

Brain Hibernation for Employee Efficiency

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Abstract

There is an innate craving among human beings to be efficient in profession and productive in life. Although modern technology has paved the way for higher professional achievement today, work related stress, and mental fatigue are serious concerns that diminish the mental capacity of humans. Animals rejuvenate by instinct using various mechanisms. One such mechanisms found among some animals is hibernation. This article argues whether brain hibernation is possible among humans for better productivity and professional efficiency.

Keywords: Brain Hibernation; Stress Management; Managing Employee Effectiveness; Work-Life Balance; Resting Mind

Introduction

Brain hibernation is a biological condition caused by constriction of the arteries by which brain limits its functions to eating, walking, talking, and other basic survival operations and shuts off to more complicated or higher order brain functioning. Resting the brain is a survival mechanism of the human body. When brain fails to execute functions due to less blood flow in the brain and lesser oxygen intake due to various conditions which includes stressful lifestyle, medical professionals regard this as a brain dysfunction and chiropractic treatment is recommended to increase cerebral blood flow to bring back the brain to normal. However, can this reduced brain function be considered a resting mechanism of the brain when it is overloaded or stressed? If so, can we intentionally cause this feat to give the brain resting so that employees and professionals become more productive from the stressors and have better work-life balance? The objective of this paper is to identify some traditional methods of voluntary brain hibernation by which brain can be rested from the complex mental process of daily work-related burdens and achieve relaxation for higher employee efficiency.

Animal hibernation

Mammals have the capacity to reduce metabolic activity to survive harsh climatic conditions without eating by slowing their heartbeat. This process is often referred to as hibernation. According to Warmflash [1] some mammals hibernate making physiological changes controlled by the brain, specifically linked to the hypothalamus. A typical example is the Greater Dwarf Lemur (*Cheirogaleus major*) in Madagascar that goes into a state of physical or mental inactivity (torpor) for a period of few months in the winter season. It reduces the metabolic activity to just two percent as compared to the normal functioning and reduced body heat to match the ambient temperature [2]. Brown and black polar bears alter their metabolism to a state of hibernation at any time of year if needed; mainly they do it during the winter season to conserve energy and stay warm [3]. The African lungfish (*Protopterus annectens*) which looks like an eel with two pairs of filamentous fins is yet another animal known for hibernation. When the dry season starts, the fish travels through mud and land, prepare a kind of cocoon and stay inside under the ground. This makes it possible to survive without water for years in a dormant sleepy state, to wake up only when freshwater surrounds [4]. There are several other animals hibernate or aestivate primarily to conserve energy.

Human hibernation

Theoretically scientists believe that human hibernation is possible; however, there is no medical breakthrough in the voluntary hibernation. The Mount Rokkō accident in 2006 is an eye-opener to many scientists in the medical community [5,6]. Mitsutaka Uchikoshi is the first recorded case of accidental human hibernation. Uchikoshi survived 24 days without food and water on Mt Rokko in the western Japan at a very low temperature when he had a fall in the mountain. He was lost and later found by a passing climber in unconscious state with multiple organ failures due to heavy blood loss. Doctors who treated him believe that his body's natural instincts send him into a state of hibernation that made his survival possible.

Scientists are interested in working on various possibilities of incorporating hibernation into medicine so that certain diseases can be controlled and cured. It is a major success in the medical field that surgeons induce therapeutic hypothermia, a medical process which is somewhat similar to hibernation process, in which human body temperature is lowered to reduce blood circulation for treatment purposes [7]. Space scientists are keener on researching this phenomenon on astronauts that would benefit the space travel [8]. If scientists can succeed, it would be a phenomenal leap in the field of space science that would open many vistas.

Hibernation concept and Eastern tradition

Although humans do not hibernate naturally, there are lots of mythological and semi-factual stories of Indian yogis and gurus of yore who achieved the feat of living more than hundred years by meditation and yogic practices. According to various traditions, folklore and fables, Indian yogis control their mind, body, and senses and enter a non-responsive state like death, which is often referred to Samadhi [9,10]. Kechari mudra, for example, is an advanced practice of yoga that enables a practitioner to have longevity and supernatural effects [11,12]. A similar biological process is naturally achieved without efforts in few hibernating animals.

Nirvikalpa Samadhi, according to Indian traditions, talked by major Indian religions (Buddhism, Jainism, and Hinduism) is the highest state of infinite bliss and peace a human can attain and, in this state of mind, thoughts cease to exist. Although Indian religions promote this as a state of being at one with the Divine, a state of true ecstasy or, union with the ultimate soul, the underlying principle is that, in this state, primarily of the mind, all thoughts and activities dissolve. Gurus and sacred writers claim that it can last for a few hours to a few days. Of course, a lot of supernatural attributes are associated with this phenomenon as per the whims and fancies of the writer, cultural background, religious association, orientation and conservative thinking of the narrator; a fact that we can infer and can't deny is that it is possible for human beings to get into a state of mental hibernation, in which the brain can be rested from current thoughts and feelings and come to a standstill that is very relaxing and rejuvenating.

According to Ayurveda (a unique system of medicine in the Indian subcontinent practiced for over 5,000 years), the monsoon season represents a time for the restoration of physical and mental health. The monsoon rainy season in Kerala, South India from June to September, more notably the Karkaṭa month which falls between mid-July to mid-August is an ideal time aspired by people who throng to Ayurvedic Health Care Centres for relaxation and rejuvenation. This season is conventionally put aside in many traditional families to have more sleep, eat sensibly and stay indoors with Ayurvedic healing that facilitates the brain to rest and the body's evolutionary drive to hibernate. It guides the brain and the connecting neurons to slow down to recuperate the nerve cells as well as the whole immune system so that effectiveness can be achieved in the profession as well as family affairs by enabling better decision-making skills, meaningful relationships and less illness in the body and mind throughout the year. Today, life is a funambulism due to the demands of work, pressures of life and living and, technology. The current technology-based life has made the traditional rest and rejuvenating time a luxury.

Brain hibernation for productivity

Deriving inferences from the above-mentioned hypotheses, some stress management concepts can be derived leading to job efficiency, work performance and productivity and, better work-life balance. Although many people might be practicing or utilizing some of these traditional methodologies already without realizing fully, when done in a serious systematic way better outcome can be achieved.

Psychologists who work on stress and work-life balance identify a disparity between the current technology based lifestyle and the evolutionary adaptation of the environment by human ancestors. This stress-filled lifestyle calls for a resting of the mind and body, notably resting the brain from complex cognitive functions. Today people tend to think that moving away from the workplace is equivalent to resting of mind and body, which is good enough for stress relieving and work-life balance. However, they falter because even when they move from their workplaces, the brain still is involved in major cognitive functions and it does not rest. Consequently, desired stress relieving does not take place because the brain is not rested from complex functions. Learning lessons from brain hibernation in animals and traditional concepts of Eastern religions, occasional reduced brain activity is recommended both for stress management as well as to enhance brain power.

Like stress another element that gives mental fatigue to decapacitate employee effectiveness is work-life balance. Professional and personal balancing of activities is one of the major constraints on employee wellbeing and it is identified to have implication on employee attitudes, behaviours, wellbeing as well as organizational effectiveness [13]. The concept of work-life balance first appeared in the late 1970's in the UK to describe the balance between an individual's job-related work and personal living. In simple terms, work-life balance is a daily effort to proper prioritizing profession and lifestyle. Basically, it starts from better time management and resting of mind and body. Prioritizing profession is to achieve growth and satisfaction in job and professional activities to have a social identity and at the same time have sufficient time and energy for personal growth, family, friends and social activities.

Although the concept of work-life balance among Millennials in Asia, Europe, US and the other parts of the globe differ significantly, Millennials who contribute to a major number of workforce globally look for a balancing act than their previous generation, the Baby Boomers or Gen Xers. Today's information technology has made employees in contact with work from anywhere and everywhere. Computers, emails, and smartphones have enabled people to accomplish their work beyond the physical boundaries of their office, after-hours or during the weekend. The downside of this modern technology based professional life has hinted the personal mental and physical space of the people leading to boredom, stress, and burnout to the extent of being less productive. There are many ways by which people and organizations try to mend this unbalancing situation. Work-life balance enters here as a modern-day mantra to help the Millennials who dominate the global workforce.

Scheduling an equal number of hours for work and personal activities is unrealistic and not encouraged. Psychologists understand that work-life balance is very person-specific because people have different priorities and lifestyles. The formula for balancing act that works today may not work for tomorrow; also, it is different for new-employees and midlevel professionals, single and married person, single couples and couples with children. Nevertheless, it is not work-life balance per se that makes a person more effective in work initiatives. Being away from the physical proximity of the office to balance the act of professional work and personal work give the brain no rest because the physical and mental strain that is experienced by the professional task is shifted to mental tasks in their personal environ. Therefore, more than work-life balance and physically away from the stressors of the workplace, the resting of the brain from mental, cognitive functions is recommended for more effective and productive; a voluntary brain hibernation is suggested.

Practical guidelines: The following could be some practical guidelines that is similar to hibernation that can be easily adopted for reducing brain activity for employee efficiency.

- a) Realize sleep is an essential part of living. Have sufficient resting for the brain by having regular sleep pattern in tune with the circadian rhythm. Develop some personal rituals to induce sleep and avoid thoughts ruminating your mind when you go to bed. Holidays could be utilized for more sleep and rest, doing nothing other than eating and resting to give the brain more power in the work days.
- b) Keep your bedroom away from the TV and other electronic gadgets so that you are not tempted and distracted from sleeping and mental rest. Moreover, paint and decorate your bedroom with pleasant colours and less light to make your mind recognize it as a place of rest rather than thinking.
- c) Reduce stimulants in the evening hours to facilitate brain resting. Learn slow breathing exercise and meditation to reduce cognitive brain activity to nil and control the autonomic nervous system to reduce the whole physical and mental system to survival functions.
- d) If one cannot attain this brain resting activity by themselves, consult some specialists and learn some easy evidence-based techniques to control the brain activity.

Conclusion

Stress and mental fatigue have become an integral part of today's living in both professional and personal domain. It is nature's gift to some animals to manage instinctively such situations by hibernation. Human beings, although are not gifted with this instinct, can work on this feat consciously with substituted mechanisms to rest the brain for optimal performance. By regular sufficient sleep, occasional reduced mental and cognitive activities, and balanced lifestyle human beings can optimize their performance whenever mental fatigue overpowers. The instinct in animals to hibernate is a great eye-opener for humans to recuperate from mental fatigue and rejuvenate for efficiency and productivity.

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