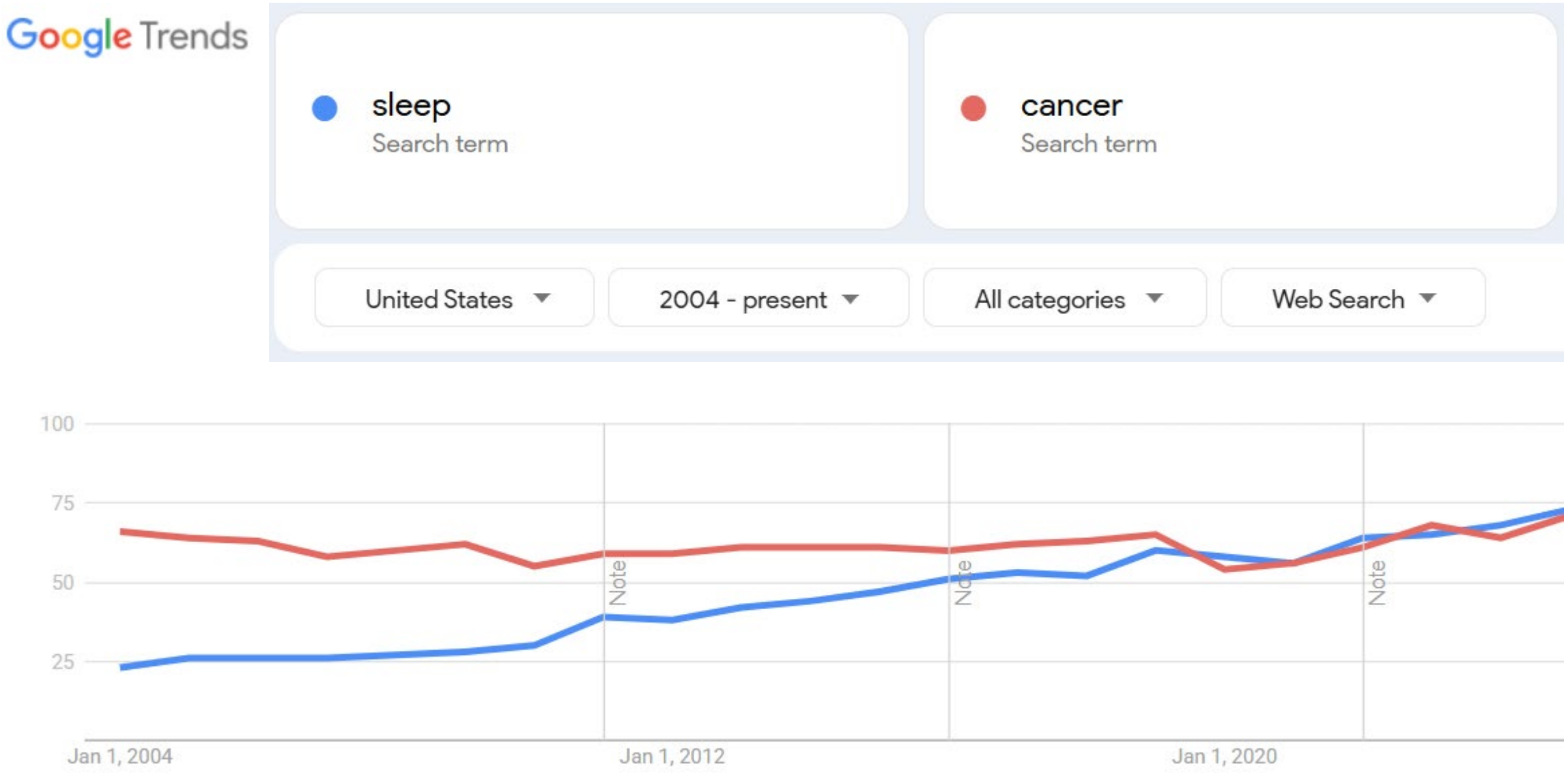
Sleep and Cancer: What to Know and What to Do

CANCER NATION

Eric Zhou, PhD
Associate Professor, Harvard Medical School

Increasing Public Interest

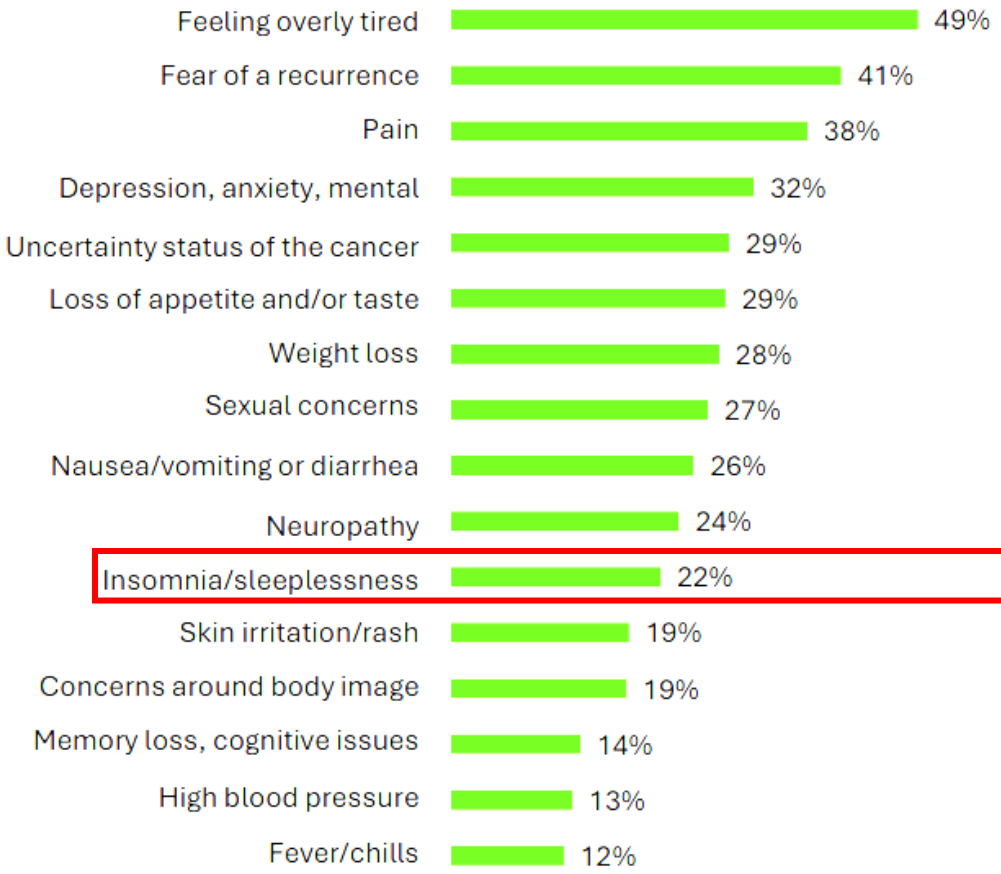


Why Should You Care?

Side Effects Experienced

Feeling overly tired, fear of recurrence, and pain remain at the top of most frequent side effects. PTSD, a new addition in 2025, is not as common, but women and Hispanic patients are most impacted.

Symptoms experienced *(top 16 out of 33 shown)*



	Women	Men	Black	Hispanic	18-39	Impacted Most
Feeling overly tired	58%	40%	45%	54%	55%	19%
Fear of a recurrence	47%	35%	39%	33%	34%	18%
Pain	42%	34%	43%	54%	56%	14%
Depression, anxiety, mental	40%	24%	38%	42%	38%	15%
Uncertainty status of the cancer	31%	28%	34%	23%	23%	10%
Loss of appetite and/or taste	34%	24%	38%	41%	41%	8%
Weight loss	29%	28%	37%	39%	54%	6%
Sexual concerns	21%	33%	32%	25%	22%	8%
Nausea/vomiting or diarrhea	32%	20%	36%	30%	43%	8%
Neuropathy	28%	20%	26%	22%	22%	11%
Insomnia/sleeplessness	30%	14%	27%	30%	32%	6%
Skin irritation/rash	24%	14%	12%	23%	15%	5%
Concerns around body image	27%	10%	23%	22%	25%	5%
Memory loss, cognitive issues	20%	7%	12%	17%	20%	4%
High blood pressure	12%	13%	18%	20%	21%	3%
Fever/chills	13%	11%	20%	15%	28%	2%

CANCER NATION

93%

+ 1 pts.

of patients experienced at least one issue symptom during treatment

Many Reasons for Poor Sleep

- Surgery
- Radiation therapy
- Chemotherapy
- Hormonal therapy
- Immunotherapy
- Transplant

Pain

Fatigue

Neuropathy

Hot flashes

Rashes/itching

Nausea/vomiting

Good Sleep Matters

JCSM
Journal of Clinical Sleep Medicine

SCIENTIFIC INVESTIGATIONS

The Relation of Trouble Sleeping, Depressed Mood, Pain, and Fatigue in Patients with Cancer

Edward J. Stepanski, Ph.D.[1]; Mark S. Walker, Ph.D.[1]; Lee S. Schwartzberg, M.D.[1,2]; L. Johnetta Blakely, M.D.[1,2]; Jason C. Ong, Ph.D.[3]; Arthur C. Houts, Ph.D.[1]

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frontiers | Frontiers in Psychology

TYPE Brief Research Report
PUBLISHED 15 December 2022
DOI 10.3389/fpsyg.2022.960029

OPEN ACCESS

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SPECIALTY SECTION

The association between sleep problems and general quality of life in cancer patients and in the general population

Dirk Hofmeister[1], Thomas Schulte[2], Anja Mehnert-Theuerkauf[1], Kristina Geue[1], Markus Zenger[3,4], Peter Esser[1], Heide Götze[1] and Andreas Hinz[1]*

[1]Department of Medical Psychology and Medical Sociology, Leipzig University, Leipzig, Germany, [2]Rehabilitation Clinic Bad Oexen, Bad Oeynhausen, Germany, [3]Department of Applied Human Studies, University of Applied Sciences Magdeburg-Stendal, Stendal, Germany, [4]Integrated Research and Treatment Center Adiposity Diseases, Leipzig University, Leipzig, Germany

Good Sleep REALLY Matters

British Journal of Cancer

www.nature.com/bjc

ARTICLE

Clinical Studies

Sleep and cancer recurrence and survival in patients with resected Stage III colon cancer: findings from CALGB/SWOG 80702 (Alliance)

Seohyuk Lee[1], Chao Ma[2], Qian Shi[3], Jeffrey Meyers[3], Pankaj Kumar[4], Felix Couture[5], Philip Kuebler[6], Smitha Krishnamurthi[7], DeQuincy Lewis[8], Benjamin Tan[9], Eileen M. O'Reilly[10], Anthony F. Shields[11] and Jeffrey A. Meyerhardt[2]✉

JCSM
Journal of Clinical Sleep Medicine

SCIENTIFIC INVESTIGATIONS

Pre-diagnostic Sleep Duration and Sleep Quality in Relation to Subsequent Cancer Survival

Amanda I. Phipps, PhD[1,2]; Parveen Bhatti, PhD[1,2]; Marian L. Neuhouser, PhD[1]; Chu Chen, PhD[1]; Tracy E. Crane, RD[3]; Candyce H. Kroenke, ScD[4]; Heather Ochs-Balcom, PhD[5]; Michelle Rissling, PhD[6]; Beverly M. Snively, PhD[7]; Marcia L. Stefanick, PhD[8]; Miriam M. Treggiari, MD[9]; Nathaniel F. Watson, MD[10]

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Contents lists available at ScienceDirect

Sleep Medicine

journal homepage: www.elsevier.com/locate/sleep

Sleep quality and overall survival among cancer survivors in the Netherlands: A PROFILES registry study

Renate Dinnessen[a], Sandra Beijer[a], Simone Oerlemans[a], Olga Husson[b,c,d], Floortje Mols[a,e], Martijn JL. Bours[f], Nicole PM. Ezendam[a,e,*]

[a] Department of Research and Development, Netherlands Comprehensive Cancer Organisation (IKNL), Utrecht, the Netherlands
[b] Department of Medical Oncology, Netherlands Cancer Institute, Amsterdam, the Netherlands
[c] Department of Surgical Oncology, Erasmus MC Cancer Institute, Rotterdam, the Netherlands
[d] Division of Psychosocial Research and Epidemiology, Netherlands Cancer Institute, Amsterdam, the Netherlands
[e] Department of Medical and Clinical Psychology, Center of Research on Psychological disorders and Somatic diseases (CoRPS), Tilburg University, Tilburg, the Netherlands
[f] Department of Epidemiology, GROW - School for Oncology and Reproduction, Maastricht University, Maastricht, the Netherlands

Contents lists available at ScienceDirect

Sleep Medicine

journal homepage: www.elsevier.com/locate/sleep

Original Article

Sleep duration is associated with survival in advanced cancer patients

Kevin P. Collins[a], David A. Geller[a], Michael Antoni[b], Drew Michael Donnell[c], Allan Tsung[a], James W. Marsh[a], Lora Burke[d], Frank Penedo[e], Lauren Terhorst[f], Thomas W. Kamarck[g], Anna Greene[a], Daniel J. Buysse[h], Jennifer L. Steel[a,g,h,*]

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[e] Department of Medical Social Sciences, Psychology, and Psychiatry and Behavioral Sciences, Northwestern University, Evanston, IL, USA
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[g] Department of Psychology, University of Pittsburgh, Pittsburgh, PA, USA
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Good Sleep REALLY Matters

SLEEP DISRUPTION PREDICTS SURVIVAL OF WOMEN WITH ADVANCED BREAST CANCER

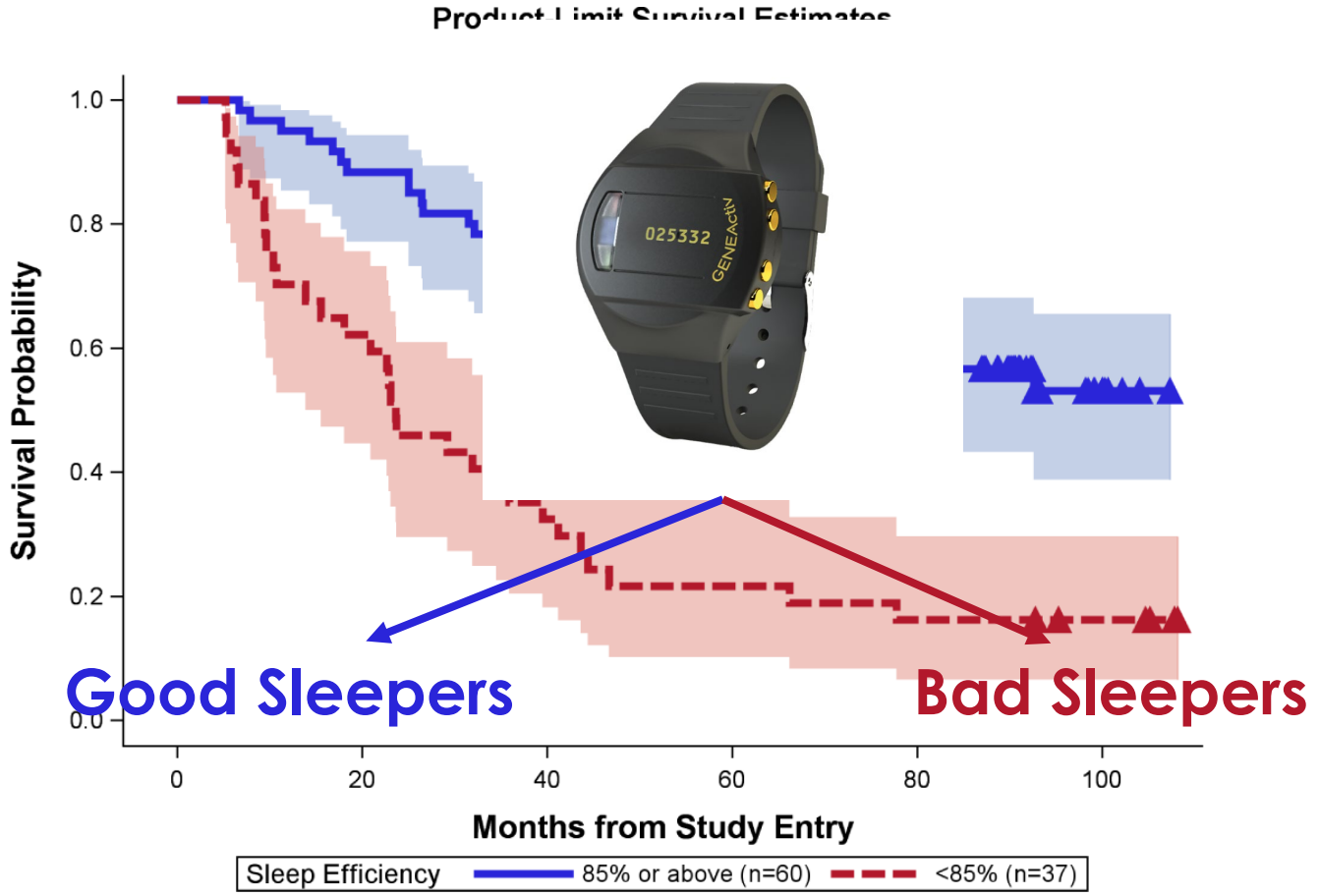
http://dx.doi.org/10.5665/sleep.3642

Actigraphy-Measured Sleep Disruption as a Predictor of Survival among Women with Advanced Breast Cancer

Oxana Palesh, PhD, MPH[1]; Arianna Aldridge-Gerry, PhD, MPH[1]; Jamie M. Zeitzer, PhD[1]; Cheryl Koopman, PhD[1]; Eric Neri, BS[1]; Janine Giese-Davis, PhD[1,2]; Booil Jo, PhD[1]; Helena Kraemer, PhD[1]; Bita Nouriani, MS[1]; David Spiegel, MD[1]

[1]Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford, CA; [2]Tom Baker Cancer Centre, Psychosocial Resources, Calgary , Canada

Our data suggest that an improvement in sleep efficiency by 10% among women with sleep efficiency <85% could potentially lead to a 32% increase in survival time.



Potentially Due to Immune Health

American Psychological Association | Society for Health Psychology

Health Psychology

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ISSN: 0278-6133

2020, Vol. 39, No. 5, 358–369
http://dx.doi.org/10.1037/hea0000811

Insomnia, Immunity, and Infections in Cancer Patients: Results From a Longitudinal Study

Sophie Ruel, Hans Ivers, and Marie-Hélène Savard
Université Laval; Centre Hospitalier Universitaire de Québec–Univesité Laval Research Center; and Laval University Cancer Research Center

Jean-Philippe Gouin
Concordia University

Julie Lemieux and Louise Provencher
Centre Hospitalier Universitaire de Québec–Université Laval and Université Laval

Aude Caplette-Gingras
Centre Hospitalier Universitaire de Québec–Université Laval and Centre Hospitalier Universitaire de Québec-Université Laval Research Center

Célyne Bastien and Charles M. Morin
Université Laval

Félix Couture
Centre Hospitalier Universitaire de Québec–Université Laval and Laval University Cancer Research Center

Josée Savard
Université Laval; Centre Hospitalier Universitaire de Québec–Université Laval Research Center; and Laval University Cancer Research Center

cancers

MDPI

Article

The Association of Insomnia with Febrile Neutropenia, Leucopenia, and Infection in Women Receiving Adjuvant Chemotherapy for Breast Cancer

Audreylie Lemelin [1], Josée Savard [2,3,4], Michelle Chen [5], Lois E. Shepherd [5], Margot Burnell [6], Mark N. Levine [7], Bingshu E. Chen [5] and Julie Lemieux [2,4,*]

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3 School of Psychology, Université Laval, Québec, QC G1V 0A6, Canada
4 CHU de Québec, Université Laval, Québec, QC G1R 4G7, Canada
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6 Saint John Regional Hospital, Saint John, NB E2L 4L2, Canada; margot.burnell@horizonnb.ca
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Health Psychology
2015, Vol. 34, No. 10, 983–991

0278-6133/15/$12.00 http://dx.doi.org/10.1037/hea0000181

Insomnia and Self-Reported Infections in Cancer Patients: An 18-Month Longitudinal Study

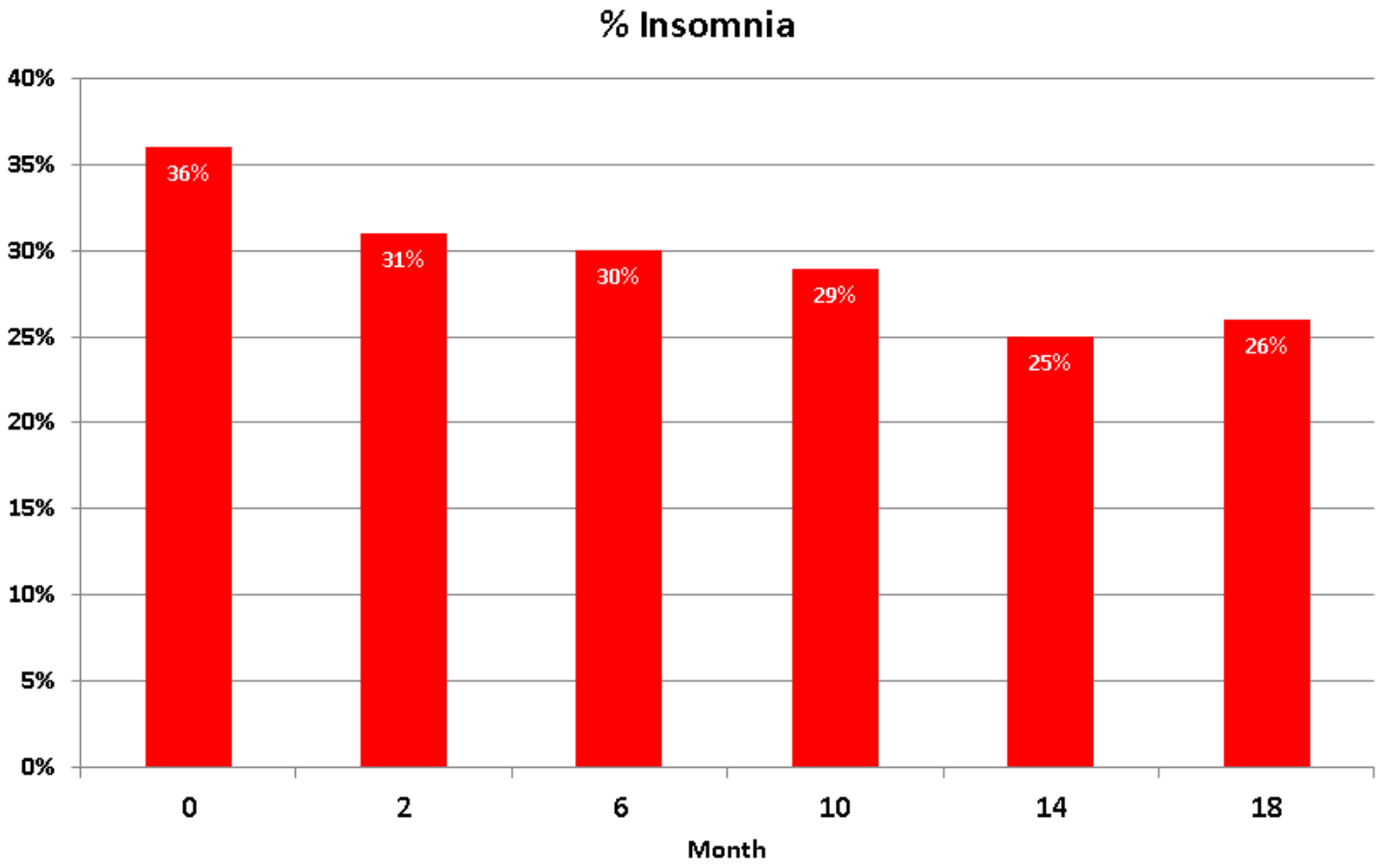
Sophie Ruel, Josée Savard, and Hans Ivers
Université Laval and Centre de recherche du CHU de Québec, Québec, Canada

Myth: It Always Goes Away By Itself

VOLUME 29 · NUMBER 26 · SEPTEMBER 10 2011

JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT

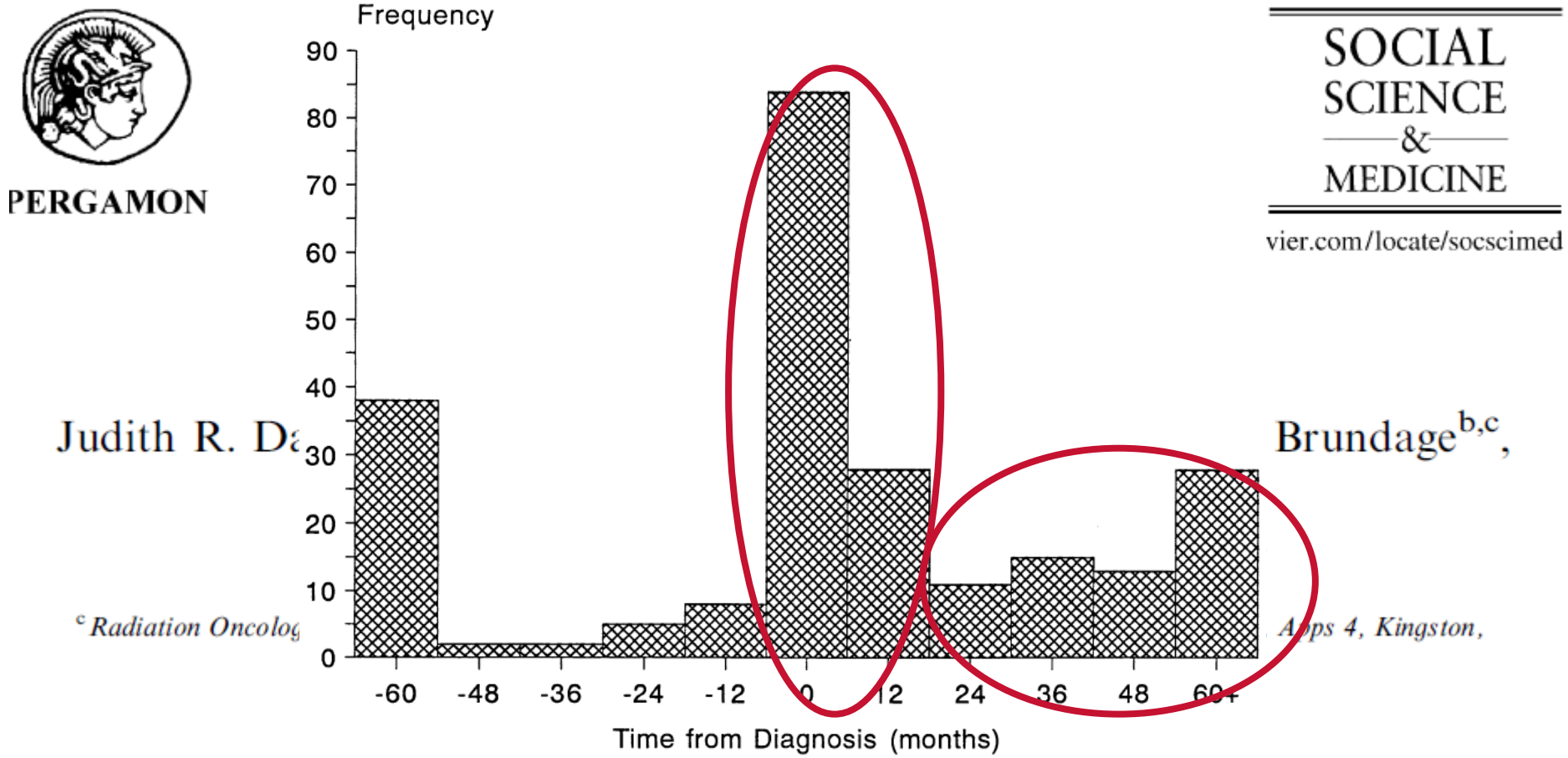


more severe and chronic.

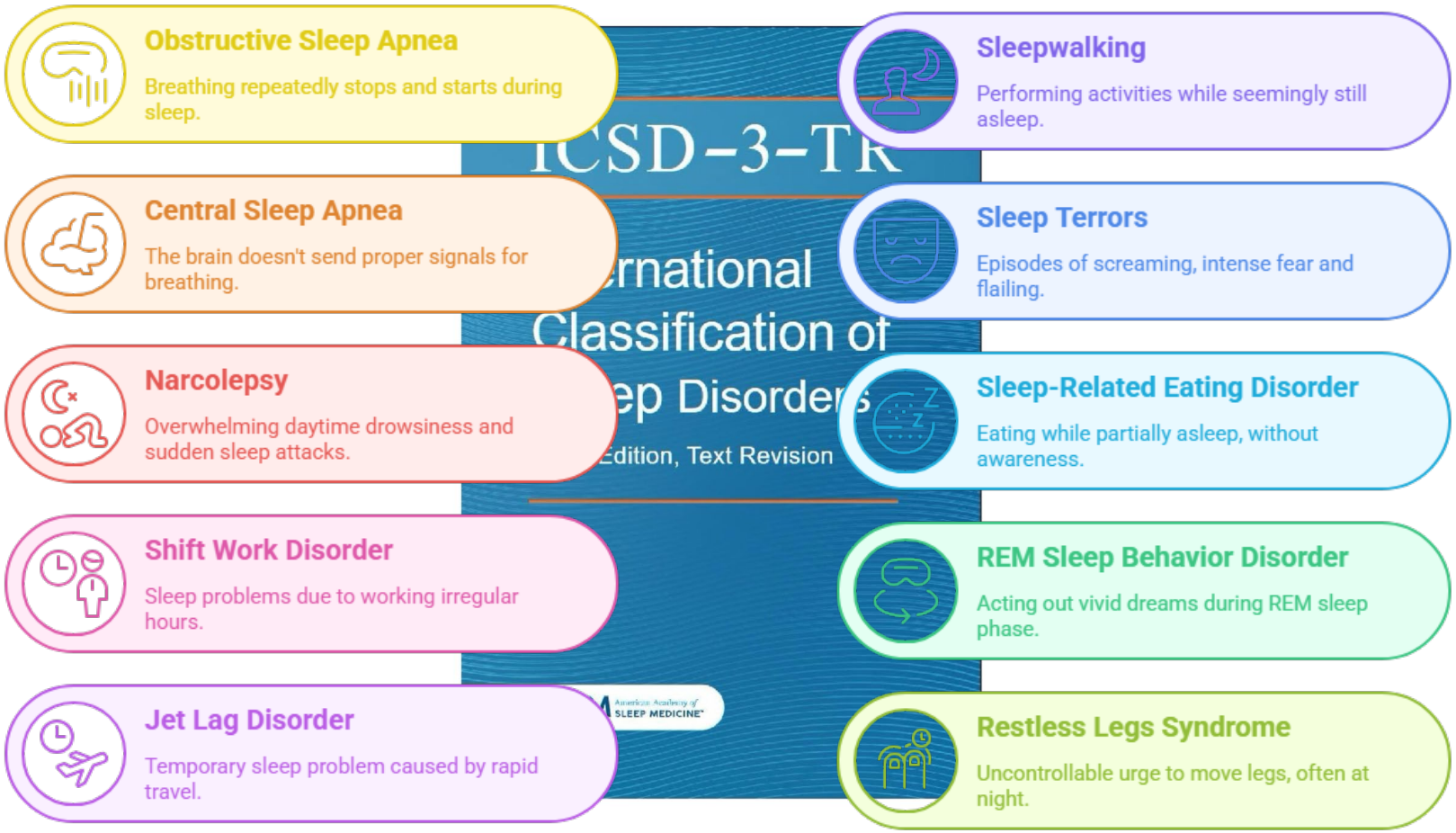
0732-183X/11/2926-3580/$20.00

DOI: 10.1200/JCO.2010.33.2247

Myth: This Only Can Happen During Treatment



There Are Many Sleep Disorders



OSA

- Family member with OSA
- Persistent snoring
- Witnessed breathing pauses
- Choking or gasping for air
- BMI 25+
- Thick neck (16” w, 17” m)
- Daytime sleepiness
- Morning headaches
- Brain fog

Insomnia

A. The patient reports one or more of the following:
1. Difficulty initiating asleep
2. Difficulty maintaining sleep
3. Final awakening earlier than desired

B. The patient reports one or more of the following related to the nighttime sleep difficulty:
1. Fatigue
2. Impaired attention, concentration, or memory
3. Impaired social, family, occupational, or academic performance
4. Mood disturbance/irritability
5. Subjective daytime sleepiness
6. Behavioral problems (e.g., hyperactivity, impulsivity, aggression)
7. Reduced motivation/energy/initiative
8. Proneness for errors/accidents
9. Concerns about or dissatisfaction with sleep

C. The reported sleep/wake complaints cannot be explained purely by inadequate opportunity or circumstances.

D. The sleep disturbance and associated daytime symptoms occur at least 3x/week and have been present for at least 3 months.

E. The sleep disturbance and associated daytime symptoms are not solely due to another current sleep disorder, medical disorder, mental disorder, or medication/substance use.

Dr. Google Says

what to do when i can't sleep

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About 506,000,000 results (0.57 seconds)

Beyond Counting Sheep—Your Action Plan

1. Keep track. Record how much and when you **sleep**, fatigue levels throughout the day, and any other symptoms. ...
2. Try therapy. ...
3. Establish a regular bedtime routine. ...
4. Use your bed the way it should be used. ...
5. Choose the right mattress. ...
6. Don't smoke. ...
7. Talk to your doc. ...
8. Exercise early in the day.

More items...

Can't Sleep? Here's 32 Solutions for Insomnia | Greatist
https://greatist.com/health/cant-sleep-advice-and-tips

About this result | Feedback

What Does NCCN Recommend?

National Comprehensive Cancer Network®

NCCN Guidelines Version 2.2026
Survivorship: Sleep Disorders

NCCN Guidelines Index
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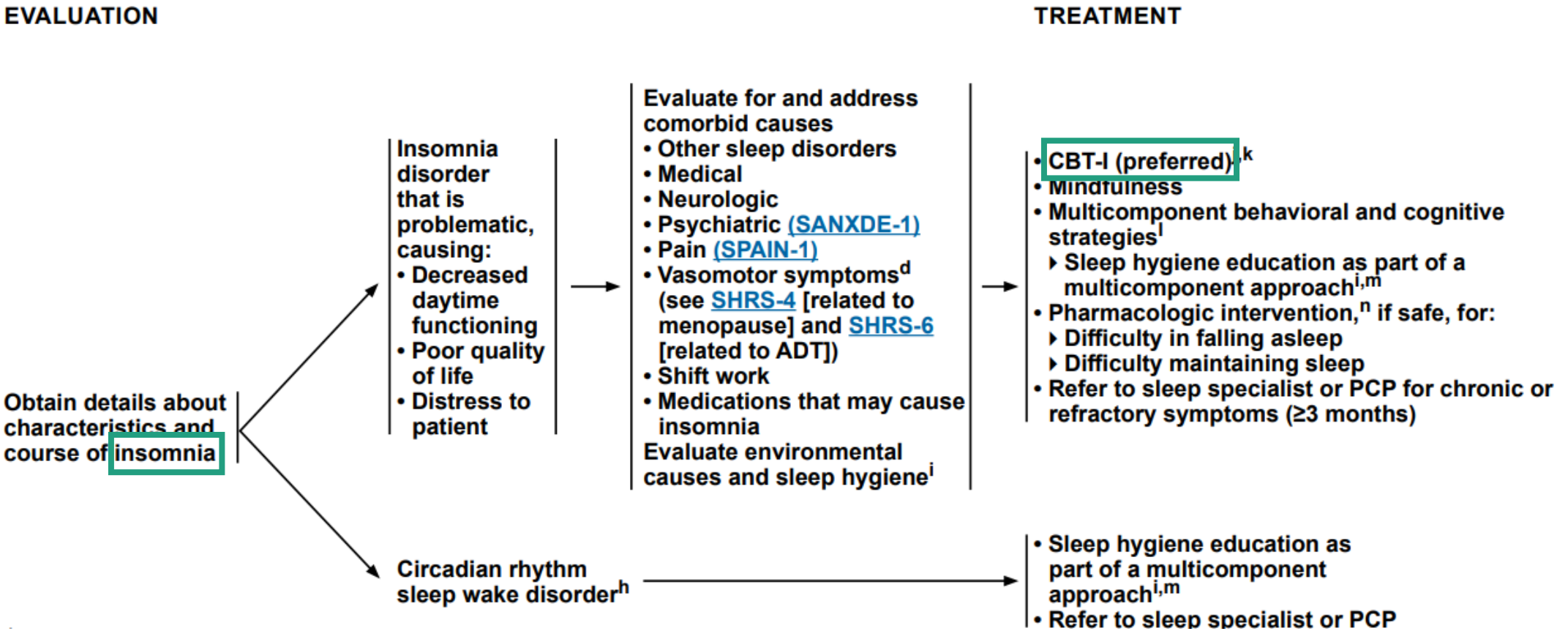
Discussion



In Clinic

Prescription Medications and Benadryl

Original Research

Mortality Hazard Associated With Anxiolytic and Hypnotic Drug Use in the National Population Health Survey

Mortality Hazard Associated with Prescription Hypnotics

Daniel F. Kripke, Melville R. Klauber, Deborah L. Wingard, Robert L. Fell, Joseph D. Assmus, and Lawrence Garfinkel

RESEARCH ARTICLE Open Access

Hypnotics and mortality in an elderly general population: a 12-year prospective study

Isabelle Jaussent[1,2], Marie-Laure Ancelin[1,2], Claudine Berr[1,2], Karine Pérès[3,4], Jacqueline Scali[1], Alain Besset[1,2], Karen Ritchie[1,2,5] and Yves Dauvilliers[1,2,6,7*]

BMJ open accessible medical research

Cohort study of the association of hypnotic use with mortality in postmenopausal women

Arthur Hartz, John Jacob Ross

Published in final edited form as:
JAMA Intern Med. 2015 March 1; 175(3): 401–407. doi:10.1001/jamainternmed.2014.7663.

Cumulative Use of Strong Anticholinergic Medications and Incident Dementia

Shelly L. Gray, PharmD, MS[1], Melissa L. Anderson, MS[2], Sascha Dublin, MD, PhD[2,3], Joseph T. Hanlon, PharmD, MS[4], Rebecca Hubbard, PhD[2,5], Rod Walker, MS[2], Onchee Yu, MS[2], Paul Crane, MD, MPH[6], and Eric B. Larson, MD, MPH[2,6]

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Melatonin and Cannabis

JCSM
Journal of Clinical Sleep Medicine

SCIENTIFIC INVESTIGATIONS

Melatonin Natural Health Products and Supplements: Presence of Serotonin and Significant Variability of Melatonin Content

Lauren A.E. Erland, MSc; Praveen K. Saxena, PhD

Gosling Research Institute for Plant Preservation, Department of Plant Agriculture, University of Guelph, Guelph, Ontario, Canada

SUBSTANCE ABUSE
2016, VOL. 37, NO. 1, 255–269
http://dx.doi.org/10.1080/08897077.2015.1023484

Routledge
Taylor & Francis Group

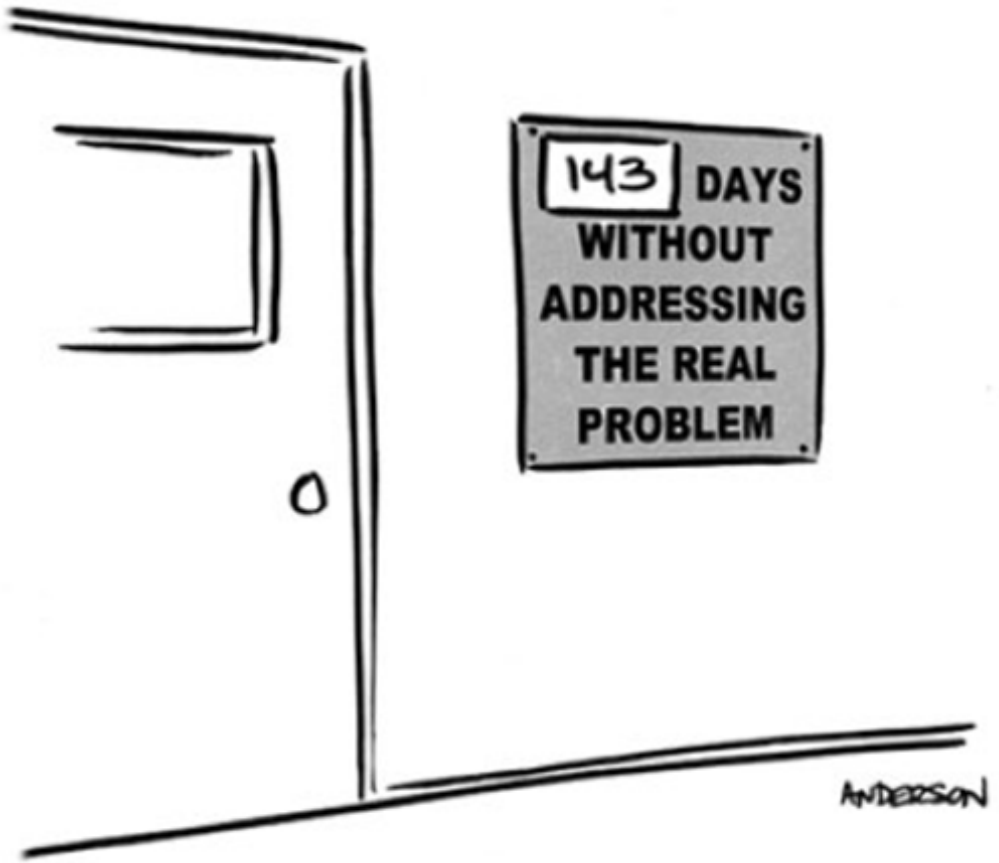
REVIEW

Cannabis withdrawal and sleep: A systematic review of human studies

Peter Gates, PhD, Lucy Albertella, and Jan Copeland, PhD

National Cannabis Prevention and Information Centre, UNSW Medicine, Randwick, New South Wales, Australia

Solving the Problem



There is a Time and a Place

First RCT for CBT-I in Cancer

VOLUME 23 · NUMBER 25 · SEPTEMBER 1 2005

JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT

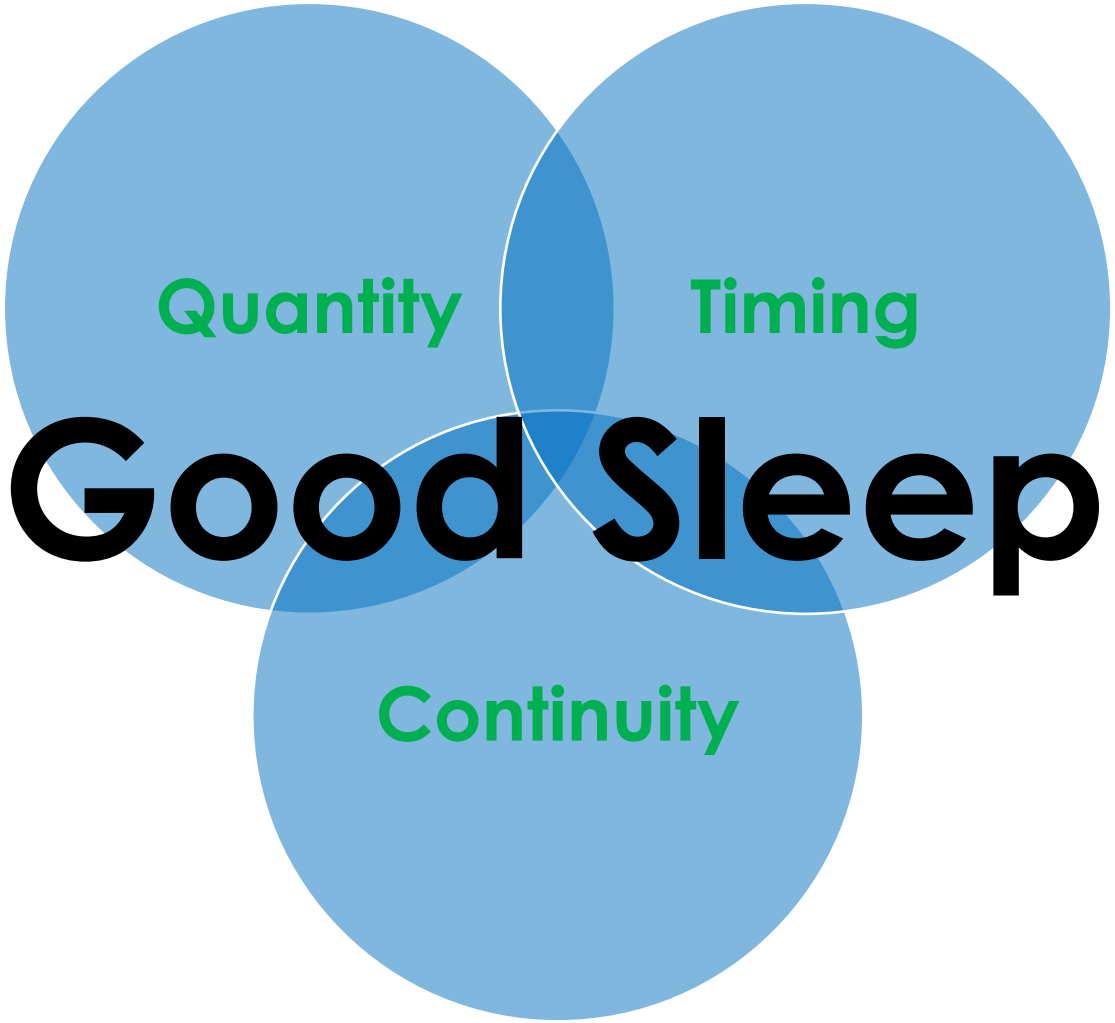
Randomized Study on the Efficacy of Cognitive-Behavioral Therapy for Insomnia Secondary to Breast Cancer, Part I: Sleep and Psychological Effects

Josée Savard, Sébastien Simard, Hans Ivers, and Charles M. Morin

CBT-I Improves More Than Just Sleep

What is CBT-I?

Good Sleep is Multi-Factorial



CBT-I Overview

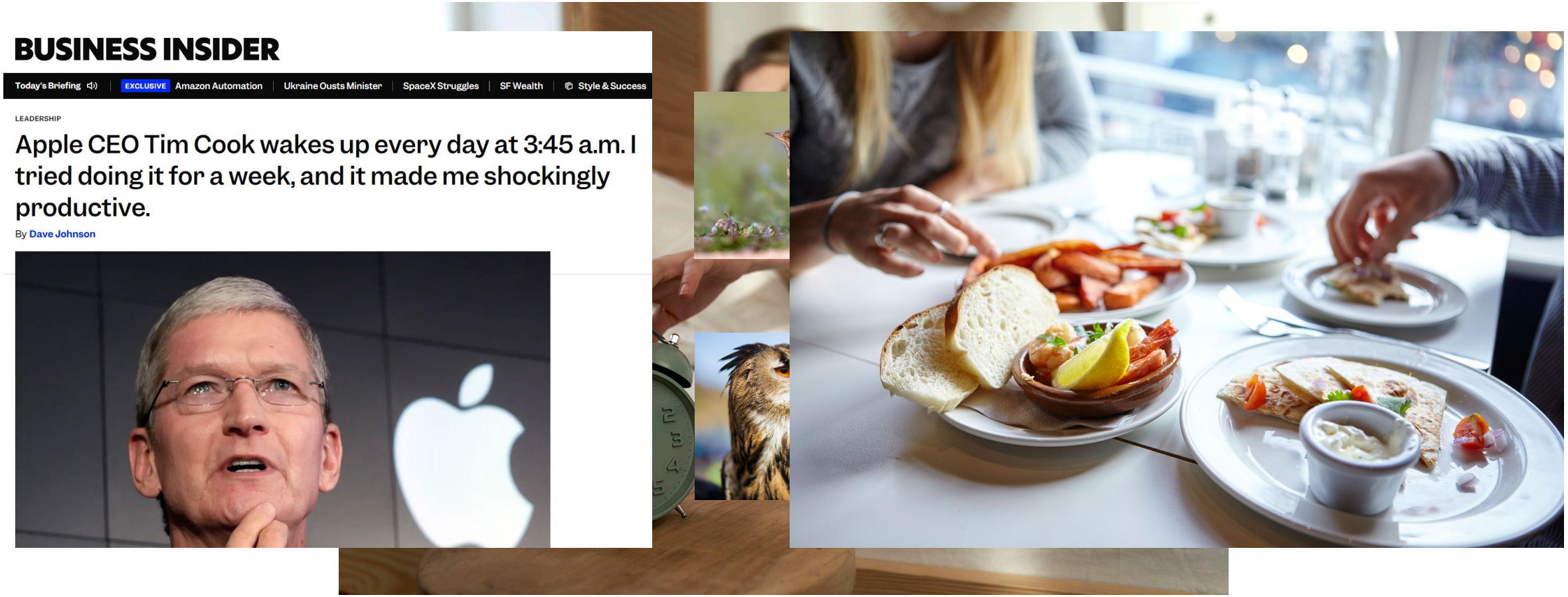
~~6–8 sessions over 6 months~~ 4 over 2

prep time

INGREDIENTS	DIRECTIONS
Sleep restriction	Match time in bed to total sleep duration
Stimulus control	Use bed only for sleep
Sleep hygiene	Improve behaviors that affect sleep
Cognitive therapy	Address maladaptive sleep cognitions
Relaxation	Practice relaxation exercises

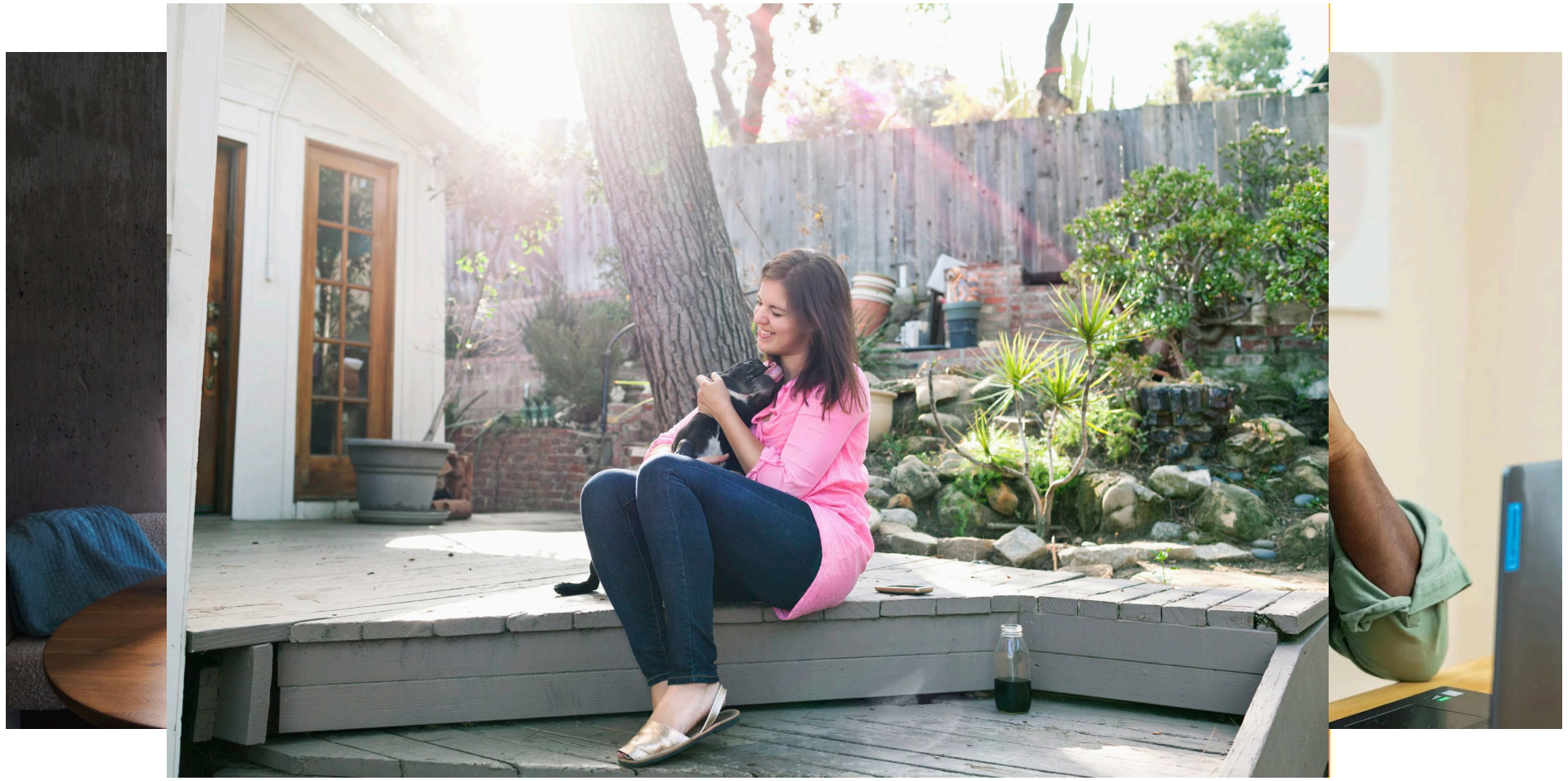
3 Steps You Can Take Today

1) Choose a consistent out of bed time based on your life.



3 Steps You Can Take Today

2) Get sun, early.

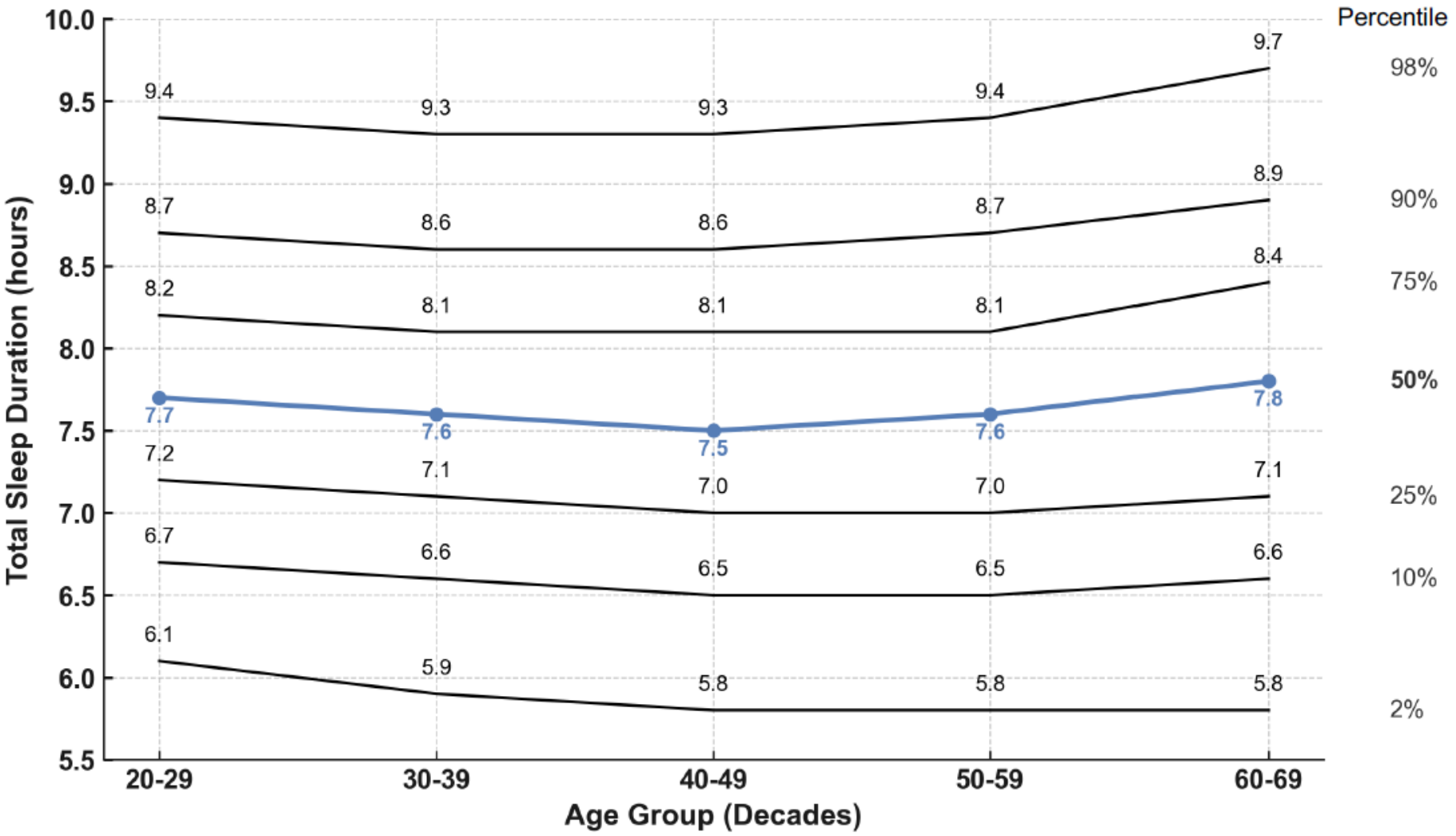


3 Steps You Can Take Today

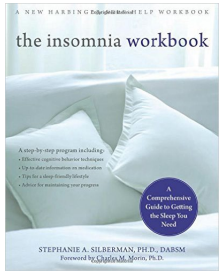
3) Understand your patterns.

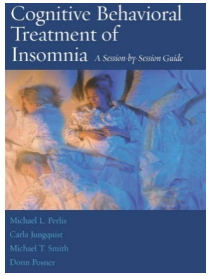
Day	Daytime Naps	Me Su	tal Time ake in Night	Time Woke Up	Time Intended to Wake Up
January 3	2 naps / 15 minutes each	Am and	minutes	5:45am	6:30am

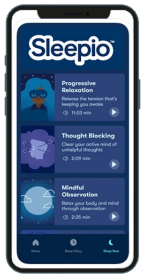
We're All Different



Resources







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