

## DEPRESSION AND SLEEP IN CHILDREN

By Azmeh Shahid, Fellow in Paediatric Neuropsychiatry

Emotional and behaviour disorders can appear during childhood and adolescence. Depression affects a person's thoughts, feelings, behaviour, and body. Major depression in children and adolescents is serious; it is more than "the blues." Depression can lead to school failure, alcohol or other drug use, and even suicide.



It's normal for children and teenagers to have sad or moody days, but when those feelings last for two weeks or longer, it could indicate that something more serious is going on.

The symptoms and presentation of depression varies in different age groups. For example in young children the presentation may be one of apathy,

withdrawal, and developmental delay or inability to reach developmental milestones. In children, major depression may be expressed by the children complaining of physical symptoms (stomach aches, headaches, etc). Some depressed children over-compensate by needing to achieve and please others. In adolescents depression maybe associated with more externalizing behaviors, expressed through acting out, eating disorders, substance abuse, cutting and self harm.

The incidence of depression appears to be increasing, with onset occurring at earlier ages.

The association of sleep disturbance and psychiatric illness is well established. Almost all individuals with Major Depressive Disorder (MDD) are observed to complain of sleep disturbances, with insomnia being the most common of these in the general population.

Changes in physiology and psychosocial environment can cause pronounced changes in adolescents sleep patterns. It is characterized by delayed bedtime, irregular sleep schedules, sleep restriction, increased risk of sleep disturbances, and daytime sleepiness at this stage in their lives. During this time body clock changes occur resulting in later bedtimes, and due to social pressures this results in shorter sleep periods.

Sleep disturbances may act as stressors, which inhibit impulse control, impair judgment and increase likelihood of negative emotional responses. Sleep disturbances may increase morbidity of pre-existing psychological problems. Nightmares and short sleep duration have been linked with self-harm.

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*Depression treatment in Children age 7-17  
Sleep problems in children and adolescents with type 2 diabetes  
Clinical management of phase delay syndrome*

## Sleep and Psychiatric Disease

**Philip Saleh , Negar Ahmadi, Colin Shapiro.**

*Atlas of Clinical Sleep Medicine, edited by M. Kieger, Chapter 16, 2009.*

Sleep disturbances of various forms are common symptoms of many psychiatric disorders. For instance, the prevalence of insomnia among psychiatric patients is 18.6% compared to 10% in the primary care population. Conversely, psychiatric illnesses are common among patients with sleep disorders, suggesting a bi-directional relation.

Investigations of chronic insomnia among sleep clinic patients show that in about 45% of patients, their chronic insomnia is due to mental disorders.

Furthermore, sleep disorders, particularly insomnia, are considered risk factors for several psychiatric disorders. In over 50 % of patients with recurrent mood disorders, insomnia precedes the mood disorders, and among patients suffering from insomnia, the prevalence of depression, anxiety and drug abuse is significantly higher in those with no insomnia”.

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One survey noted that one in every five young people at any given time is affected by mental health problems. Population studies show that at any point in time 10 to 15 percent of children and adolescents have some symptoms of depression.

It is very important to recognize and understand that depression is a disorder that does present in children and adolescents. There are certain biological associations with depression such as sleep. In some cases resolving the sleep problems solves the mood and irritability issues.

## A preliminary attempt at defining ‘Sleep markers of depression’ categorically and examining their association with subjective low mood.

**Philip Saleh, Azmeh Shahid, Frances Chung and Colin M. Shapiro.**

*Canadian Sleep Society. Abstract 22: 106, 2009.*

**Introduction:** Sleep is the most commonly observed physical complaint in depressed patients and polysomnographic sleep disturbances have been extensively studied as possible etiological and specific markers of depressive state. However, no previous attempt has been made to operationalize the observed macroarchitectural sleep changes observed in Major Depressive Disorder (Slow wave sleep abnormalities, REM sleep abnormalities, and decreased sleep continuity) into a categorical model which could be applied in the clinical setting.

**Methods:** In a sample of 2467 patients with no prior sleep complaint screened for possible sleep apnea prior to surgery, 74 patients who underwent polysomnographic sleep studies and completed a battery of questionnaires relating to their sleep and mood were studied. We retrospectively compared categorical results of these scales to presence or absence of sleep markers of depression, which were defined in the context of previous depression literature .

**Results:** No significant associations were found between the CES-D and total sleep markers of depression. However, there was a significant trend toward subjective insomnia in those with sleep markers of depression.

**Conclusion:** This study does not indicate a high specificity of sleep markers of depression for low mood. However, controlled, cross-sectional prospective studies are required to clearly determine whether a more specific model can be constructed for either subjective or objective depression.

PHILIP SALEH



Philip Saleh successfully completed his Master of Science degree at the University of Toronto in 2009 studying the capacity of sleep architectural markers to predict depressive state and response to antidepressant treatment. He has published abstracts at both the 2009 annual meeting of the Associated Professional Sleep Societies and the 2009 conference of the Canadian Sleep Society, and has co-authored two book chapters, one regarding sleep patterns in seasonal affective disorder (SAD) and the other examining sleep in psychopathology more broadly. Over the course of working toward his Master's thesis, Philip also trained and worked as a sleep laboratory technologist at the Sleep and Alertness Clinic at Toronto Western Hospital. He is currently in his first year of a medical degree at McGill University in Montreal. ick Kids Hospital in Toronto.

## Depression and anxiety in adolescent females: the impact of sleep preference and body mass index.

Pabst SR, Negriff S, Dorn LD, Susman EJ, Huang B.

*J Adolesc Health.* 44:554-60, 2009.



## TRYPTOPHAN

For this flyer and other pamphlets please go to [www.sleepontario.com](http://www.sleepontario.com)

## Sleep problems and their relation to cognitive factors, anxiety, and depressive symptoms in children and adolescents.

Alfano CA, Zakem AH, Costa NM, Taylor LK, Weems CF.

*Depress Anxiety.* 26:503-12, 2009.

**PURPOSE:** To examine the differences in depressive symptoms and anxiety between (a) normal weight and overweight, and (b) morning type and evening type (sleep chronotype) adolescent girls. The interaction of sleep chronotype and weight and depressive symptoms and anxiety were also examined. **METHOD:** The design consisted of a cross-sectional study of 264 adolescent females (mean age = 14.9 +/- 2.2, range 11-17 years). Sleep chronotype, depressive symptoms, and anxiety were obtained by self-report questionnaire. The mean of three measurements of height and weight was used to calculate the body mass index (BMI). Participants were categorized into two groups according to BMI percentile: normal weight (<85th percentile) and overweight (> or =85th percentile). **RESULTS:** Compared with normal-weight females, overweight females were more likely to be non-Caucasian, lower socioeconomic status, have more advanced pubic hair and breast stages, and earlier age at menarche. No differences were observed with respect to sleep chronotype, depressive symptoms, and trait anxiety between normal weight and overweight females. Evening chronotype was associated with more depressive symptoms (beta = -.65, p < .01) and higher trait anxiety (beta = -.22, p < .05). Evening chronotype was associated with more depressive symptoms in both normal-weight and overweight females. However, the association was stronger in overweight females. **CONCLUSIONS:** Individually, sleep and weight impact physical and mental health during adolescence. The combination of evening chronotype and overweight appears to have the strongest association on the emotional health of adolescent females.

## Pathways to adolescent health sleep regulation and behavior

R.Dahl, D.Lewin

*J Adolesc Health.* 31:175-84, 2002.

There are several converging reasons to focus on sleep regulation in relation to healthy adolescent development: (a) Sleep appears to be particularly important during periods of brain maturation; (b) there are substantial biological and psychosocial changes in sleep and circadian regulation exist across pubertal development; (c) interactions between physical and psychosocial domains can lead to dramatic alterations in sleep patterns and habits during adolescence; (d) increasing evidence that many adolescents frequently obtain insufficient sleep exists; (e) there is mounting evidence that sleep deprivation has its greatest negative effects on the control of behavior, emotion, and attention, a regulatory interface that is critical in the development of social and academic competence, and psychiatric disorders; (f) the most obvious direct health consequences of insufficient sleep are high-risk behaviors associated with substance abuse and automobile accidents; (g) substantial evidence for bidirectional effects between sleep and behavioral/emotional regulation exists. Although the past decade has seen research progress in these areas, there continue to be major gaps in existing knowledge and a paucity of well-controlled studies to guide specific health policy decisions and recommendations regarding sleep in adolescence. There is a need for a better delineation of the links among sleep, behavior, and affect regulation. Finally, this paper examines one specific application of this knowledge area regarding early starting times among some high schools

**BACKGROUND:** Existing research indicates sleep problems to be prevalent in youth with internalizing disorders. However, childhood sleep problems are common in the general population and few data are available examining unique relationships between sleep, specific types of anxiety and depressive symptoms among non-clinical samples of children and adolescents. **METHODS:** The presence of sleep problems was examined among a community sample of children and adolescents (N=175) in association with anxiety and depressive symptoms, age, and gender. Based on emerging findings from the adult literature we also examined associations between cognitive biases and sleep problems. **RESULTS:** Overall findings revealed significant associations between sleep problems and both anxiety and depressive symptoms, though results varied by age. Depressive symptoms showed a greater association with sleep problems among adolescents, while anxiety symptoms were generally associated with sleep problems in all youth. Cognitive factors (cognitive errors and control beliefs) linked with anxiety and depression also were associated with sleep problems among adolescents, though these correlations were no longer significant after controlling for internalizing symptoms. **CONCLUSIONS:** Results are discussed in terms of their implications for research and treatment of sleep and internalizing disorders in youth.

## Depression Sleep

by David Buchanan

Not very tired  
Just needing to get away  
Unable to deal with these feelings  
Unable to deal with today

Emotional instability  
So dismal and so bleak  
Pulling back the covers  
It's time for depression sleep

In and out of slumbers  
Unwilling to stay long  
Time to try and live  
Searching to be strong

Rise and fight these feelings  
Yet sadness starts to creep  
Pulling back the covers  
It's time for depression sleep

### Features of Depression:

If a child has been displaying one or more of these signs of depression for at least two weeks, and they are interfering with his/her ability to function, then he/she may be depressed

- Frequent sadness, or crying
- Extreme sensitivity to rejection/failure
- Increased irritability, anger, or hostility
- Decreased interest in activities
- Persistent boredom; low energy
- Social isolation
- Low self-esteem and guilt
- Frequent absences from school
- Poor performance in school
- Poor concentration
- A major change in eating habits
- Insomnia or being excessively sleepy
- Attempts to run away from home
- Use of alcohol or other drugs
- Suicidal statements

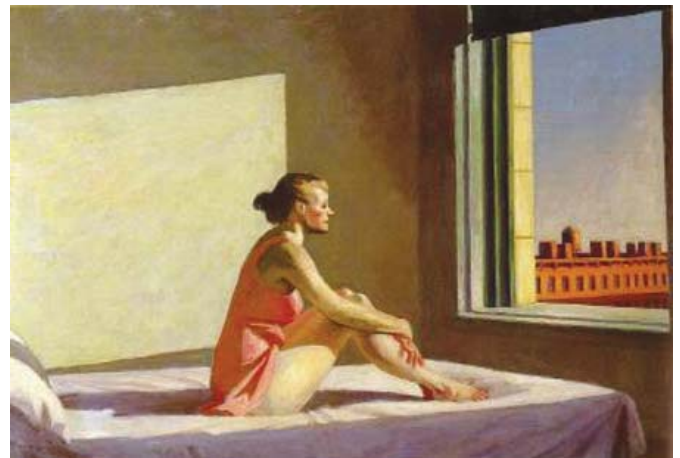
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[www.sleepontario.com](http://www.sleepontario.com)  
or [youthdalesleep.com](http://youthdalesleep.com)

By Deena Sherman

## Hopper

Edward  
Hopper  
(1882-1967)

was the quintessential American artist, depicting an American life in a manner that made him famous not only in the USA, but around the world. Hopper



*Morning Sun by Edward Hopper, 1952*

was particularly notable for

painting in an unfashionably realistic style when everyone around him was embracing abstract art. It is said that Hopper suffered from depression and that the loneliness of the figures in many of his paintings reflected his own solitude. Hopper painted with poignancy and excellence, and for that he was honored in his own lifetime.

Hopper's story is a simple one. He was born in Nyack, N.Y., attending a local private school followed by the Nyack High School. He was a shy child, nicknamed 'Grasshopper', whose social alienation only increased when he grew to six feet at age twelve. In 1899 he went to a commercial art school, but soon after enrolled in the New York School of Art. Hopper twice traveled to Europe to study, a right of passage for young artists, but was not strongly influenced by what he saw. Nor did he follow the "wild" behavior of other youthful artists in Paris. (One of the people with whom Hopper stayed wrote to his parents, describing the young artist as a "Mama's boy").

Hopper returned to New York City where, in a love-hate relationship with commercial art (he was good at it, but hated doing it), he earned a living, painting for himself on his days off. In 1913, he moved into a somewhat bleak top floor apartment at Three Washington Square which had 74 steps, no elevator and a communal washroom that was shared with other residents on the floor. Although Hopper would earn well from his paintings, he only moved once – to another apartment on the same floor. When he married in 1924 at age 42 to artist Josephine Verstille Nivison, the couple continued to live in the apartment, though they did spend their summers in Cape Cod. The subject matter and the style of Edward Hopper were consistent throughout his 60-year-career. What changed was his aptitude, which resulted in hauntingly captivating paintings for which he is considered the greatest American realist of the twentieth century.

### Sources

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