

GLOSSARY

Aromatherapy - the practice of inhaling, ingesting, or absorbing volatile plant oils, including essential oils for health benefits, including use to stimulate brain function and to improve psychological and physical well-being

Attention – a cognitive function that maintains a variable level of awareness, the four main types of attention are selective attention, divided attention, sustained attention, and executive attention, attention span may vary based on a number of factors and has a direct connection with learning, awareness, safety, and memory

Blood-brain barrier (BBB) - the dynamic, protective barrier membrane that separates blood circulating in the extracellular fluid in the central nervous system and the brain, the BBB is semipermeable so some materials are allowed to cross and others are prevented for purposes of protecting the brain from foreign substances that may injure the brain

Botanical – from a plant or plant part, of or relating to plants or to the scientific study of plant life, a substance obtained from plants

Cognition – the mental action or process of acquiring knowledge and understanding through thought, experiences, and the senses, the act or process of knowing, mental processes involved in gaining knowledge and comprehension, including thinking, knowing, remembering, judging, and problem-solving

Diffusion – the process of using warm or cool water vapor to diffuse microparticles of essential oil aromatics into the air in the form of a fine mist, diffusion allows essential oils to be inhaled and absorbed through mucosal tissues

Essential oils - aromatic volatile oils expelled from the leaves, flowers, stems, roots, seeds, bark, or other parts of plants via steam or hydrodistillation, essential oils are small in molecular size and lipid soluble, capable of penetrating cell membranes and being metabolized as nutrients, essential oils should be diluted before direct contact use, may be directly inhaled, ingested, or topically applied

Geraniol – a naturally occurring scent ingredient found in lemon essential oil, geraniol is a monoterpenoid and an organic alcohol molecule with a carbon atom bound to a hydroxyl (molecule of oxygen hydrogen) group

Herb - any plant or plant part recognized for its medicinal, culinary or aromatic properties

Herbal therapy – use of a plant or its parts for its medicinal value and its value toward wellness associated with certain conditions, use of phytochemicals found in plants for their ability to enhance wellness on a physical, emotional, or spiritual level

Heterogenetic – alteration of generations, such as genetically modified organism (GMO)

Homeostasis – an ideal balance or stable equilibrium between interconnected parts, such as physiological processes that are maintained in balance to each other, a balance of systems in the body

Infusion – a hot water extraction method used with softer plant parts including leaves and flowers (vs. decoction which is used for bark, seeds, and roots) with a typical ratio of one teaspoon of herb to one cup of water, or one ounce of herb to one pint of boiling water, infusions are generally steeped for longer periods of time such as 4 to 6 hours or overnight

Inhalatory (inhalation) method – the simplest way to receive essential oils, essential oils may be inhaled directly and undiluted from the vial

Ketones – organic compounds containing a carboxyl group with a hydrocarbon on both sides, thought to stimulate cell regeneration, found in rosemary and sage

Long-term potentiation (LTP) – patterns of synaptic activity in the brain that, over time and repetition, create a persistent strengthening, predictability, and increase in signal transmission between neurons

Memory – process of receiving and retaining past information or knowledge so it is available for recall when needed, memory helps create connections between people, places, events, and knowledge of what we have experienced in the past, so we can help make sense of the present and future

Mild cognitive impairment (MCI) – slight but noticeable problems with memory, language, thinking or judgment that are greater than normal aging deficits and not as great as a dementia-related decline, MCI is associated with an increased risk of developing Alzheimer’s disease or another dementia

Nervines – a property of an herb, a medicine used to calm or stimulate the nerves, an herbal property that impacts the nervous system either with stimulating or relaxing actions

Neurobiology - the scientific study of the structure and function of the nervous system and brain, also called *neuroscience*

Neurocognitive – relating to neurological structures or processes involved in cognition, a neurocognitive deficit might occur as a result of brain injury such as stroke, head trauma, or progressive neurological disease

Neuroplasticity - the brain’s ability to adjust to variations in health or in response to an injury of disease process, the malleability of the neurogenic system to adapt, cognitive adaptability, new neural pathways able to be created in order to improve and recover motor and sensory function

Nootropic – cognitive enhancers, smart drugs, naturally-occurring or synthetic chemicals that provide cognitive benefits, from the Greek *noos* for “mind”

Officinalis – used in medicine, recognized in the pharmacopoeia

Olfactory system – sense of smell, part of the sensory system, sensation of airborne substances, closely and intensely associated with memory

Phenols – a class of chemical compounds found in plants, including peppermint, the phenolic acids in peppermint provide natural antioxidants

Sesquiterpenes – chemical constituents commonly found in essential oils, known to be able to pass beyond the blood-brain barrier

Synaptic plasticity - changes that occur in neural synapses, based on neuron activity or inactivity, the number of nerve cells in an individual brain that have neuroplastic ability may be in the millions or billions

Tea – a hot or cold drink made from combining herbs and water, infused for a short period of time, used for culinary purposes

Tisane – a hot or cold drink made from combining herbs and water, infused for hours, overnight, or for longer period of time, used for medicinal purposes

Tonic – a remedy that has noted properties for improving energy, strength, building or nourishing herbs that can be safely taken over long periods of time for a deficiency

Topical application – the application of essential oils directly to the skin for absorption via the integumentary system, most essential oils are highly concentrated therefore dilution is recommended by mixing a type of carrier oil with the essential oil

Vigilance – a state of alertness, keenly attentive, attention endurance

Visuospatial/Visuoconstructional function – a mental process including comprehension of and application with visually perceived objects and their spatial relationships

Volatile oils – essential oils that contain readily-vaporizing aroma compounds such as terpene derivatives from plants