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**Cannabis 101 for Nurses**

**Introduction**

The endocannabinoid system plays an instrumental role in the body. The technological advancement has revolutionized the dimensions of medical science. It essentially constitutes a substance which is similar to cannabis that is produced inherently inside the human body. The cannabis receptors are deemed to be in an abundant amount in our central nervous system. These receptors allow the endocannabinoid system (ECS) to regulate critical functions as following: digestion, memory, immune function, temperature regulation, mood and appetite. When a person smokes marijuana, the system gets flooded with cannabinoids. The impact of cannabis casts distinguished impacts on the physiology. However, some of the effects are essentially positive. Since the cannabis products can potentially stimulate the activity of the ECS, empirical researches are conducted to study treatments.

**Manifestations of Cannabinoids in Body**

In the human brain, endocannabinoids and cannabinoids function as neurotransmitters. Cannabidiol or CBD is a plant-based cannabinoid that has attracted the attention of a wide range of scientists and researchers(“Project CBD: Medical Marijuana & Cannabinoid Science,” n.d.). It does not possess any psychoactive properties. Thus, the benefits caused by CBD are devoid of THC. The technological advancement has accelerated the medical researches. The medical science has delineated a comprehensive research account based on ECS and further discovered critical conditions that relate to the deregulation of the system.

**Endocannabinoid Deficiency Syndrome**

To discuss the syndrome, it is not a disease but a condition which is at times called central sensitivity syndrome. The following set of conditions comprises the syndrome: a migraine, fibromyalgia and irritable bowel syndrome. They are essentially resistant to several treatments and thus researchers have advanced to utilise the cannabis-based treatment. For instance, these conditions involve in excess of one system. Fibromyalgia involves the peripheral and central nervous system, the endocrine, the immune system and even the digestive system. Poor memory and temperature sensitivity are the common symptoms. To discuss treatment, cannabinoids are researched as the potential subjects to cure such conditions. The theory of clinical endocannabinoid deficiency refers to the cases wherein the body fails to produce enough endocannabinoids or receptors to ensure the smooth functioning of the system. Many diseases arise because of the poor mechanism of these functions.

 Cannabis present in plants as hemps, with cannabidiol (CBD), are primarily analogous to the endocannabinoids inherently produced by the human body. Empirical researchers have illustrated that they profoundly interact with the cannabinoid receptors of the endocannabinoid system to elicit several chemicals that foster the homeostasis. In United Kingdom (UK), a research published by Professor Michael Barnes concludes the presence of considerable evidence reflecting the potential of cannabis products to treat several conditions (“Routes of administration for cannabis use - basic prevalence and related health outcomes: A scoping review and synthesis. - PubMed - NCBI,” n.d.). The endocannabinoid system regulates the functioning of neurotransmitter. They also cast a significant impact on regulating the inflammation processes. Hence, the disease that is associated with their dysfunction as Parkinson and Alzheimer may be associated with clinical endocannabinoid deficiency. The cannabinoids extracted from cannabis plants have essential nutrients which can minimise diseases by assisting the endocannabinoid system and fostering sustainable functioning.

**Four Routes of Administration of Cannabis**

 Cannabis use and consumption are prohibited federally. Medical cannabis is legal in 30 states and the District of Columbia. Patients utilise several methods to treat the diseases as per the prescriptions of the doctor. One of the most common methods to utilise cannabis is smoking herbal cannabis. Patients generally tend to smoke the dried cannabis flowers and adjacent leaves. However, cons are associated with it. The widespread discrepancy in the dosage size between concentrated and herbal products can cast adverse impacts as cognitive impairment or psychosis. The increasingly common method to consume the herbal cannabis is through a herbal vaporiser. Hashish which is a crude product constituting sticky glands of cannabis plant is one of the very first way cannabis was utilised for the psychedelic effect. Since a significant concentration of cannabinoids is present in the concentrated products, a small amount is required to feel the effect.

Furthermore, the other route patients may adopt the edible cannabis. They are becoming an increasingly common route of consumption among the patients. When the cannabis products are ingested orally, THC is inconsistently absorbed and extensively metabolised. Various studies have illustrated that for each 1mg of THC consumed via vaporizing or smoking, 2.5 mg of THC is necessary to be ingested to experience the similar effect(“Routes of administration for cannabis use - basic prevalence and related health outcomes: A scoping review and synthesis. - PubMed - NCBI,” n.d.) The local laws which govern these laws vary from state to state. Patients adopt the route to cure the intricate diseases. The patient who ingests cannabis products is likely to experience a long-lasting and more intense effect. The intensification occurs because when cannabis is ingested, the amount of hydroxylated THC is in a higher amount(“Contemporary Routes of Cannabis Consumption: A Primer for Clinicians | The Journal of the American Osteopathic Association,” n.d.). It is one of the common advantages but there also exist adverse consequences. The detrimental downside is the difficulty in regulating the dosage. Patients must strictly adhere to the dosage and prescription as per the directions of the doctor.

 Third, homemade cannabis oil and topical is the consumption route adopted by patients as a treatment. The cannabis oils are generally crude concentrates made at home by users. Their consumption has witnessed an immaculate surge. However, it has not proven to be a potential anticancer agent in true letter and spirits. The limited amount of available data suggests topical cannabinoids is absorbable with systematic effect. The topical preparations are likely to assist with the pain and inflammation at a local level. However, systematic absorption by the route of cannabis oil and topical is negligible and patients may not feel intoxicated. It is known to treat pain and epilepsy among other advantages. Gastrointestinal and breathing problems are the disadvantages of consuming the discussed route of cannabis consumption.

 Fourth, juiced cannabis is another route of cannabis consumption adopted by patients. It is also growing to become a prominent route for consumption. The high concentration of cannabinoid acids coupled with the immaculate balance of acids assists the cell function and minimises the damage caused by the free radicals. However, cannabis lose significant amount of nutritional value when heated. CBD has halted the growth of cancers in several cases but with high doses. The cons associated with the route are the frequent and intense phenomenon of psychosis and delusions.

**Conclusion**

 CBD has assumed a potential role of offering significant medical benefits. Products established form CBD extract have gained immense exposure. Besides, cannabinoids are utilised to cure the deficiencies and syndrome as endocannabinoid deficiency. Robust technological and medical advancement has carved the path for the treatment of diseases. Different routes have been established for the patients to consume cannabis for the treatment of conditions as per the supervision of the doctor or nurse. However, both positive and negative ramifications are caused by these routes. The bottom line is that cannabinoids extracted from the cannabis plants are being potentially utilised by researchers and scientists to gain medical benefits.

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