2004	Scholarship to Support the Completion of an Outstanding Dissertation Work, Austrian Research Centers Seibersdorf
2001-2003	Scholarship from the Department of Epidemiology, Harvard School of Public Health
2001	Best Poster Award, Annual Poster and Exhibit Day, Harvard School of Public Health
2002-2003	Harvey Fineberg Fellowship (Cancer Prevention), Harvard Center for Cancer Prevention
2002	Scholar-in-Training Award, American Association of Cancer Research
2002	Ernst and Lily Schönmann Award for Outstanding Accomplishment in Cancer Research, Austria

Research, Teaching, and Clinical Contributions

Major **research interests**:

1. Circadian phase: melatonin / cortisol as biomarkers for cancer risk
2. Shift work: light exposure and cancer etiology
3. Breast cancer: biomarkers, gene-environment interactions, and prevention
4. Gastrointestinal tumors: etiology and prevention
5. Parkinson's disease: associations with cancer etiology

My research has examined the epidemiology of a variety of cancers, including breast, colon, and pancreatic cancer. I have recently become interested in studying new areas including Parkinson's disease and its relation with cancer etiology, to further understand biological mechanisms in carcinogenesis.

My primary research interest is in exploring the exposures that influence the circadian system in humans: I completed my doctoral thesis on the effects of light at night on cancer risk through the melatonin pathway under the direction of Professor Graham Colditz in the Department of Epidemiology. As part of my dissertation I demonstrated that the effects of light at night may affect not only breast cancer, but also other cancers such as colorectal cancer, generating evidence that supports a new hypothesis on the development of cancer. I addressed stress at the work place as a potential confounding factor of the observed associations and was able to rule out an important bias due to this form of stress. I have conducted urinary melatonin measurements in the Nurses' Health Study to assess the hormone's variations according to shift work status and observed significantly lower melatonin levels among women with increasing numbers of night work. Presently, I am leading a project that evaluates associations between the hormone's levels and breast cancer risk in the Nurses' Health Study (NHS). I have recently received funding from the NIH to support parts of related projects in the NHS and to develop a new circadian light meter (Schernhammer, PI). As part of this grant, I will also develop a light intensity questionnaire, which can be validated with data from the light meter and may proof a helpful tool in future cohort studies that need to assess light exposure. I am also co-investigator on a project that evaluates reproductive and hormonal breast cancer risk factors among blind women and their associations with melatonin and circadian rhythms; this grant has been recently awarded by the Department of Defense (Breast Cancer Research Program, Lockley, PI). Most recently, I have submitted a R01 grant application to the NIH to study clock gene variants, their association with breast cancer risk and potential interactions of theses associations with night shift work in the Nurses' Health Study cohort. This grant application received an outstanding score and we expect to start the project in December 2005 (Schernhammer, PI).

Another research focus has been to examine the role of other endogenous hormones such as IGF-I and IGFBP-3, and differences with respect to functionally different polymorphisms of these genes, and risk of breast cancer. This focus reflects a broad interest in identifying and applying the use of biomarkers.

Thirdly, I am interested in the etiology and prevention of gastrointestinal tumors. I am collaborating with colleagues from the Dana Farber Cancer Center, utilizing data from two large prospective cohorts to explore risk factors for both colorectal and pancreatic cancer and to define further the chemopreventive effects of COX-2 inhibitors on cancer risk. In addition, I am also studying pathways of indicators of energy balance including IGFs with respect to colon cancer risk.

Most recently I have become interested in studying new areas including Parkinson's disease and its relation with cancer etiology, to further understand biological mechanisms in the development of cancer in humans. I have prepared and submitted a R01 grant application to the NIH for a project where I will serve as co-investigator to jointly explore risk factors for Parkinson's disease and cancer. This project is conducted in collaboration with the Department of Epidemiology and Environmental Health at UCLA (Dr. Ritz, PI) and the Institute of Cancer Epidemiology of the Danish Cancer Society (Drs. Olsen and Hansen).

During my time in Boston I have also maintained a working relationship with colleagues and institutions in Austria. I am working in partnership with the Austrian Research Centers Seibersdorf to explore potential practical applications of the findings from my doctoral thesis on general lighting issues: That melatonin suppression induced by light varies according to the wavelength of the light source and that it is possible to determine a critical exposure duration for the respective light sources. I was also actively involved in the foundation of a nationwide network of Austrian scientists in North America and am currently chairing the local group in Boston.

My major **teaching activities** were centered around instructing medical residents and students, both in Austria and at the Harvard School of Public Health.

I supervised a Masters Thesis in a combined postgraduate program of the School of Dental Medicine and the School of Public Health, both at Harvard University, and I was a teaching assistant at the Harvard School of Public Health for epidemiological and biostatistical courses. I have also tutored first year medical students at the Harvard Medical School and provide research guidance and mentorship for Sarah Megdal, a student at Milken Community High School, Los Angeles, throughout her three-year research program. I am currently developing a new course, which I will teach at the Harvard School of Public Health, starting in the fall of 2005. I have presented my work on the effects of light on cancer risk at numerous national and international gatherings, and was invited to give a guest lecture in the grant-writing course at the Harvard School of Public Health for the fourth year in a row. I have developed a web-based, interactive teaching tool for Komen's compendium "About Breast Cancer", summarizing current evidence for a range of breast cancer risk factors. In addition, during my clinical work, I served as instructor and advisor for medical residents and students. I have enjoyed my time teaching and mentoring young investigators and intend to continue this work.

Funding Information

ACTIVE: Brigham Administered Grants

2001-2004	5P01CA087969-04, NCI, Co-Investigator, Dietary & Hormonal Determinants of Cancer in Women
2001-2005	2R01CA049449-15, NCI, Co-Investigator, Biochemical Markers in the Nurses' Health Study Cohort
2004-2005	5R01CA086102-05, NCI, Co-Investigator, Prospective Studies of Pancreatic Cancer Pathogenesis
2004-2006	5P01CA055075-15, NCI, Co-Investigator, Prospective Studies of Diet and Cancer in Men and Women
2004-2009	BC030928 Idea Award, Department of Defense/US Army, Co-Investigator, Reproductive and Hormonal Risk Factors for Breast Cancer in Blind Women
2005-2009	1R01OH008171-02, NCI/NIEHS/CDC, Principal Investigator, Effects of Light at Night on the Circadian System in Nurses

Report of Current Research Activities

Nurses' Health Study Cohort – Co-investigator
Nurses' Health Study II Cohort – Co-investigator
Breast Cancer Risk Factors in Blinds – Co-investigator
Effects of Light on Circadian System – Principal Investigator

PENDING:
1R01 CA114534-01 (Schernhammer) 10/01/05 - 9/30/08 Principal Investigator
NIH/NCI
Clock genes, night work, and breast cancer risk
This proposal will evaluate associations of common variants in candidate genes of the circadian clock with breast cancer risk, as well as their interactions with night shift work. The study involves 1,108 breast cancer cases from the Nurses' Health Study II and 1:3 matched controls.

1R01ES013717-01 (Subcontract Schernhammer) (Ritz) 4/01/06 - 3/31/11
Co-Investigator, NIH
Danish Parkinson's Disease Registry Study
This proposal will evaluate environmental and genetic risk factors for Parkinson's Disease, taking advantage of a worldwide unique resource available in Denmark to conduct the largest population-

based case-control study of Parkinson's disease ever to study risk factors (~ 13,000 cases) and gene-environment interactions (~2,500 new-onset cases) in PD: the National Parkinson's Patient Register in Denmark, in combination with Denmark's National Patient Register and Denmark's nationwide Pension Fund containing historical employment information for all Danes.

HMS Fund for Women's Health 09/05-08/06
Co-Principal Investigator
Pilot Trial of Oral Melatonin Supplementation in Breast Cancer Survivors
We propose to conduct a randomized, placebo-controlled pilot trial of oral melatonin supplementation over six months in 40 healthy survivors of early stage breast cancer without current hormonal therapy use. Variations in circulating estradiol, IGF-I, and IGFBP-3 levels will be evaluated, along with the effects of melatonin on mood, sleep quality, and menopausal symptoms.

Publikationen/Bibliography
Original Articles

1. Bandak S, Czejka M, Schueller J, **Schernhammer E**. Pharmacokinetic drug interaction between epirubicin and interferon alpha 2b in serum and red blood cells. Arzneimittelforschung 1995;45(2):212-5.
2. Czejka M, Schueller J, **Schernhammer E**, Bandak S. Drug interactions between interferon alpha 2b and 5-fluorouracil during continuous intravenous 5FU infusion. Pharmazie 1995;50(6):416-9.
3. Czejka M, Bandak S, Simon D, Schueller J, Weiss C, **Schernhammer E**. Pharmacokinetic interaction between 4'-epidoxorubicin and the multidrug resistance reverting agent quinine. Z Naturforschung 1995;50(7-8):565-70.
4. Thurliman B, Kroger N, Greiner J, Mross K, Schueller J, **Schernhammer E**, Schumacher K, Gastl G, Hartlapp J, Krupper H. Dexverapamil to overcome epirubicin resistance in advanced breast cancer. J Cancer Res Clin Oncol 1995;121(Suppl 3):R3-R6.
5. **Schernhammer ES**, Laden F, Speizer FE, Willett WC, Hunter DJ, Kawachi I, Colditz GA. Rotating night shifts and risk of breast cancer in women participating in the Nurses' Health Study. J Natl Cancer Inst 2001;93(20):1563-8.
6. **Schernhammer ES**, Michaud DS, Leitzmann MF, Giovannucci E, Colditz GA, Fuchs CS. Gallstones, cholecystectomy, and the risk for developing pancreatic cancer. Br J Cancer 2002;86(7):1081-5.
7. **Schernhammer ES**, Leitzmann MF, Michaud DS, Speizer FE, Giovannucci E, Colditz GA, Fuchs CS. Cholecystectomy and the risk for developing colorectal cancer and distal colorectal adenomas. Br J Cancer 2003;88(1):79-83.
8. **Schernhammer ES**, Laden F, Speizer FE, Willett WC, Hunter DJ, Kawachi I, Fuchs CS, Colditz GA: Night-shift work and risk of colorectal cancer in the Nurses' Health Study. J Natl Cancer Inst 2003;95(11): 825-828.
9. **Schernhammer ES**, Hankinson SE, Hunter DJ, Blouin MJ, Pollak MN, Polymorphic variation at the –202 locus in IGFBP-3: serum levels of insulin-like growth factors, interaction with retinol, and breast cancer risk. Int J Cancer 2003; 107(1):60-64.
10. **Schernhammer ES**, Kang JH, Chan AT, Colditz GA, Fuchs CS: A prospective study of aspirin use and risk of pancreatic cancer in women. J Natl Cancer Inst 2004;96(1): 22-28.
11. Chan AT, Giovannucci E, **Schernhammer ES**, Colditz GA, Willett WC, Fuchs CS. A prospective study of aspirin use and the risk of colorectal adenoma. Ann Intern Med 2004;140(3):157-166.
12. Patel SR, Ayas NT, Malhotra MR, White DP, **Schernhammer ES**, Speizer FE, Stampfer MJ, Hu FB. A prospective study of sleep duration and mortality risk in women. Sleep 2004;27(3):440-444.
13. Kroenke C, Holmes M, **Schernhammer ES**, Colditz GA, Ichiro K. Caregiving stress, endogenous sex steroid hormone levels, and breast cancer risk. Am J Epidemiol 2004;159(11):1019-1027.
14. **Schernhammer ES**, Hunter DJ, Pollak M, Hankinson SE. A growth hormone polymorphism at position 1663 in intron 4 of the GH1 gene is not associated with breast cancer risk. Int J Cancer Prev 2004;1(1):33-37.

15. Fridrich P, Eappen S, Jaeger W, **Schernhammer ES**, Zizza AM, Wang GK, Gerner P. Phase 1a and 1b study of amitriptyline for ulnar nerve block in humans: side effects efficacy. Anesthesiology 2004;100:1511-1518.
16. **Schernhammer ES**, Rosner B, Willett WC, Colditz GA, Laden F, Hankinson SE. Epidemiology of urinary melatonin in women and its relation to other hormones and night work. Cancer Epidemiol Biomarkers Prev 2004;13(6):936-943.
17. **Schernhammer ES**, Colditz GA: 'Physician Suicide': a quantitative assessment of suicide rates among physicians [Meta-Analysis], Am J Psychiatry 2004; 161(12):2295-2302.
18. **Schernhammer ES**, Hankinson SE, Rosner B, Kroenke C, Speizer FE, Willett WC, Colditz GA, Kawachi I. Job stress and risk of breast cancer: The Nurses' Health Study. American Journal of Epidemiology 2004; 160(11):1079-1086.
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20. **Schernhammer ES**, Holly J, Pollak M, Hankinson SE. Circulating levels of insulin-like growth factors, their binding proteins, and breast cancer risk. Cancer Epidemiol Biomarkers Prev 2005; 14(3):699-704.
21. **Schernhammer ES**, Hankinson SE. Urinary melatonin levels and breast cancer risk. J Natl Cancer Inst 2005; 97(14).
22. Vutuc C, **Schernhammer ES**, Haidinger G, Waldhör T. Prostate cancer and prostate-specific antigen (PSA) screening in Austria. Wien Klin Wochenschr (in press).
23. Megdal S, Kroenke C, Laden F, Pukkala E, **Schernhammer ES**. A systematic review and meta-analysis of the association between night shift work and breast cancer risk [meta-analysis]. Eur J Cancer (in press).
24. Kroenke C, Bennett G, Fuchs C, Giovannucci E, Kawachi I, **Schernhammer E**, Holmes M, Kubzansky L. Depressive symptoms and prospective incidence of colorectal cancer. Am J Epidemiol (in press).
25. **Schernhammer ES**, Hu F, Giovannucci E, Michaud DS, Colditz GA, Fuchs C. Sugar-sweetened soft drink consumption and risk of pancreatic cancer in two prospective cohorts. Cancer Epidemiol Biomarkers Prev 2005 (in press).

Reviews, Book Chapters, and Editorials

1. **Schernhammer ES**. *In utero* exposures and breast cancer risk: joint effects of estrogens and insulin-like growth factor [editorial]. Cancer Causes Control 2002;13(6):505-8.
2. **Schernhammer ES**, Colditz GA: Response: Night shift work, light at night, and risk of breast cancer [letter]. J Natl Cancer Inst 2002;94(7):530-1.
3. **Schernhammer ES**, Hankinson SE. Light at night: A novel risk factor for cancer in shift workers? [invited review]. Clinics in Occupational and Environmental Medicine/ Chronobiology and Shiftwork, 2003; 3(2):263-278
4. **Schernhammer ES**, Hankinson SE. Epidemiologic approaches to evaluating IGF and cancer risk [invited book chapter]. In: LeRoith D, Zumkeller W, Baxter R, editors. Insulin-like Growth Factors. Landes Bioscience, 2003 ; Chapter 19, p. 317-338 http://www.eurekah.com/chapter.php?chapid=973&bookid=34&catid=19
5. **Schernhammer ES**, Dittrich CH. Epidemiological studies for evaluating the role of cyclooxygenase in chemoprevention of malignant tumors [invited review]. Wien Med Wochenschrift 2003;153(5-6):1-12.
6. Hankinson SE, **Schernhammer ES**. Insulin-like growth factor and breast cancer risk: evidence from observational studies [invited review]. Breast Diseases 2003;17:27-40
7. **Schernhammer ES**. Harvard launches a workshop series targeting the control of obesity in the U.S. Cancer Causes & Control 2003; 14(10):1009-1012.
8. **Schernhammer ES**, Schulmeister K. Melatonin and cancer risk: does light at night compromise physiologic cancer protection by lowering serum melatonin levels? Br J Cancer 2004; 90(5):941-943
9. **Schernhammer ES**, Schulmeister K. Light at night and cancer risk [invited review]. Photochem Photobiol 2004; 79(4):316-318

10. **Schernhammer E**, Fuchs C. RESPONSE: Re: A Prospective Study of Aspirin Use and the Risk of Pancreatic Cancer in Women. J Natl Cancer Inst 2004; 96(8):637-638
11. Pollak MN, **Schernhammer ES**, Hankinson SE. Insulin-like growth factors and neoplasia [invited review]. Nat Rev Cancer 2004; 4(7):505-518
12. **Schernhammer ES**, Chen H, Ritz B. Circulating melatonin levels: possible link between Parkinson's disease and cancer risk? [Hypothesis]. Cancer Causes Control (in press).
13. **Schernhammer E**, Enzinger P. Insulin-like growth factor receptor (IGFR-I) as a target for future therapeutic interventions [invited book chapter]. In 'Signaltransduktion in der Onkologie – Grundlagen und therapeutische Möglichkeiten' [German]. UNI-MED Science Verlag. Hsgb. Dittrich C. 2005 (in press).
14. **Schernhammer ES**. Taking Their Own Lives – The High Rate of Physician Suicide [perspective article]. N Engl J Med 2005; 352(24):2473-2476.

Medienberichte über ihre Arbeit und weiterführende Links

Krebs durch Kunstlicht: Warum nachtaktive Menschen häufiger an Tumoren erkranken
Künstliche Beleuchtung in der Nacht begünstigt verschiedene Tumoren. Diese These war bis vor kurzem umstritten. Doch nun bestätigt eine Studie an 120.000 Testpersonen den Zusammenhang für Brust-, Dick- und Enddarmkrebs. Das Risiko für diese Tumoren steigt bei regelmäßiger Nachtarbeit über einen Zeitraum von 15 Jahren um bis zu 35 Prozent an.

Licht, ob künstliches oder natürliches, ist überall auf der Welt Sinnbild des Guten. Umso unglaublicher erscheint es, dass sich nun Studien häufen, die künstliches Licht in der Nacht als eine Ursache für verschiedene Krebsarten dingfest machen. Regelmäßige Nachtarbeit erhöht beispielsweise das Risiko einiger Tumoren um bis zu 35 Prozent.

Dass Licht schaden kann, deutete sich zum ersten Mal vor einigen Jahren an. Damals beobachteten unter anderem skandinavische Forscher, dass blinde Frauen nur halb so oft an Brustkrebs erkranken wie sehende. Die ersten Studien waren jedoch zu klein, um aussagekräftig genug zu sein. Die Ergebnisse wurden daher nicht ernst genommen.

Erst als Eva Schernhammer, Wissenschaftlerin an der Harvard Medical School in Boston, Daten von über 120.000 Krankenschwestern auf den Zusammenhang zwischen Nachtschichten und dem Brustkrebsleiden untersuchte, erhärtete sich der Verdacht: Krankenschwestern, die häufig nachts arbeiten, haben ein höheres Krebsrisiko. Es liegt nach 15 Jahren regelmäßiger Nachtarbeit um bis zu einem Drittel höher als üblich. Auch für Dick- und Enddarmkrebs steigt die Gefahr mit der Nachtarbeit in ähnlichem Maße an.

"Licht in der Nacht verringert die Produktion von Melatonin. Dieser Stoff wird normalerweise überwiegend während des Schlafes im Dunklen gebildet und schützt vor Krebs", erläutert Schernhammer. Darüber hinaus scheint Licht in der Nacht für mehr weibliches Östrogen zu sorgen. Dieses wiederum lässt die Gefahr von Brustkrebs ansteigen. Tatsächlich fanden sich im Blut der nachts arbeitenden Krankenschwestern niedrigere Melatonin- und erhöhte Östrogenwerte.

Bisher schoben einige Mediziner die größere Krebsgefahr alleine dem Östrogen in die Schuhe. Diese Erklärung genügt jedoch nun nicht mehr, denn auch andere Krebsarten wie Darmkrebs nehmen mit den Nachtschichten zu. "Dies lässt sich eher über das fehlende Melatonin als über zu hohe Östrogenspiegel begründen", berichtet Schernhammer. Demnach müssten nicht nur Frauen, sondern auch Männer, welche die Nacht durchwachen, ihr Krebsrisiko erhöhen. Weitere Studien sollen darüber Aufschluss geben.

Kritik an der Lichtthese weiß Schernhammer heute dank umfassender Untersuchungen zu entkräften. So fällt auch Stress der Nachtarbeiter als Grund für den häufigeren Krebs aus. "Wir haben alle bis dato bekannten Risikofaktoren für Brust- und Dickdarmkrebs bei der Auswertung nochmals berücksichtigt. Wir fanden aber keinen nennenswerten Einfluss auf unsere Ergebnisse", hebt Schernhammer nachdrücklich hervor.

Rückendeckung kommt von dem Mediziner George Brainard von der Thomas-Jefferson-Universität in Philadelphia. Er ließ Studenten bei unterschiedlich farbigem Licht die Nacht hindurch kein Auge schließen und untersuchte danach ihr Blut. Dabei stellte Brainard fest, dass vor allem blaues Licht das krebsschützende Melatonin absinken lässt, während rotes Licht sich vergleichsweise harmlos zeigte.

All dies seien sehr junge Erkenntnisse, um die noch rege geforscht werde, betont Brainard. Vermutlich lässt sich der Befund durch einen bislang unbekannten Rezeptor im Auge erklären, der weder zu den Stäbchen noch zu den Zapfen gehört. Er leitet Informationen über die äußeren Lichtverhältnisse an das Gehirn weiter, und zwar an eine Region, die landläufig als biologische Uhr bekannt ist und die die Bildung von Melatonin steuert. "Dieser neue Rezeptor spricht vor allem auf blaues Licht an", erklärt Schernhammer gegenüber ddp.

Bringen durchwachte Nächte damit die biologische Uhr und mit ihr die Melatonin-Produktion durcheinander? Vieles spricht dafür. Mitunter auch die Tatsache, dass fehlender Schlaf auf Dauer rascher altern lässt. Wer die Nacht zum Tag macht, mag sich am Morgen, um Jahre gealtert, im Spiegel kaum wiedererkennen. Doch vom höheren Krebsrisiko verriet der Spiegel bislang nichts.

Susanne Donner, 21.01.2004 - http://www.wissenschaft.de/wissen/hintergrund/236607.html

Suicide high among female doctors. More than double the rate of general public

By William J. Cromie, Harvard News Office

Male doctors take their own lives at a higher rate than the general population of white men in the United States. That's been known for some time. Now, the largest, latest study of physician suicides in this country has found that female doctors take their lives much more often.

The study was undertaken by Harvard Medical School researchers following the death of a young female physician who took her life in the School's library.

Eva Schernhammer and Graham Colditz examined the results of 25 studies of physician suicides and concluded that male doctors killed themselves at a rate 41 percent higher than that of other men and women. The more startling finding was that female doctors take their lives at a rate more than twice (2.27 times) that of the general public.

"We do not yet have a clear answer to why this is," admits Schernhammer, who works at Brigham and Women's Hospital, a Harvard teaching affiliate in Boston. "There is evidence that depression, drug abuse, and alcoholism, possibly related to stress, are often associated with suicides of physicians. Female physicians in particular have been shown to have a higher frequency of alcoholism than women in the general population."

The women may feel more stress because of gender bias and an increased need to succeed in this male-dominated profession. That seems likely, but Schernhammer says there have been no conclusive studies to back it up. She also notes that being single and not having children, which applies more to women than men in medicine, "has been linked to higher suicide rates."

According to another study, done last year, the most common way that doctors take their lives is by poisoning themselves, often with drugs taken from their offices or laboratories.

Critical of themselves

The Harvard researchers published the results of their investigation in the December issue of the American Journal of Psychiatry. In this report, they cite evidence from other studies that doctors who kill themselves "are more critical of others and of themselves, and are more likely to blame themselves for their own illnesses."

Other studies conclude that doctors feel uncomfortable turning to their colleagues for help. Instead, they may "resort to alcohol or drugs and isolation. Once they seek help, it appears likely they are not taken seriously enough by their fellow colleagues." One investigation found that more than half of physicians who sought help later committed suicide. Although they had been diagnosed with psychiatric problems, none were hospitalized before they took their lives.

Schernhammer and Colditz believe that the underlying risk factors for female physicians' suicide could make them good targets for prevention programs. They highlight such factors as a high incidence of psychiatric disorders, especially depression. Also, excessive drug use can be a sign that they are under the kind of stress and strain that leads to suicide.

The researchers recommend that the higher risk of suicide among physicians, particularly female physicians, be recognized nationally. They suggest that more studies be done to determine the causes of the suicides and to find possible ways to stop them. As a model for such intervention, they cite a program that resulted in dropping the suicide rate among U.S. Air Force personnel from 16.4 per

100,000 people to 9.4 per 100,000 in two years. These interventions should, they say, include discreet and confidential access to psychotherapy for stressed-out physicians.

Last but not least, Schernhammer suggests "an open discussion of the stress encountered in medical careers is critical for successful early recognition of impairment and risk of suicide."

Quelle:http://www.news.harvard.edu/gazette/2005/02.03/11-suicide.html

Verwirrung um Aspirin-Krebsgefahr

Eine US-Studie ergab, dass die langjährige regelmäßige Einnahme des Aspirin- Wirkstoffs Acetylsalicylsäure (ASS), bei Frauen das Risiko für Bauchspeicheldrüsenkrebs erhöht. Frühere Untersuchungen ergaben jedoch das genaue Gegenteil.

Dieses Ergebnis haben die Forscher in der Online-Ausgabe des Fachblatts "Journal of the National Cancer Institute" (JNCI, DOI: 10.1093/jnci/djh001) veröffentlicht. In einem Kommentar verweist das Journal jedoch darauf, dass andere Untersuchungen zu dem genau gegenteiligen Ergebnis gekommen seien.

20-jährige Studie

Ein Team um Eva Schernhammer vom Channing Laboratory der Havard Medical School in Boston (US-Staat Massachusetts) hat Daten von mehr als 88 000 Frauen ausgewertet. Innerhalb von 18 Jahren waren unter diesen 161 Fälle von Bauchspeicheldrüsenkrebs aufgetreten. Frauen, die nach eigenen Angaben länger als 20 Jahre zwei oder mehr ASS- Tabletten pro Woche nahmen, hatten ein um 58 Prozent höheres Risiko für Bauchspeicheldrüsenkrebs als Frauen die dies Mittel nicht nahmen. Bei 14 oder mehr Tabletten pro Woche stieg das Risiko schon nach wenigen Jahren um 86 Prozent.

Nach einer anderen US-Studie, die im August 2002 im JNCI veröffentlicht wurde, führte die ASS bei Frauen dagegen zu einem geringeren Risiko für Bauchspeicheldrüsenkrebs. Die damalige Studienleiterin Kristin Anderson von der Universität von Minnesota sagte, es gebe starke Hinweise darauf, dass der Wirkstoff bei der Vorbeugung von Bauchspeicheldrüsenkrebs helfe.

Bayer verweist auf positive Wirkungen von ASS

Der Aspirin-Hersteller Bayer verwies auf andere, positive Wirkungen von ASS, etwa bei der Vorbeugung von Herzerkrankungen, an denen jedes Jahr allein in den USA schätzungsweise knapp eine Million Menschen stürben. Frauen sollten nach Ansicht von Bayer Aspirin nur nach Rücksprache mit ihrem Arzt absetzen.

Der JNCI-Kommentar betont, es gebe keine einfachen Antworten auf die Frage nach dem Einfluss von ASS auf die Entstehung von Bauchspeicheldrüsenkrebs. Weitere Studien seien nötig.

Quelle: http://www.stern.de/wissenschaft/gesundheit/?id=518555

Weitere links:

http://www.swr.de/wiesoweshalbwarum/archiv/2003/10/23/beitrag2.html
http://science.orf.at/science/news/95257
http://womensenews.com/article.cfm/dyn/aid/2167/context/archive