

When you are sleep-deprived #1

Previously, working overnight in _____ a computer or playing _____ was often considered cool. Today, _____, this is already a thing of the past. More _____, sleep deprivation is _____ unprofessional and _____ rather unintelligent. _____ sleep deprivation _____ your physical and mental health, and even intellectual performance. In fact, some people have short sleep _____, but they are _____ one in ten thousand. Some _____, such as Napoleon Bonaparte and Thomas Edison, were often _____ short sleepers, but some records suggest that they were actually _____ daytime _____. Essentially, the body and brain of Homo sapiens are not designed to function well _____ sleep. Having enough sleep is never _____ laziness. It is, in fact, an act full of _____ and responsibility. Sometimes we cannot sleep well for various reasons, including diseases and _____, but those who _____ reduce their sleep and _____ are merely _____ their stupidity and _____. Why do we have to sleep enough?

Previously, working overnight in front of a computer or playing around until dawn was often considered cool. Today, thank goodness, this is already a thing of the past. More recently, sleep deprivation is regarded as unprofessional and bragging about it rather unintelligent. Chronic sleep deprivation deteriorates your physical and mental health, and even intellectual performance. In fact, some people have short sleep genes, but they are less than one in ten thousand. Some historical figures, such as Napoleon Bonaparte and Thomas Edison, were often named as short sleepers, but some records suggest that they were actually habitual daytime nappers. Essentially, the body and brain of Homo sapiens are not designed to function well without sufficient sleep. Having enough sleep is never an act of laziness. It is, in fact, an act full of kindness and responsibility. Sometimes we cannot sleep well for various reasons, including diseases and concerns, but those who willingly reduce their sleep and boast about it are merely advertising their stupidity and irresponsibility. Why do we have to sleep enough?

dawn	夜明け、明け方	deteriorate	悪化させる
thank goodness	ありがたい、ああよかった (皮肉)	intellectual	知的な、知能に関する
deprivation	欠乏、不足	habitual	常習的な
brag	自慢げに言う	sufficient	十分な、足りる
chronic	慢性的な	advertise	広告する

When you are sleep-deprived #2

Lack of sleep is bad for our health. You may _____ so _____ that we don't have to _____ here, but the effect is perhaps much _____ you _____. There is a global experiment in which 1.5 billion people are _____ sleep by one hour for a single night every year. We _____ "daylight savings time." In the Northern _____, the switch to daylight savings time in spring _____ makes people _____ of sleep. Surprisingly, we see a _____ 24-percent increase in _____ that following day. We see the same _____ the number of traffic accidents and suicide rates. In _____, the _____ happens. _____ daylight savings time ends and they gain an hour of sleep opportunity time, heart attacks significantly decrease. During sleep, _____ non-REM stage 3 in the first 2 to 3 hours, our heart rate and blood _____ goes down, reducing the _____ system. This is a great opportunity for _____ to _____ and _____. The same is _____ for our immune functions. During the day, our immune system is very busy _____ various _____. In a safe and comfortable _____, the immune system is _____ busy state and _____, _____ and recharging itself. There are a _____ things your body can only do _____ sleep.

Lack of sleep is bad for our health. You may think it is so obvious that we don't have to repeat this warning here, but the effect is perhaps much greater than you might have expected. There is a global experiment in which 1.5 billion people are forced to cut their sleep by one hour for a single night every year. We call it "daylight savings time." In the Northern hemisphere, the switch to daylight savings time in spring automatically makes people lose an hour of sleep. Surprisingly, we see a sudden 24-percent increase in heart attacks exclusively that following day. We see the same pattern with the number of traffic accidents and suicide rates. In autumn, the exact opposite happens. When daylight savings time ends and they gain an hour of sleep opportunity time, heart attacks significantly decrease. During sleep, particularly non-REM stage 3 in the first 2 to 3 hours, our heart rate and blood pressure level goes down, reducing the burden on our cardiovascular system. This is a great opportunity for vital organs to recover from and repair damages. The same is true for our immune functions. During the day, our immune system is very busy dealing with various potential threats. In a safe and comfortable bedroom, the immune system is freed from its busy state and thus, devoted to resolving inflammation and recharging itself. There are a multitude of things your body can only do during sleep.

daylight savings time	夏時間、サマータイム	immune	免疫の
exclusively	〜に限って、独占的に	threat	危機、脅威
suicide	自殺	devote	捧げる、専念する
heart rate	心拍数	inflammation	炎症
blood pressure	血圧	multitude	多数の
cardiovascular	心血管系の、循環器系の		

When you are sleep-deprived #3

A number of studies _____ attention, concentration, and other cognitive capacities decline under sleep deprivation. Obviously we have to sleep enough so that you can be the best _____ of yourself the following day. _____, if you are in a _____ position, your sleep conditions _____ because your lack of sleep affects not only your personal performance but also the _____ team. You make decisions involving your team or project. If you are sleep-deprived, all members _____ the poor _____ decision making. In addition, research shows that sleep deprivation reduces the _____ of positive emotional expressions, _____ influence as a leader. Also, lack of _____ REM sleep _____ our abilities to _____ emotional _____, especially faces, _____ a negative impact on managing team _____ and motivation. Moreover, _____ themselves _____ their boss in their _____ and behaviors. _____ receive an email _____ boss at 3 a.m. or _____ 4 hours of sleep, they are being told _____ or _____ that sleep should not be prioritized. Research shows that workers tend to cut their sleep by around 25 minutes _____ are _____ by a boss _____ the importance of sleep. _____, the entire department has to pay the price for the sleep deprivation of its manager. _____ sufficient sleep is an indispensable, professional _____.

A number of studies have shown that our attention, concentration, and other cognitive capacities decline under sleep deprivation. Obviously we have to sleep enough so that you can be the best version of yourself the following day. Besides, if you are in a managerial position, your sleep conditions will matter even more because your lack of sleep affects not only your personal performance but also the entire team. You make decisions involving your team or project. If you are sleep-deprived, all members suffer from the poor quality of your decision making. In addition, research shows that sleep deprivation reduces the display of positive emotional expressions, diminishing potential influence as a leader. Also, lack of sufficient REM sleep undermines our abilities to read emotional signals, especially faces, which can have a negative impact on managing team atmosphere and motivation. Moreover, subordinates model themselves after their boss in their attitudes and behaviors. When they receive an email from their boss at 3 a.m. or hear him boasting about 4 hours of sleep, they are being told overtly or covertly that sleep should not be prioritized. Research shows that workers tend to cut their sleep by around 25 minutes when they are supervised by a boss who disregards the importance of sleep. Put simply, the entire department has to pay the price for the sleep deprivation of its manager. Securing sufficient sleep is an indispensable, professional duty.

decline	低下する	overtly	はっきりと、公然と
managerial	経営の、管理職の	covertly	ひそかに、暗に
display	表出	supervise	監督する、指揮する
diminish	減らす、少なくする	disregard	無視する、軽視する
undermine	損なう、むしばむ	department	部門、課
subordinate	部下	secure	確保する
model	模倣する	indispensable	不可欠な

When you are sleep-deprived #4

As widely known, sufficient sleep is indispensable for _____ memories. _____ to say, studying _____ an examination is not recommended. The _____ of learning should be _____ of our skills, intelligence, and personality in the _____. If you _____ - _____ study all night long for tomorrow's test, you will _____. However, overnight _____ is _____ effective for tomorrow. If you take a closer look into the brain functions, you will learn that memory consolidation is a _____ between non-REM and REM sleep. Neurologically speaking, a memory involves a _____ between neurons, and the brain has a _____ capacity for _____. During Non-REM sleep, the brain _____ and removes unnecessary _____, followed by REM sleep which reconstructs new connections and _____ ones. If you think of the brain as a _____, _____ you sleep, the space _____ a _____ you _____ the day. As you fall asleep, Non-REM sleep _____ which items are similar, _____, and _____, and _____ unimportant ones, creating a space. After the _____ by non-REM sleep, REM sleep rearranges items into the _____ based on their _____ and significance so that you can quickly pick out one when it's necessary. This is how the brain makes the most of its limited _____ capacity, and this task can only be done during sleep. Without sufficient Non-REM and REM sleep, what you learned during the day cannot be organized, fixed, and refined. Also, you will _____ having no _____ space for other information the following day. Learning can never be _____ only by reading books and listening to lectures during the day. It has to _____ with _____ and _____ of our neural _____ by non-REM and REM sleep.

As widely known, sufficient sleep is indispensable for consolidating memories. Needless to say, studying overnight before an examination is not recommended. The ultimate purpose of learning should be cultivation of our skills, intelligence, and personality in the long term. If you short-sightedly study all night long for tomorrow's test, you will lose in the long run. However, overnight cramming is not even effective for tomorrow. If you take a closer look into the brain functions, you will learn that memory consolidation is a close cooperation between non-REM and REM sleep. Neurologically speaking, a memory involves a synaptic connection between neurons, and the brain has a finite capacity for synapses. During Non-REM sleep, the brain sorts out and removes unnecessary synaptic connections, followed by REM sleep which reconstructs new connections and strengthens existing ones. If you think of the brain as a warehouse, before you sleep, the space is disorganized with a flood of items you brought in during the day. As you fall asleep, Non-REM sleep identifies which items are similar, relevant, and redundant, and throws away unimportant ones, creating a space. After the clearance by non-REM sleep, REM sleep rearranges items into the shelves based on their relevance and significance so that you can quickly pick out one when it's necessary. This is how the brain makes the most of its limited storage capacity, and this task can only be done during sleep. Without sufficient Non-REM and REM sleep, what you learned during the day cannot be organized, fixed, and refined. Also, you will end up having no cerebral space for other information the following day. Learning can never be achieved only by reading books and listening to lectures during the day. It has to come along with remodeling and optimization of our neural circuits by non-REM and REM sleep.

consolidate	強固にする	warehouse	倉庫
cram	詰め込み勉強をする	relevant	関連がある、意味がある
neurological	神経の、神経に関する	redundant	余分な
neuron	ニューロン（神経細胞）	cerebral	脳の、知能の
finite	有限の	optimization	最適化
synapse	シナプス（神経細胞の接続部）		

When you are sleep-deprived #5

After all, how many hours should we sleep? The answer is unknown. _____ genetics, the quality of sleep, daily conditions, and even _____ differences. So, the best advice has to be _____; We should sleep as long as we can to spend the following day without feeling sleepy _____ the day, _____. There is no _____ - _____ - _____ - _____ answer. If you search on the Internet, you will find various _____ information. For example, the most popular idea is 7 to 9 hours of sleep. It _____ that _____ increase _____ we sleep more or less than this range. This is quite reliable information _____ by the Center of Disease Control, but we need to be a little _____. First, we need shorter sleep _____ we _____, but elderly people _____ have a higher risk of dying. Second, people with serious diseases are more likely to need longer sleep for _____. In addition, they often suffer from poor quality of sleep _____ illness, leading to longer sleep to _____ the quality. There is a _____ between sleep _____ and mortality rates, but we cannot _____ are in a _____. In other words, we cannot conclude that a shorter or longer sleep is the cause of _____ mortality. Yet, 7 to 9 hours of sleep _____ a very reliable benchmark. If you expected a clear answer, you might be disappointed, but that is what science is. It is quite difficult to _____ a _____ conclusion, and so is to provide sufficient evidence to _____ a _____. Realizing our _____ is one of the most important insights in scientific _____. _____ to sleep _____, the _____ conclusion seems that we should _____ our own senses _____ to science.

After all, how many hours should we sleep? The answer is unknown. It depends on genetics, the quality of sleep, daily conditions, and even seasonal differences. So, the best advice has to be as follows; We should sleep as long as we can to spend the following day without feeling sleepy during the day, period. There is no one-size-fits-all answer. If you search on the Internet, you will find various sources of information. For example, the most popular idea is 7 to 9 hours of sleep. It is indicated that our mortality rates increase either when we sleep more or less than this range. This is quite reliable information supported by the Center of Disease Control, but we need to be a little cautious. First, we need shorter sleep as we grow older, but elderly people naturally have a higher risk of dying. Second, people with serious diseases are more likely to need longer sleep for recovery. In addition, they often suffer from poor quality of sleep due to illness, leading to longer sleep to compensate for the quality. There is a correlation between sleep duration and mortality rates, but we cannot assert that they are in a causal relationship. In other words, we cannot conclude that a shorter or longer sleep is the cause of increased mortality. Yet, 7 to 9 hours of sleep still remains a very reliable benchmark. If you expected a clear answer, you might be disappointed, but that is what science is. It is quite difficult to draw a definite conclusion, and so is to provide sufficient evidence to prove a theory. Realizing our ignorance is one of the most important insights in scientific endeavors. When it comes to sleep duration, the current conclusion seems that we should trust our own senses while referring to science.

one-size-fits-all	さまざまな場面に対応する	correlation	相関関係
indicate	示す	causal	因果関係のある
mortality	死亡（率）	definite	明確な
reliable	信頼できる、当てになる	endeavor	試み、努力
compensate	埋め合わせる	refer	参照する