

MINDSCAPES

MASS GENERAL DEPARTMENT OF PSYCHIATRY NEWSLETTER FOR FRIENDS AND SUPPORTERS • FALL 2018

Sleep, Memory and Mental Illness

The rich realms of the mind cannot exist without sleep. Disrupted sleep upsets emotional balance, undermines memory and learning, and is a well-recognized symptom of psychiatric disorders like depression, anxiety, bipolar disorder, and schizophrenia. It can trigger or worsen episodes of mental illness. And growing evidence suggests sleep disorders might predispose some people to mental illness through mechanisms that researchers and clinicians in the Department of Psychiatry at Mass General are illuminating.

FAR-REACHING EFFECTS OF INSOMNIA

Chronic insomnia affects up to 10 percent of American adults. Any form of insomnia—trouble falling asleep, trouble staying asleep, or waking early—interferes with getting sufficient restful sleep, causing nighttime distress and daytime dysfunction. Although short periods of disrupted sleep rarely pose lasting problems, chronic insomnia harms physical health, partly by hyperarousal of the stress system. It also affects mental health.

“For decades, we’ve known that people with depression have sleep disturbances,” says John W. Winkelman, MD, PhD, professor of Psychiatry and chief of the Sleep Disorders Research Program at Mass General. “Only more recently has the opposite been shown: sleep disturbance independently contributes to mood disturbance. It’s a bi-directional cycle that goes around and around, each worsening the other.” Dr. Winkelman notes that insomnia doubles the risk for major depression, and in people struggling with depression, it’s an independent risk factor for suicide.

“For decades, we’ve known that people with depression have sleep disturbances. Only more recently has the reverse been shown: sleep disturbance independently contributes to mood disturbance.”

—John W. Winkelman, MD, PhD

Working in collaboration with researchers in Boston and England, Dr. Winkelman is looking for genetic predictors of insomnia by mining the UK Biobank, a large data set used for genome-wide association analyses. Researchers using this databank recently made associations between genes, or regions of genes, and a receptor for a sleep-disrupting compound. Currently, Dr. Winkelman and colleagues are investigating potential overlaps in genetic mechanisms between insomnia and neuroticism, a personality trait characterized

by moodiness, anxiety, irritability, self-consciousness, and poor stress management.



Department of Psychiatry sleep researchers John W. Winkelman, MD, PhD; Dara S. Manoach, PhD; Edward F. Pace-Schott, MS, MA, PhD

Whether treating insomnia might lessen risk for future depression isn’t known. Clearly, anxiety about sleep begets more insomnia—a cycle Dr. Winkelman terms “insomniaphobia.” Fortunately, the opposite is also true. “Over time, people whose insomnia is treated successfully become less anxious about sleep because they develop more confidence that they’ll be able to fall asleep, stay asleep, and fall back asleep,” he says.

IMPACT ON MEMORY AND FEAR EXTINCTION

Every night, humans cycle between lighter and deeper sleep stages distinguished by patterns of electrical activity. Best known is the dreamscape of rapid eye-movement (REM) sleep that caps three lesser known non-REM stages. All are important to emotional balance and to memory consolidation, an ongoing process essential to learning in which the brain selects key data, prunes nonessential details, and folds in new information. If certain sleep stages are interrupted or truncated, this process can be derailed.

Impressions linked to fearful experiences are etched deeply in the brain as a protective evolutionary mechanism through a process called fear conditioning. Let’s say that, after being mugged in a dark alley, we become fearful of dark alleys. But if such memories become generalized, a similar impression—say, simply being in the dark—can activate the same fight-flight-or-freeze response as the original

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From the Chief



Increasingly, health behaviors and early intervention and prevention will consume much of our conversation with the people whose health we will care about. What you eat, how you exercise, how you rest your brain and, importantly, how you sleep can all affect how you think, feel and behave. Our fall *Mindscapes* issue highlights the innovative work of four Department faculty members who are exploring aspects of sleep.

The quality and amount of a patient's sleep is a fundamental concern for psychiatrists and psychologists. Sleep and mental health have a two-way relationship—lack of sleep often makes depression, anxiety or other psychiatric disorder worse, while chronic insomnia can contribute to the onset of a psychiatric disorder.

Another aspect of prevention—and arguably one of the hottest areas of medicine—is determining who is at risk for developing an illness. Knowing what our genes and our environment predispose us to offers our best chance to make lifestyles changes or to be screened regularly for signs of abnormal or dysregulated functioning.

We are on the threshold of a time when we clinicians will be less concerned with taking your symptoms and fitting them into a category before deciding on a treatment. Rather we will have the tools to learn about who you are and your unique history, genome, metabolome, and microbiome and matching that information with the right treatment for you. That's the promise of the national All of Us research project led by our own Jordan W. Smoller, MD, ScD, reported here.

As always, we are pleased to recognize the generosity of individuals who have contributed significantly to our work, especially to building our endowment. With the celebration of the Stemberg and Kessler MGH chairs, there are now 22 senior Department faculty positions that donors singly or collectively have endowed. The value of these permanent resources cannot be overstated, as they ensure that we have the highest possible caliber of leadership of our clinical, teaching, scientific and community endeavors.

Thank you for your friendship and support. We wish you and yours the joy of the holidays and a healthy, happy New Year.

Jerrold F. Rosenbaum, MD
Chief of Psychiatry,
Massachusetts General Hospital
Stanley Cobb Professor of Psychiatry,
Harvard Medical School

Faculty News

Sharon Dekel, PhD, MPhil, MS,

assistant professor of Psychology at Harvard Medical School and principal investigator in the MGH PTSD Research Program, has received the 2018 Susan A. Hickman Memorial Research Award from Postpartum Support International (PSI), the largest national organization for maternal mental health. The award is given annually to a researcher for high impact contributions to the field of perinatal mental health. Dekel was recognized for her study on the use of intranasal oxytocin for the prevention of maternal psychopathology. The award was named in 1997 in honor of Susan A. Hickman, a past PSI Board member, following her sudden death. Dr. Hickman was a psychotherapist who specialized in perinatal mood disorders.



Sharon Dekel, PhD,
MPhil, MS



Stephanie Sogg, PhD

Stephanie Sogg, PhD, assistant professor of Psychology at Harvard Medical School and psychologist at the MGH Weight Center, received an Integrated Health Scholarship from the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) to attend the annual IFSO World Congress in Dubai in September 2018.

Dr. Sogg delivered four presentations on the topic of psychosocial aspects of obesity and bariatric surgery.

Sabine Wilhelm, PhD, chief of Psychology and director of the MGH OCD and Related Disorders Program, has received the Peter K. Ranney Innovation Award for her presentation: "Mobile Apps: Bridging the Mental Health Treatment Gap" at the World Medical Innovation Forum in April 2018 hosted by Partners HealthCare.

This award is given to presenters in the Forum's First Look Program, which recognizes scientists who embody the innovative, entrepreneurial and visionary spirit of the World Medical Innovation Forum.



Sabine Wilhelm, PhD

Jerrold F. Rosenbaum, MD, chief of Psychiatry, was awarded the Ellis Island Medal of Honor in May 2018 in recognition of his many accomplishments and "unwavering dedication to sharing his knowledge, compassion, talents and generosity with others." One of the nation's most prestigious awards, the Ellis Island Medal of Honor is officially recognized by both Houses of Congress, and those who receive it are highlighted annually in the Congressional Record. With this designation, Dr. Rosenbaum joins a remarkable group of trailblazers, including seven presidents of the U.S., former Vice President Joseph Biden, retired Supreme Court Justice Sandra Day O'Connor, former Secretary of State Condoleezza Rice, Nobel laureates Elie Wiesel and Malala Yousafzai, and activists Muhammad Ali and Rosa Parks.

All of Us Research Program

Moving beyond one-size-fits-all treatment of disease

Imagine one day being screened for depression and being prescribed a medication that would be effective without the current trial-and-error process. Or without a troublesome side effect.

Currently only about a third of patients find relief from symptoms with the first anti-depressant they are prescribed. Whether for a psychiatric disorder, hypertension, diabetes, or a host of other illnesses, imagine that your doctor is able to choose the right drug in the right dose the first time.

This is personalized or precision medicine—a revolutionary approach that utilizes an individual's unique differences in genes, body chemistry, environment and lifestyle to evaluate symptoms and to provide care and to prevent illness. This is in contrast to a one-size-fits-all approach, where prescribing decisions are typically based on average results across large numbers of patients.

BOLD NATIONAL EFFORT

While advances in precision medicine have been made—for example, in cancer and cardiovascular disease—the approach has not been broadly incorporated into medical practice. Yet with each year, its promise is accelerating. In his 2015 State of the Union address, President Obama announced the Precision Medicine Initiative (PMI), a bold new research effort to transform how we improve health and treat disease. The PMI was launched in fiscal year 2016 with \$130 million allocated to the National Institutes of Health to build a national, large-scale research participant group, and another \$70 million was allocated to the National Cancer Institute to lead precision medicine efforts in oncology.

The All of Us Research Program is a key element of the PMI. Nationally launched in May 2018, All of Us is an historic effort to engage with more than a million people living in the U.S. to accelerate research and improve health. By considering individual differences in lifestyle, environment and biology from a huge set of data, researchers hope to uncover paths toward delivering precision medicine as a mainstream form of care. As readers may recall, the Partners Biobank at Mass General and other Partners-affiliated hospitals has laid a crucial foundation for precision medicine research. Now, through All of Us, the hospital is able to participate in this promising research domain on a national scale.

The New England component, All of Us New England, is led by Partners HealthCare and Boston Medical Center. The principal investigators from Mass General, a Partners affiliate, are Jordan

W. Smoller, MD, ScD, associate chief of Research for the MGH Department of Psychiatry and director of Psychiatric Genetics, and Shawn N. Murphy, MD, PhD, chief research information officer at Partners HealthCare and associate director of Medical Informatics at the MGH Laboratory

“There is an urgent need to improve how we diagnose and treat mental health and substance use problems and this study offers a unique opportunity for us to accelerate major discoveries that can benefit everyone. We have to move beyond a one-size-fits-all, trial-and-error approach to treatment to one which considers what makes each of us unique.”

—Jordan W. Smoller, MD, ScD

of Computer Science. Their goal is to enroll 90,000 participants; through September 2018 more than 7,000 people had signed on.

ENROLLING IN ALL OF US

The enrollment process is relatively simple. After an informed consent process, participants are asked to complete a survey either in person or on line, share their electronic health record, and may be later asked to contribute physical measurements, blood and urine samples. They can then be part of the program for up to ten years. There will be ongoing opportunities for participants to contribute information through surveys, wearable sensors and more. Personal identifiers are removed from the data used for research, and the samples are sent to a secure repository.

Starting in 2019, researchers will be able to apply to use the data to conduct their own studies. And, along the way, participants will get information back about the data they provide, which may help them learn more about their own health.

Dr. Smoller also co-chairs the national All of Us Science Committee and chairs the task force that is designing assessments of mental health and substance use for the study. “There is an urgent need to improve how we diagnose and treat mental health and substance use problems and this study offers a unique opportunity for us to accelerate major discoveries that can benefit everyone,” he says. “We have to move beyond a one-size-fits-all, trial-and-error approach to treatment to one which considers what makes each of us unique.”

To enroll, people can register online at www.joinallofus.org, call 617-768-8300 or visit one of the enrollment sites at the MGH Main Campus, MGH Primary Care at Assembly Row, the MGH Chelsea HealthCare Center or the MGH Revere HealthCare Center.

How to Join

1 3 Health Surveys

2 Physical measurements

3 Blood & urine collection

4 \$25 After completion of basic requirements

All of Us
New England

MGH MASSACHUSETTS
GENERAL HOSPITAL

Founding Member of Partners HealthCare

Celebrating the Joyce Root Tedlow Professorship of Psychiatry

David Mischoulon, MD, PhD, appointed to Harvard Medical School chair

David Mischoulon, MD, PhD, has been named as the second incumbent of the Joyce R. Tedlow Professorship of Psychiatry at Harvard Medical School. Dr. Mischoulon directs the Depression Clinical and Research Program (DCRP) at Mass General. A celebration of his incumbency took place with Dr. Mischoulon's colleagues, family and friends on July 30, 2018, at the Paul S. Russell, MD Museum of Medical History and Innovation.

Chief of Psychiatry Jerrold F. Rosenbaum, MD; Executive Vice Chair of Psychiatry Maurizio Fava, MD; and DCRP colleague Maren B. Nyer, PhD, joined Professor Richard S. Tedlow in offering remarks. Professor Tedlow, professor emeritus at Harvard Business School, contributed generously and led fundraising efforts to establish the professorship in memory of his beloved first wife, Dr. Joyce Root Tedlow who was on the DCRP faculty until her untimely death in 2003.

"Joyce was a model physician and academician," said Dr. Mischoulon, in paying tribute to his former colleague. "From the first time we met in 1996, I was impressed by her compassionate nature and sharp clinical mind. Joyce was especially supportive of young faculty like myself, who were learning to navigate the complex environment of academic medicine. If you needed advice about the care of a patient or about your career, you could count on Joyce for an insightful answer. Even during her long illness, she was more concerned about her friends and family than about herself. Her kind and generous spirit remains with and inspires all of us to this day."

In holding the Tedlow Professorship, Dr. Mischoulon succeeds the former associate chief of the department, Jonathan E. Alpert, MD, PhD, who left Mass General in 2016 to assume leadership positions at Montefiore Hospital and Albert Einstein College of Medicine in New York City. Dr. Mischoulon's research focuses on multiple aspects of depression, particularly the use of complementary and alternative medicine. He has authored or co-authored more than 250 original articles and book chapters, has co-edited a textbook on natural medications for psychiatric disorders, and is co-editing the Mass General guide to treatments for depression.



From left: Donna M. Staton, MD; Professor Richard S. Tedlow; David Mischoulon, MD, PhD; Maurizio Fava, MD

Celebrating the Life and Legacy of Lee Baer, PhD

Research and teaching fund established in his honor

On June 15, 2018, Department of Psychiatry colleagues joined with family and friends of the late Lee Baer, PhD, to honor the life of the revered Mass General psychologist and the establishment of a fund in his name. A challenge gift from the Chirag Foundation was the catalyst to launch the fund, named the Dr. Lee Baer Fund for OCD Research and Teaching. Dr. Baer, who spent 36 years at Mass General, passed away in July 2017.

"Lee wasn't concerned with either fame or fortune. He was always and only focused on the patient and his passion was to research the disabling obsessive compulsive disorders that cause so much suffering," said Anil Singhal, President of the Chirag Foundation.

Dr. Baer was professor of Psychology at Harvard Medical School, a clinician-researcher at Mass General and an internationally recognized leader in advancing the understanding and treatment of obsessive compulsive disorder. He co-founded the OCD treatment and research programs at Mass General and McLean Hospital. His groundbreaking research established the major subtype of OCD sufferers of those who are plagued by recurrent intrusive "bad" thoughts. He contributed significantly to the development and validation of cognitive behavioral treatments of OCD, and he created print and web-based tools for patients, including the widely used self-help book *Getting Control: Overcoming Your Obsessions and Compulsions*.

At the celebration, many warm and wonderful memories of Dr. Baer—the family man, the scientist and the therapist—were described. The director of the Obsessive Compulsive and Related Disorders Program and the chief of Psychology at Mass General, Sabine Wilhelm, PhD, remarked, "Lee was actually pretty famous, but this is not what mattered to him. I was one of his mentees early on and whenever we discussed a grant or research idea, he always said, 'Let's be really clear how exactly this is going to help the patients.' I loved that about him. It was always down to relieving suffering."



From left: Abha Singhal, Anil Singhal, Carole Anne Baer, David Baer, Emily Baer and Sabine Wilhelm, PhD

A Journey to Recovery

It was a cold and stormy night in Seattle, Washington as I looked out my apartment window thinking the world was coming to an end. I remember sirens (I lived near a hospital) and watching storm clouds pass by as weather conditions worsened. I was self-medicating with white wine, a Christmas gift from my family, trying to calm my racing thoughts and maybe get some sleep. I called an old family friend, somehow remembering her manic-depressive illness. She called my parents in Portland, Oregon, who arrived the next day. I was placed on powerful anti-psychotic medications which quieted my racing mind.

The four years that followed my diagnosis were chaotic and bizarre. I experienced homelessness and prison, incurred enormous credit debt and abused alcohol. I remember renting a car in Seattle and driving to New York City where I was going to claim my fame as a writer and actor, neither of which I have ever been. I remember, too, once when I had to save my life in prison by demanding to see the warden for fear of being assaulted. I had been incarcerated following an incident with my college fraternity. (I later appeared before a judge, who dismissed all charges without any record.)

After three years of up and down behavior, my parents stopped financial support. They said "no more!" Shortly afterwards, I checked in to a Connecticut hospital after being picked up as I was hitchhiking to my uncle's home. I was stabilized with lithium and returned to Seattle, where I lived in a rooming house near the University of Washington. (Please note, I had an extremely good life growing up on a beautiful estate overlooking Portland, Oregon with loving parents and everything a person could desire.) For the next nine months, I slipped into a deep depression, working at a convenience store and not doing much more than sleeping.

In the Spring of 1982, I knew I had to start my life over and decided to return to my native Massachusetts. My parents bought me a one-way ticket to Boston and gave me \$150 to start my life, which I promptly lost. I went to Hyannis, where I found a job and a place to live.

I moved to Boston in October of 1982. I needed medication and help with my

manic-depressive illness and knew that Massachusetts General Hospital was the best place to go. I went to the MGH Psychiatry department and with a loud voice, requested assistance. Dr. Jerry Rosenbaum, head of the department, overheard my request and asked me to come to his office. His department was starting a five-year lithium study and asked if I would like to be the first patient. I participated in this study for five years. My study coordinator helped me get into therapy.



David Myers, left, and Jerrold F. Rosenbaum, MD

I got sober in AA in 1987, and celebrated 30 years of sobriety in 2017. Through the AA program, I was able to stop a compulsive gambling addiction, quit smoking and build a substantial financial retirement fund. I lost 30 pounds (I exercise every day) and restored the difficult relationship with my family, all the while owning and operating various cleaning services in Cambridge, Massachusetts, where I live.

I am forever grateful to Massachusetts General Hospital for the deep and caring help they provided me. I would never have been able to accomplish what I've done in my life without the assistance of Dr. Jerry Rosenbaum's kind and unconditional support. I am grateful beyond words. (Tears come to my eyes as I write this.)

I thank you all for the love and kindness that you so freely gave to me. It is now my time to give back and help others suffering with mental illness.

—David Myers

"I am forever grateful to Massachusetts General Hospital for the deep and caring help they provided me. I would never have been able to accomplish what I've done in my life without the assistance of Dr. Jerry Rosenbaum's kind and unconditional support."

—David Myers

Two New Psychiatry Chairs Celebrated

KESSLER FAMILY MGH CHAIR IN PEDIATRIC NEUROPSYCHOLOGICAL ASSESSMENT

Ellen B. Braaten, PhD, founding director of the Learning and Emotional Assessment Program (LEAP), was honored as the inaugural incumbent of the Kessler Family Endowed MGH Chair in Pediatric Neuropsychological Assessment at a celebration on June 27, 2018 in the Paul S. Russell, MD Museum of Medical History and Innovation.

The new chair was made possible by major funding from Michele and Howard Kessler, their sons and daughters-in-law, Brian and Jennifer Kessler and David and Stephanie Kessler, and matched by 18 other donors. Michele and Howard Kessler previously funded the MGH Chair in Public and Community Psychiatry to address disparities in mental health care for people with chronic and persistent psychiatric illness and who rely on the public system of services. Michele is also a founding co-chair of the MGH Leadership Council for Psychiatry, a membership group of 86 individuals and families who are dedicated to fighting stigma and to advancing research and care in mental illness through support of the Department of Psychiatry at Mass General.



From left: Dr. Peter Slavin, MD; Jerrold F. Rosenbaum, MD; Ellen B. Braaten, PhD; Michele Kessler, Stephanie Kessler, Howard Kessler, and David Kessler

Dr. Braaten is an expert in the field of pediatric neuropsychological and psychological assessment. Her research has focused on children with nonverbal learning disabilities and attentional disorders, resulting in numerous articles, chapters, and reviews on ADHD, learning disabilities, gender and psychopathology, intelligence, and assessment of children. She is co-author of *Straight Talk about Psychological Testing for Kids*, a book that has become a classic for parents and professionals; author of *The Child Clinician's Report Writing Handbook*, which has been called "the most comprehensive child assessment handbook available;" author of *Finding the Right Mental Health Care for Your Child*; and co-author of *Bright Kids Who Can't Keep Up*.

LEAP's seven-member neuropsychologist team provides comprehensive neuropsychological assessment, individual educational planning, parent guidance and school consultation for 800 families annually.

The Kessler Family Endowed MGH Chair in Pediatric Neuropsychological Assessment and The Thomas G. Stemberg Endowed Chair in Child and Adolescent Psychiatry are the Department's 10th and 11th MGH chairs and with Harvard professorships included, its 21st and 22nd endowed faculty positions.

THOMAS G. STEMBERG ENDOWED MGH CHAIR IN CHILD AND ADOLESCENT PSYCHIATRY

J. Stuart Ablon, PhD, director of Think:Kids at Mass General, was honored as the inaugural incumbent of the Thomas G. Stemberg Endowed Chair in Child and Adolescent Psychiatry at a celebration on May 7, 2018 at the Paul S. Russell, MD Museum of Medical History and Innovation.



From left: Jerrold F. Rosenbaum, MD; J. Stuart Ablon, PhD; Katherine Chapman Stemberg; and Peter L. Slavin, MD

The chair was made possible through a generous bequest from Staples founder Tom Stemberg. In addition to being a strong advocate for Mass General in his role as a President's Council member, Mr. Stemberg also served on the Think:Kids Advisory Council for more than a decade, where his expertise and strategic guidance helped to facilitate the tremendous growth of the program and the number of young people who are reached. Following Stemberg's untimely passing in 2015, his extraordinary legacy gift was used with other contributions to fund the Stemberg Chair, which honors his memory and his passion for helping children lead healthy, fulfilling lives.

In opening remarks, Peter L. Slavin, MD, president of Mass General, praised Mr. Stemberg's creative and incisive mind, as well as his commitment to children suffering from behavioral issues. "We'll be forever grateful to Tom for recognizing the incredible value that Think:Kids brings to kids and families every day," Dr. Slavin said. "Because of his early engagement and leadership, the program got off the ground and flourished."

Dr. Ablon is co-author with Ross Greene, PhD, of *Treating Explosive Kids: The Collaborative Problem Solving Approach* and author of articles, chapters and scientific papers on the process and outcome of psychosocial interventions. In 2002, he co-founded with Dr. Greene the Center for Collaborative Problem Solving at Mass General, and served as co-director until 2008, when he founded Think:Kids. Through training, support and clinical services in this evidence-based approach, Think:Kids promotes the simple, but game-changing belief that challenging kids lack the skill, not the will, to behave well—skills related to problem solving, flexibility and frustration tolerance.

— Sleep, Memory and Mental Illness

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event: hammering heart, fast breathing, twitchy muscles, feelings of anxiety, dread, and doom. Generalization of fear memories is characteristic of post-traumatic stress disorder (PTSD).

“Lasting sleep disturbances, such as insomnia, nightmares, and disrupted REM sleep, raise the odds that people will develop PTSD after a traumatic experience,” says Edward F. Pace-Schott, MS, MA, PhD, an associate researcher in psychiatric neuroscience.

Just as memories of traumatic events get encoded in the brain, they can also be extinguished with new learning through memories of similar everyday experiences that do not involve danger, for example finding that being in the dark can be safe, or through a form of cognitive behavioral therapy (CBT) involving repeated or prolonged exposure to a feared situation or its memory.

Using advanced brain scans and other tests, Dr. Pace-Schott and colleagues have captured intriguing differences in fear conditioning and extinction among people with insomnia, generalized anxiety disorder (GAD), PTSD, and healthy study participants. In a recent brain circuitry study, healthy participants had stronger connections between a section of the cortex believed to rein in fears and the amygdala, which ramps up fear, compared with people with insomnia. Still weaker connections occurred in people with GAD. And in the first study to examine brain responses to fear conditioning and extinction in people with insomnia versus good sleepers,

Dr. Pace-Schott’s team found that people with insomnia extinguish fear more slowly. Over time, this could create vulnerability for anxiety disorders.

SLEEP SPINDLE DEFICITS AND SCHIZOPHRENIA

Sleep spindles are sudden bursts of high-energy brain activity that occur repeatedly during stage 2 non-REM sleep and that facilitate memory formation and learning. “Sleep spindle deficits may be a brain signature of schizophrenia,” says neuropsychologist Dara S. Manoach, PhD, who directs a laboratory in the Athinoula Martinos Center for Biomedical Imaging at Mass General. “Our lab has identified

“Our lab has identified a deficit in [...] memory consolidation among people with schizophrenia that correlates with—and may even be caused by—reduced sleep spindle activity.”

—Dara S. Manoach, PhD

a deficit in sleep-dependent memory consolidation among people with schizophrenia that correlates with—and may even be caused by—reduced sleep spindle activity.”

Schizophrenia affects thinking, perception, and sense of self. Its

hallmark is psychosis, a loss of reality during which people may hear voices, hallucinate, and suffer delusions. Yet years before psychosis appears, genes and environmental pressures could be remodeling brain regions and circuitry essential to emotional balance and cognition.

In healthy people, research shows that stimulating the brain at the frequency of sleep spindles during stage 2 non-REM sleep enhances spindle activity and improves memory. Dr. Manoach will try a similar brain stimulation intervention in patients with schizophrenia through a collaborative study with Joan A. Camprodon, MD, PhD, director of Neuropsychology and Neuromodulation at Mass General. If successful, this novel approach may help in the treatment of schizophrenia, or potentially even prevent its onset.

Treating Insomnia with CBT

Insomnia is often addressed with sleep medicines, such as benzodiazepines or hypnotics intended to relax and sedate. Because side effects may be considerable and benefits slim, the American College of Physicians strongly recommends first trying cognitive behavioral therapy for insomnia (CBT-I).

CBT-I combines cognitive psychotherapy to help people reframe and relieve distress over sleeplessness; behavioral strategies like sleep restriction and sleep control; relaxation tools; and sleep hygiene tenets, such as keeping bedrooms cool and dark, limiting naps, and sticking to a sleep schedule. Learning CBT-I takes 6 weeks or longer and requires committing to changing habits like channel surfing when sleepless.

“Bed is for sleep and sex, not TV, eating, or checking emails,” says Mark J. Gorman, PhD, director of Behavioral Sleep Medicine at Mass General. Limiting time awake in bed to 15 minutes before leaving to spend half an hour in quiet pursuits elsewhere helps condition your mind to accept that bed is for sleeping.

Studies show that CBT-I alone or combined initially with sleep medicines improves problems with falling asleep, staying asleep, or waking early. Severity of insomnia declines. Quality of sleep and sleep efficiency (percentage of time spent sleeping in bed versus awake) grows better. Many people find results long-lasting.

Although research results are mixed, one study of people with depression and insomnia found that those treated with antidepressants plus CBT-I vs. antidepressants alone were much more likely to gain relief from insomnia (50 percent vs. 8 percent) and depression (62 percent vs. 33 percent). And an analysis of many studies of people with anxiety and insomnia showed moderate relief of anxiety.

So, CBT-I might help stop the vicious cycle of disrupted sleep and mood disorders if combined with other treatments. It’s not yet clear which mode of CBT-I works best: individual or group sessions, telephone or internet modules. “Before just trying CBT-I yourself, check with a psychologist trained in the technique,” advises Dr. Gorman. “*The International Directory of CBT-I Providers* is an excellent resource.”



Mark J. Gorman, PhD



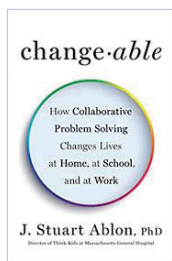
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Faculty Books



J. Stuart Ablon, PhD

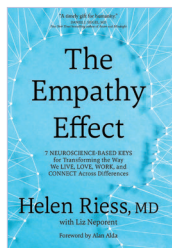
Published by Tarcher Perigee, June 2018

Why is it so hard to change problem behavior—in our kids, our colleagues, and even ourselves? Conventional methods often backfire, creating a downward spiral of resentment and frustration, and a missed opportunity for growth. What if the thinking behind these old methods is wrong? What if people don't misbehave because they want to, but because they lack the skills to do better? Or as renowned psychologist J. Stuart Ablon asks, what if

changing problem behavior is a matter of skill, not will?

Based on more than twenty-five years of clinical work with juvenile offenders as well as training parents, teachers, counselors and law enforcement, and supported by research in neuroscience, *Changeable* presents a radical new way of thinking about challenging and unwanted behavior—Collaborative Problem Solving—that builds empathy, helps others reach their full potential, and most of all really works.

With illuminating scientific evidence, remarkable success stories, and actionable insights, *Changeable* gives parents, teachers, CEOs and anyone interested in learning about why we behave the way we do a roadmap for helping people grow.



Helen Riess, MD, and Liz Neporent with a forward by Alan Alda

Published by Sounds True, November 2018

Empathy is undergoing a new evolution. In a global and interconnected culture, we can no longer afford to identify only with people who seem to be a part of our “tribe.” As Dr. Helen Riess of Harvard Medical School has learned, our capacity for empathy is not just an innate trait—it is also a skill that we can learn and expand. With *The Empathy Effect*, the leading researcher presents a groundbreaking

teaching book to help us learn essential skills for transforming the way we relate to others in any situation.

“Nourishing empathy lets us help not just ourselves,” says Dr. Riess, “but also everyone we interact with, whether for a moment or a lifetime.” Drawing from her empathy training curricula now used internationally in health care, business, and education, she takes us step by step through her EMPATHY program. Here you’ll learn to enhance empathic behavior in yourself and others; recognize and reverse dehumanization and scapegoating tactics; practice empathy at work, home, and in everyday settings; discover ways to build empathy in groups and leadership positions; and much more.

Book summaries based on publisher descriptions found at www.amazon.com and www.BN.com.

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For information about how to support the clinical care, research, teaching and community health activities of the Department of Psychiatry at Massachusetts General Hospital, please contact Ellen Plapinger at 617-726-0402 or eplapinger@mg.harvard.edu or Lorraine Fanton at 617-724-6439 or lfanton@mg.harvard.edu.