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Sleep Disorders in Children: A Guide for Parents

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Sleep Disorders in Children: A Guide for Parents

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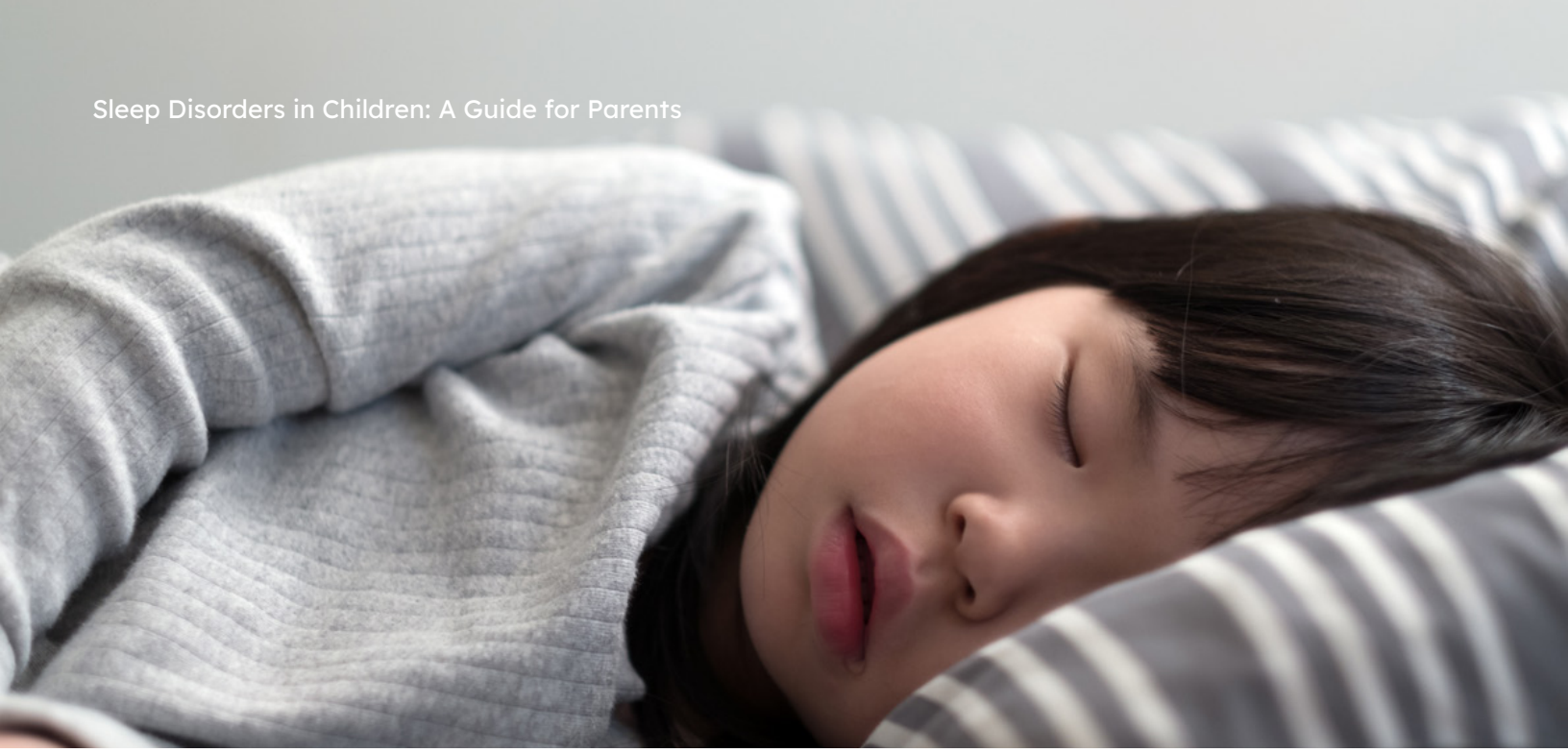
Introduction

Sleep disorders in children are widespread. 15 to 30% of all preschoolers have problems falling or staying asleep. In most cases it is transitory without being pathological. These behavioral disorders are not harmful for the child but can be very stressful for the family. They don't need specialized medical evaluation, but rather an explanatory personal consultation.

The occurrence of symptoms that require medical treatment, such as nocturnal breathing disorders, are much less frequent.



NORMAL SLEEP IN CHILDREN

Knowledge of the normal development of sleep in children is helpful for parents so that they can better understand their child's sleep behavior and adequately respond when sleep is disturbed.

Children are not just little grown-ups, except for sleeping a little longer, but otherwise no different in their sleep behavior. The maturation of the brain and social development lead to age-specific characteristics of children's sleep.

BASICS OF SLEEP

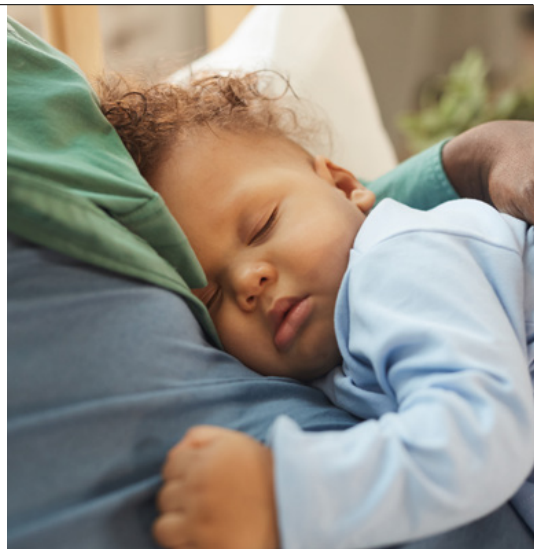
Sleep is divided into two phases, REM and Non-REM sleep. In REM sleep you can see rapid eye movements behind the closed lids. Breathing is irregular. The muscles are relaxed. Dreams in this phase are more commonly remembered. In Non-REM sleep the eyes do not move. Breathing is regular. REM and Non-REM sleep are differentiated in the pattern of electrical activity of the brain, muscles, and eyes. Both stages alternate cyclically during the night.

This differentiated sleep structure develops during the first year of life and reflects brain maturation processes. In infants, REM sleep is also called "active sleep." Babies move around a lot and are easier to wake up. In contrast, they remain quite still in Non-REM sleep (restful sleep).

DEVELOPMENT OF THE SLEEP-WAKE RHYTHM

In the first weeks of life, sleep and wakefulness in newborns are distributed irregularly across day and night. The infant has not yet adapted its rhythm to the light-dark environment, but continues, to a certain extent, its life in the womb. In the first months of life, sleep and wake phases are redistributed, attaining a sleep period of 6 or more hours at night.

Most children have a strong urge for regularity. They often demand breastfeeding or the bottle at the same times each day. But there are children who have difficulties developing a rhythm of their own. These children need a regular daily routine provided by the parents. In addition to the influence of light, this social rhythm — activity, rest, eating — helps children set their internal clock.



INDIVIDUAL SLEEP NEEDS

In the first year of life, the duration of nocturnal sleep increases at the cost of daytime sleep, while slowly decreasing again during the second to fifth year. There are large individual differences in the amount of sleep both children and adults need. The difference can be up to 6 hours between children of the same age.

In the individual child, sleep duration is fairly stable. Children who sleep little in the first years of life tend to do this in the following years as well. Children can only sleep as much as their body needs. If the child spends more time in bed than is needed, this may lead to age-dependent difficulties in falling or staying asleep.

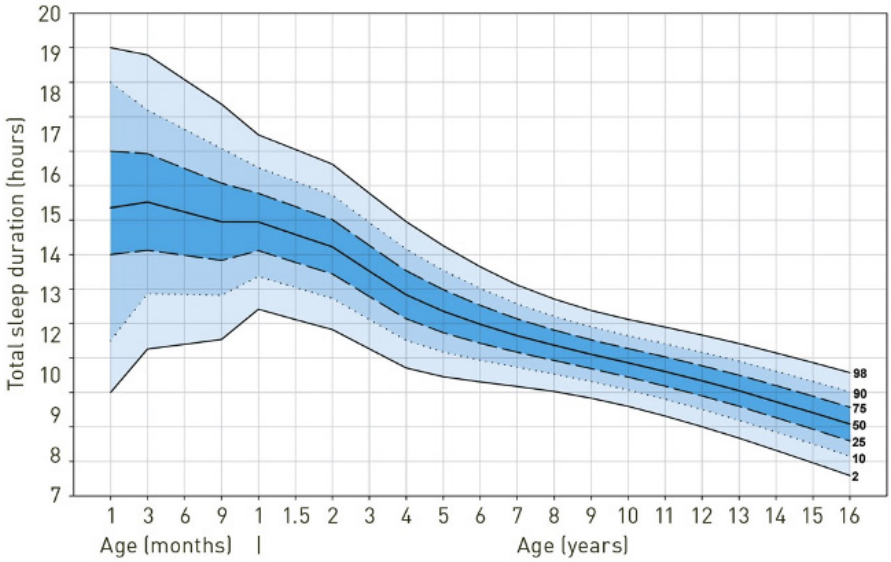


FIGURE 1. TOTAL SLEEP DURATION IN THE FIRST YEARS OF LIFE.

The individual sleep need of a child can be found by keeping a sleep log for 10-14 days (see example on the last page), and the length of time in bed adjusted to fit the sleep need. How often and how long the child should sleep during the day depends on the child and the parents' needs. It is important that daytime sleep of is sufficient for the child to be happy when awake and interested in its environment. Switching to a new sleep plan requires 7 to 14 days. To ensure adherence to new bedtimes the parents must consistently maintain the regimen.

MEALS AT NIGHT

In the first weeks of life breastfeeding is surely the form of nutrition that is best for the child. During the first 6 months of life children adapt their sleep-wake behaviour to the day-night cycle. They begin to sleep longer and. in parallel. their feeding shifts more and more into the day.

After 6 months a healthy, normally developed child is no longer reliant on nightly food intake. However, the child has possibly gotten used to breastfeeding, or a bottle at night — it has developed a learned appetite behavior that leads to regular awakening. In breastfed children it is often difficult for the mother to change this nocturnal behavior. She should extend the breastfeeding intervals during the day to 4 – 5 hours, so that the child learns to drink larger amounts at one time in order to cover its caloric needs during the day. For bottle-fed children. a step-by-step approach is recommended, diluting and reducing the night portion.

SLEEPING RITUALS AND SLEEP AIDS

A regular identical bedtime ritual helps children fall asleep and stay asleep. Already in the first year of life they need a fairly stable pattern to which they can orient. An important role is played by regular procedures and rituals that signal to the child what comes next. Events become predictable and thereby convey security and feelings of safety. The pre-sleep ritual should lead the child to fall sleep. Falling asleep should occur as independently as possible, at most with the help of a pacifier.

Babies and toddlers wake several times at night. That is normal sleep behavior. How the child falls asleep in the evening determines its behavior when waking up at night. A child that has learned to fall asleep by itself in the evening will find sleep again at night on its own.

When parents lie down with their children, and stroke them or sing them to sleep, the ritual turns into a sleeping aid. The child connects falling asleep with the proximity of the parents, with being held and cradled. Since it can only fall asleep at night with the help of parents, it demands their presence. This can be very tiring for parents.

Sleeping habits that have become established require a lot of patience and consistency to change them. Advice and support from a specialist — a pediatrician, maternal counselor or psychologist — can be helpful.

SLEEPING POSITION AND SLEEPING COMFORT IN INFANCY

The number of children who die from Sudden Infant Death Syndrome (SIDS) has declined in recent years. The decisive measures for risk reduction in SIDS are to sleep on the back, on a firm mattress, in a smoke-free environment (starting during pregnancy), avoiding overheating (the optimal nighttime room temperature is 18 °C/64 °F), breastfeeding in the baby's first year, and using a pacifier as required.

The safest place for an infant to sleep is on its own cot in the parents' bedroom. A sensible alternative are cots that can be fixed to the parents' bed. Sleeping together in the parental bed places demands on the parents. The infant needs enough space to sleep, the bed accordingly must be large enough and the mattress should be firm. Pillows, sheepskins or similar supports should be avoided.

If the parents are smokers or have used alcohol, medication or drugs, are ill or exhausted, bed sharing increases the risk of SIDS, and should be avoided.

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THE CHILD IN THE PARENTS' BED

During the second year of life many children suddenly don't want to continue sleeping alone (Figure 2). There are different reasons for this. If the parents don't feel disturbed, there is nothing against the family bed. There is no reason to assume that such sleep behavior is detrimental to the child. If the parents feel disturbed by the presence of a child, or have educational concerns, a mattress beside the parents' bed can be helpful, or siblings can sleep together.

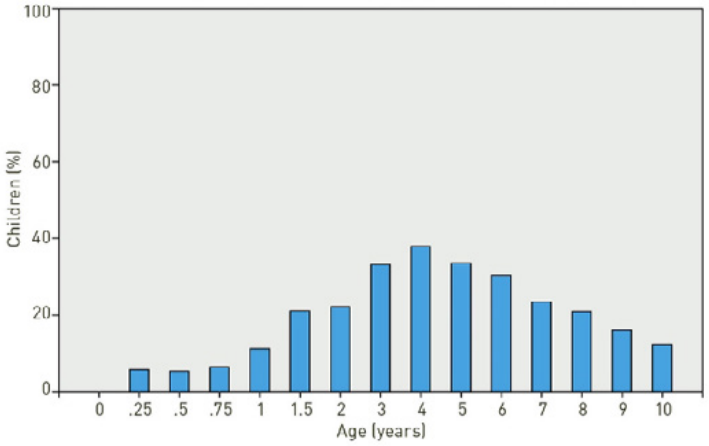

FIGURE 2. CHILDREN IN THEIR PARENTS' BED.

RHYTHMIC MOVEMENTS

From the sixth month of life many children exhibit rhythmic movements when they fall asleep — head shaking, body rolls or rocking — which have no actual disease significance, and are part of normal development. Already from the second year these rhythmic movements diminish in frequency again (Figure 3).

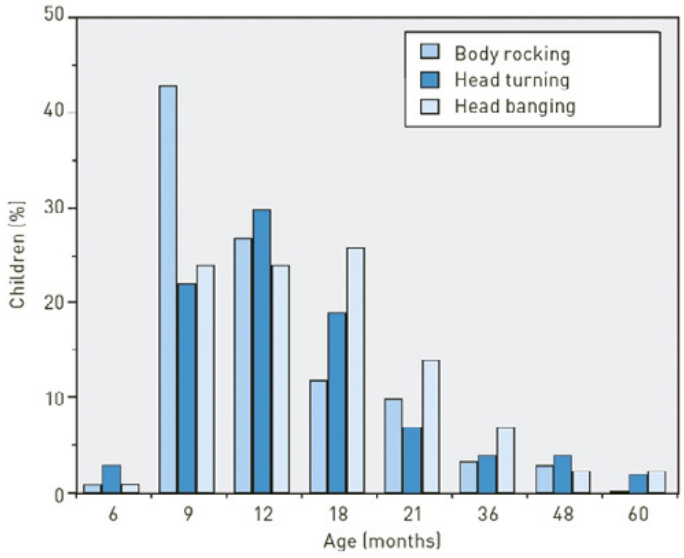

FIGURE 3. RHYTHMIC MOVEMENTS IN THE FIRST YEARS OF LIFE (ADAPTED FROM KLACKENBERG, 1982).

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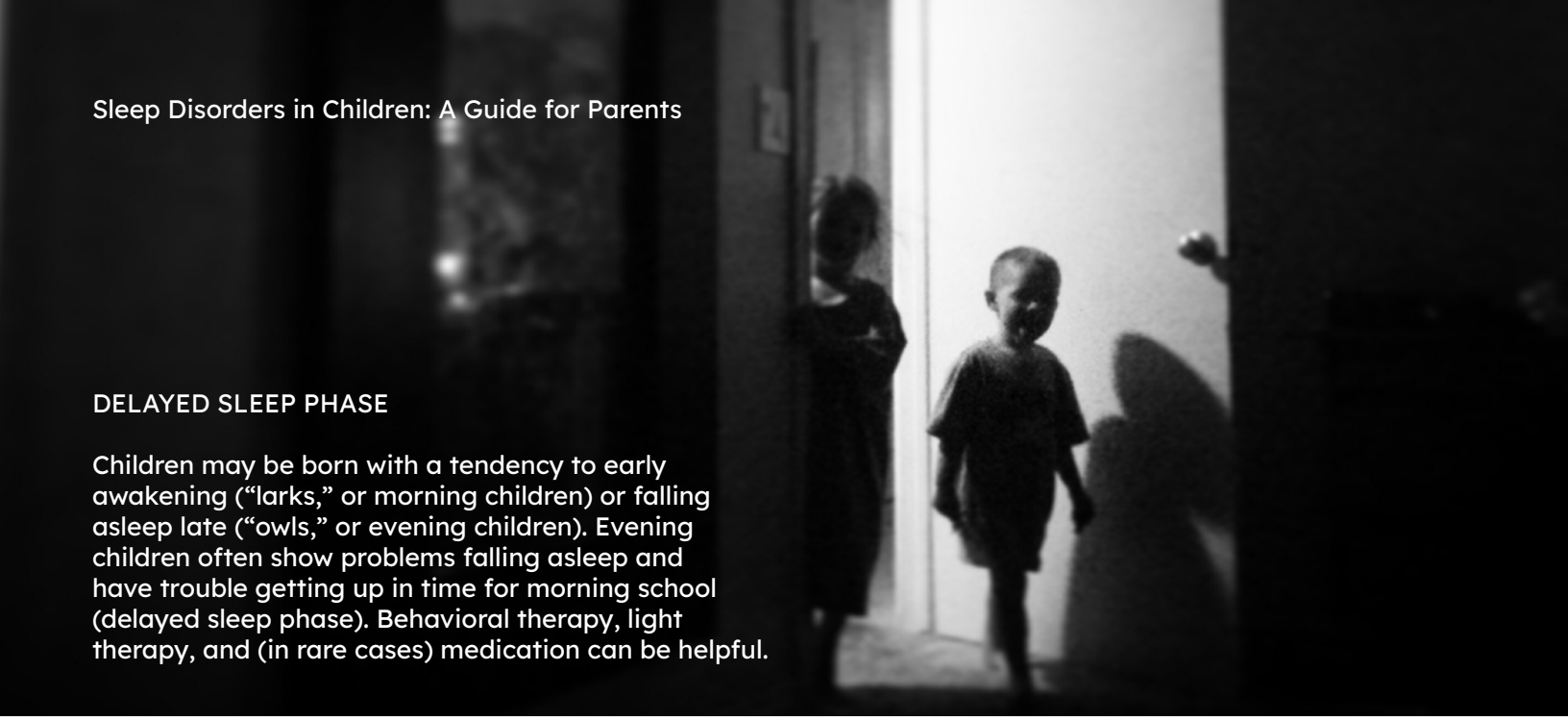

DELAYED SLEEP PHASE

Children may be born with a tendency to early awakening ("larks," or morning children) or falling asleep late ("owls," or evening children). Evening children often show problems falling asleep and have trouble getting up in time for morning school (delayed sleep phase). Behavioral therapy, light therapy, and (in rare cases) medication can be helpful.

WAKING-UP DISORDERS: INCOMPLETE AWAKENING.

Waking-up disorders involve incomplete awakening from deep sleep. Typically they occur in the first few hours after falling asleep and are common and harmless sleep phenomena during early and middle childhood. They often run in families.

In addition to incomplete awakening, waking-up disorders include night terrors or pavor nocturnus (in toddlers) and sleepwalking (school age). During the night terrors the child thrashes wildly, screams terribly, sweats and often has a bizarre facial expression. It is unresponsive and cannot be woken up. After 5-10 minutes the episode is over, the child immediately falls asleep again, and doesn't remember in the morning what happened. During such an episode the parents should stay with the child to avoid injury, but they shouldn't try to hold or wake up the child.

Sleepwalking children are mostly calm, get up and move around. They can also open windows and doors. That's why it is important that parents secure possible sources of danger and inform caregivers when the child sleeps away from home.

Lack of sleep, an irregular rhythm, emotional stress, as well as other sleeping disorders can predispose the child to a waking-up disorder. If it lasts over a long period or takes unusual forms, further medical assessment is indicated.

TABLE 1. DIFFERENCE BETWEEN NIGHT TERRORS AND ANXIOUS DREAMS.

	NIGHT TERRORS	ANXIOUS DREAMS
Sleep phase	Partial awakening from deep sleep.	Anxiety-inducing dream in REM-Sleep, followed by waking up.
Temporal occurrence	1 to 4 hours after falling asleep	In the second half of the night.
First impression (child)	Wide open eyes, beside himself, cannot be woken up.	Wakes up, cries, calls for parents.
Child's behavior	Sits in bed, lashed out, facial expressions shows fear, anger, or confusion.	Cries, scared. Fear persist after waking up.
Behavior towards parents	Doesn't notice the parents. Cannot be calmed down. Screams and thrashes when held.	Recognizes the parents immediately. Wants to be comforted.
Falling asleep again	Quickly	Takes some time.
Memory	None	Remembers the next day.
What should parents do?	Wait, don't try to wake the child. Protect from injury.	Addection. If necessary, talk to the child about dreams.

ANXIOUS DREAMS (NIGHTMARES)
In contrast to night terrors, anxious dreams occur in the second half of the night and in REM sleep. The child is apparently awake, crying or screaming, calls for the parents and seeks comfort. The trigger is a frightening dream which the child often remembers. It is important for parents to show love and comfort.

TEETH GRINDING
Nocturnal teeth grinding is quite common but harmless. In long-lasting cases an orthodontic device may be necessary to avoid heavy wearing down of the teeth.

TALKING IN SLEEP
Talking in sleep is a common and harmless phenomenon.

OBSTRUCTIVE SLEEP APNEA SYNDROME (OSAS)
Obstructive sleep apnea syndrome (OSAS) is a breathing disorder during sleep that is caused by a narrowing of the upper respiratory tract. Affected children snore, have repeated breathing pauses, sweat and sleep restlessly. Sometimes there is only one heavy and loud inhalation that is recognisable by the pulled-in chest. About 10% of children snore while sleeping, but only 1% have OSAS. Daytime drowsiness or hyperactivity that leads to loss of performance and school difficulties are common side effects. The breathing pauses can induce lack of oxygen with effects on brain and heart. The diagnosis is made by wearing an apparatus monitoring breathing while asleep. Frequently, removal of the tonsils suffices to eliminate the sleep apnea and prevent its serious consequences.

NARCOLEPSY
Narcolepsy is a rare disturbance of sleep-wake regulation (0.1% of the population), and occurs seldomly at school age. The disease manifests itself with an unusual tendency to fall asleep (sleep attacks), short-term loss of muscle tone (cataplexy), daytime sleepiness, hallucinations, and immobility when half asleep, though not all symptoms necessarily occur at the same time. The diagnosis is made in a sleep laboratory and following laboratory tests.

RESTLESS LEGS SYNDROME (RLS)
This disease manifests itself through tingling, pain and a strong urge to move the legs. These unpleasant sensations occur mainly at night during sleep and longer periods of rest. Sleep disturbances and daytime sleepiness can result. School children and teenagers rarely suffer from RLS. The complaints concern nocturnal leg pain and difficulties in falling or staying asleep. Depending on severity, drug treatment can be indicated.

MEDICATION FOR SLEEP DISORDERS
Sleeping pills are not appropriate for normal and healthy children with functional sleep disorders. Occasionally treatments such as melatonin for children with developmental disabilities can be helpful.

IN CONCLUSION . . .

Because children's sleep problems are so frequent, understanding normal and abnormal sleep behavior is important to foster healthy sleep habits. This e-book offers basic sleep education for parents and health care professionals. The recommended measures are highly efficacious for improving children's sleep.

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About us

The Center for Environmental Therapeutics is a 501(c)(3) nonprofit based in New York, founded in 1994 in response to international interest in new environmental therapies – drug-free ways to improve mood sleep, and energy. We are leaders in the research and development of light therapies as counterparts to conventional medications. Our program serves health care providers, the consumer public, and industry. CET is made up of a multidisciplinary team of eminent researchers and clinicians committed to pooling their efforts toward the development of effective environmental therapies. We host a popular website, cet.org, with educational material for the general public and clinicians; online, personalized self-assessments of depressive disorders, symptom severity, and circadian rhythm status; and an extensive question library based on inquiries from t he public, which offers guidance from academic and clinical experts.

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