Just a Few More Minutes, Please?

2014 FCE Human Development Leader Lesson

Goal of Lesson:

Participants will gain:

- An understanding of the importance of sleep
- An understanding of the sleep cycles and proper amounts of sleep
- An understanding of how sleep effects the body

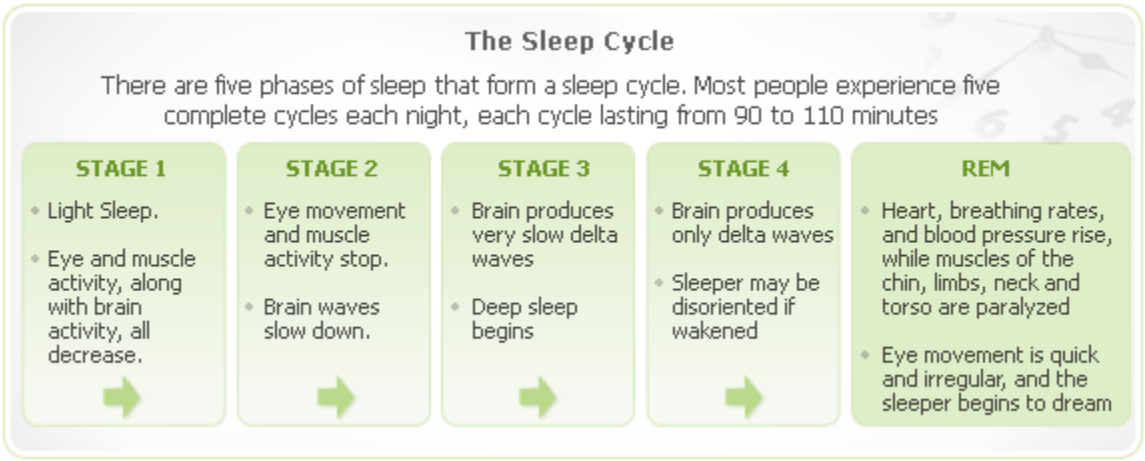
Everyone is familiar with those mornings where it seems easier to just roll over, hit the alarm clock and go back to sleep…for just a few more minutes. What creates this desire for more sleep? Why is it so hard to get up in the mornings, or after a nap? Is something wrong? Or are we just tired? Is sleep really that important? Why does it seem we can never get enough? Is there a right amount of sleep that we need? Can you catch up on sleep? Is anyone getting tired just thinking about sleeping? In this lesson we're going to look at what sleep is, how we use it, what we need and various myths and suggestions about sleep. Hopefully after this you'll go away with having some great ideas for ways to improve your sleeping habits to gain a more restful sleep and wake feeling refreshed and ready for a new day.

What is a basic definition of sleep? According to the National Institute of Child Health and Human Development (NICHD), "sleep is essential for day-to-day functioning, performance, learning and overall health. Sleep disorders, including insomnia, are a leading cause of accidents, lost productivity and illness" (NICHD, 2013). Sleep in general is a very complicated biological process that can be simplified greatly or it can bury one in information. There are cycles our brains and bodies process through while we're sleeping, these are called circadian (pronounced sur-kay-dee-uhn) rhythms. Our body has an internal clock and these cycles are biologically set. Our bodies clock is "strongly influenced by light" (NICHD, 2013) so depending on the amount of light you are receiving in a 24 hour period greatly regulates our bodies internal clock. Hence, if we're in dark or dimly lit places we often find ourselves getting sleepy, whereas if we're out in the sun or bright light we are more alert and active. There are five circadian rhythms our bodies go through, these are called Phase 1, Phase 2, Phase 3, Phase 4, and Rapid Eye Movement (also known as REM) sleep. Let's take a quick look at what these phases do for us!

As a person falls asleep, they immediately fall into stage 1. The first four phases of sleep consist of about 75% of our sleep, according to the NICHD; let's look at the breakdown of what happens during these beginning stages.

In phase 1, individuals are between being away and falling asleep and will begin to sleep lightly. As you move into phase 2, individuals move into a deeper sleep and become disengaged from the surroundings. In phase 2 our body temperature drops. Phase 3 and 4 is the deepest and most restorative sleep. Blood pressure drops, breathing slows down, muscles relax, our bodies increase the supply of blood to our muscles, our bodies perform tissue growth and repair, our energy levels increase again and our bodies release hormones. As our bodies move into REM sleep (or phase 5) this equates the other 25% of our sleep. Generally this occurs about 70-90 minutes after first falling asleep, and then on and off for the remainder of your circadian rhythm. REM sleep often lasts longer as you move later into the night. During this cycle our brain and bodies are energized, our daytime performance is supported, our brains are active and dreaming often occurs. Our eyes will dart back and forth, creating the "rapid eye movement". If you watch someone during this cycle you can see their eyes moving beneath their closed eyelids! REM is involved in the process of retaining memories, learning and maintaining balanced emotions. Our bodies also become immobile and relaxed and our body temperature isn't tightly regulated. The whole process of going from phase 1 to phase 5 is usually around 90 minutes.

During the night our sleep phases change in their duration. As we're first falling asleep we spend a lot of time in the first four stages and very little in the REM stage. As we sleep longer and get deeper



into the night we find our bodies spend most of their time in REM and phase 1 and 2, quickly cycling through phase 3 and 4. Below is a condensed image of the 5 phases of sleep.
Notice in stage 4 that is states that sleeper may be disoriented if wakened. This is vital to understand. When you wake up, groggy and disoriented and just feel like getting more sleep…you've woken your body too early and it's most likely being pulled awake from stage 4. When sleeping, it's best to figure out how many sleep cycles you need to be fully rested so you're not waking your body from a deep sleep.

Naps are another huge factor to this! If you just need a quick dose of energy, studies suggest that a quick 10-20 minute rest is best for your body. This allows individuals to rest and relax but not to get into that deep sleep and feel groggy and more tired when they awake. If you want a longer nap, be sure to sleep for 90 minutes…then your body will be ready to go again!

The age of the individual plays a big part in deciding what amount of sleep is needed for good performance. Getting the proper amounts of sleep is important because it "ensures that the mind and body are completely rested. Certain phases are needed to help you feel rested and energetic the next day, which other phases help you learn information and form memories" (NICHD). If we're not getting proper amounts we may face "problems with learning and processing information" in the short term and can have harmful long-term effects on health and well-being if not fixed. According to the Center for Disease Control and Prevention, it's said that more than 25% of U.S. adults are not getting enough sleep at least 15 out of 30 days. Because sleep is so vital to our lives…you may be wondering what happens to us if we aren't getting the sleep or what could be occurring?

As we lost sleep we lose our ability to focus which in turns slows down our response times, increases our chances to take risks and make poor decisions. This can affect our relationships, our jobs and even our driving. The National Heart, Lung and Blood Institute say that the lack of sleep "can cause irritability…particularly for children and teens…and are more likely to become depressed". Depending on the age of the individual, we handle the loss of sleep differently. Usually adults can maintain control of their irritability, whereas with younger children they often become fussy, cry more readily or pitch fits to try and compensate for their feelings. Often, a simple nap or an early bedtime can solve these problems long term. Losing sleep also affects our health. Not getting proper amounts of sleep can greatly increase our risk of high blood pressure, heart disease, obesity, diabetes, hypertension, mood disorders such as depression, anxiety and mental distress or several other medical conditions. Sleep is vital because as the body produces the hormones we talked about earlier it allows the body to grow, build muscles, fight illnesses and repair any damage in our bodies. If we're losing this valuable time, our bodies are only being worn down over time and it is only a matter of time before we may start experiencing some negative effects of lost sleep.

There are many false beliefs we hold towards sleep and we're going to take a few minutes to look at a few of these.

1. Snoring is a common problem, but isn't harmful. Although snoring is generally harmless, for some it's a symptom of a life threatening disorder – Sleep Apnea. If a person snores loudly, experiences day time sleepiness and/or wake up gasping for air in the night need to contact a professional to determine if they have sleep apnea.
2. You can't "cheat" on the amount of sleep you get. Despite the popular belief that you can regain sleep, once you lose sleep there is no making it back up. Creating an inadequate sleep debt is impossible to repay and if continued can increase risk of obesity, high blood pressure, negative mood and behaviors, decreased productivity and personal safety issues.
3. Daytime sleepiness always means a person isn't getting enough sleep. This can be a sign of drowsiness and can occur even after you've gotten enough sleep at night. This can be a sign of an underlying medical condition, such as sleep apnea or narcolepsy. These problems are all treatable, so seek help if this is a continuous struggle.
4. The older you get, the fewer hours of sleep you need. Experts recommend 7-9 hours of sleep for most adults. Sleep patterns may change as we age, but the amount of sleep needed usually does not. The older we get the more frequently we may wake up during the night, but we can

compensate for this by taking short naps during the day (National Institute of Child Health & Human Development).

Sleep is a very important part of our daily lives. It allows us to have the energy we need to have productive days, assists in giving us emotional stability and gives us additional safety and security. For the activity today, we will have a relaxation technique that is taken from the Arthritis Foundation.

Activity: read in a calming voice, slowly

Loosen any clothing that feels confining and sit in a comfortable position with your back straight. Close your eyes to help reduce any distractions and to help you to focus. Take a deep slow breath in through your nose, and slowly exhale through your mouth. Again, take a deep breath in…and slowly exhale. Continue to breathe slowly and deeply. Notice yourself getting more and more relaxed. Let all your tension melt away.

And now I want you to imagine in as much detail as possible that you are sitting comfortably in a chair or hammock in the middle of a beautiful pine forest. Enjoy the fresh, cool, clean, fragrant air. What a pleasure it is to breathe! Imagine a gentle, cool breeze as it touches your skin, runs through your hair. You are sitting comfortably, feeling peaceful and calm. As you casually look around, the beauty of the tall pine trees with their rich brown bark and graceful feathery green branches impress you. You notice the pine cones on the branches. You watch the laves of the aspen trees dancing in the wind. The ground interests you with its rich brown dirt covered with pine needles and leaves and as you inhale deeply you smell the robust, earthy aroma.

You hear birds calling and a woodpecker at work in the distance. The trees filer the light of the sun. You notice a stream of bright light where the sun shines directly into a small clearing in the forest. The clearing is covered with green grass and beautiful wild flowers of all types and colors. You see butterflies around the flowers, fluttering here and there.

Nearby, you see a river flowing slowly and peacefully. Concentrate on the slow, gentle movement of the water. As you watch the river, you notice a canoe slowly moving on the water. Paddles moving slowly and quietly, pushing the canoe along in the gentle flow of the water. You see a family of ducks, with the mother and her babies paddling along in a line. Along the bank, you see more wildflowers. They are colorful and in full bloom. Here too, butterflies move from one group to another, and add to the vibrant colors you see.

You sit quietly for some time, just enjoying the beauty of nature and the peacefulness in this small corner of the world. You are at peace in your pine forest, sitting comfortably, feeling relaxed and calm, and appreciating the wonders of nature and of being alive. You may go back to the forest whenever you want, simply by sitting or laying quietly and remembering this place in as much detail as possible.

When you are done with this exercise, you will feel very relaxed, yet alert. Take a deep breath…open your eyes…and stretch.

Sources:

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