## **AromaStick Energy**







## An energizing scent to invigorate mind and body

<u>Ingredients:</u> Organic Peppermint Oil, Organic Rosemary Oil, Organic Grapefruit Oil

Energy is required for both mental and physical performance. When levels of energy drop, the result is lack of vitality and motivation.

There are various ways to invigorate a tired mind and body. Most fixes come in the form of snacks packed full with sugar or from "Energy" drinks loaded with caffeine. But there is another element just as necessary, and that is providing the body with sufficient oxygen so it can convert glucose into energy (Note: It is possible to turn glucose into energy without oxygen, but the byproduct lactic acid results in muscle aches). An increased demand for energy leads to an increase in metabolism and, as a consequence, to an increase in the amount of oxygen required by the body. As a result, a sufficient supply of oxygen is essential if the body is to produce enough energy to sustain its level of performance. When we breathe in, oxygen rich air enters our lungs. From here, oxygen is absorbed into the blood, which, thanks to the cardiovascular system, transports the oxygenated blood to the muscles and the brain (Pittman 2011). Naturally, the actual amount of air we inhale determines the level of metabolic activities which can be performed, and thus the level of performance, which can be sustained. By improving oxygen uptake, increased levels of both physical as well as cognitive performance can be achieved (Kim et al. 2013, Mucci et al. 2004).

Performance, for far too long, has been reduced to muscle power. It is increasingly known that the muscles do not work on their own but instead their function is closely tied with the brain. For instance, research shows that muscle fatigue can lead to changes in interaction with structures of the brain's neural network or that exercise tolerance in motivated subjects is ultimately limited by perception of effort (Marcora et al. 2009) indicating that a large part of muscle fatigue is a result of the brain regulating motoric performance (Hilty et al. 2011). Confidence, will power, focus, the ability to deal with stress are all factors that influence the capacity for drive and motivation, and together with muscle power, performance.

The essential oils in the AromaStick Energy have been carefully composed to boost blood oxygen levels for increased muscle power and to trigger the brain into increased alertness and focus.

Peppermint oil has a variety of uses. Inhalation of peppermint has been shown to be effecting in soothing and protecting the respiratory tract and in inhibiting the growth of germs (Ács et al 2018). Menthol, a key component of peppermint has been shown to open up the airways in the nose and trachea (Kenia et al. 2008). However, peppermint oil has also an impact beyond its antimicrobial properties. Studies have shown that the inhalation of peppermint aroma improved lung capacity and inhalation ability among healthy participants (Raudenbush 2003) while tests assessing levels of attention showing that peppermint oil generally reduces

tiredness while increasing levels of alertness, allowing participants to stay focused for longer and perform better (Barker et al. 2003, Moss et al. 2008). Animal studies have even shown that the effects of inhalation are comparable to the effects obtained following injection of caffeine (Lim et al. 2005).

Rosemary oil and the inhalation of its volatile compounds have been shown to produce significant enhancement of performance on cognitive tasks and alertness (Moss et al. 2003, Moss et al. 2012) which goes hand in hand with other studies that show their use reduces feelings of anxiety and stress (McCaffrey et al. 2009). Inhalation has also shown to have stimulatory effects on the autonomic nervous system, increase heart rate, blood pressure and respiratory rate (Sayorwan et al. 2012) backing the traditional medicinal use of rosemary for its antispasmodic and vasodilatory effects.

Grapefruit, as a member of the citrus family, shares many of its members' properties. Studies have suggested that the inhalation of citrus scent can have a significant impact on physiological stress symptoms, with research indicating an ability to restore stress-induced immunosuppression and homeostatic balance (Komori et al. 1995, Johnson et al 2016). The inhalation of grapefruit oil scent has also been shown to increase autonomic neurotransmission and blood pressure (Tanida 2005). In fact, inhalation of grapefruit oil can increase the activity of the sympathetic nervous system, i.e. the part of the autonomic nervous system responsible for muscle blood flow and tension, heart rate and respiration by a factor of between 1.5 and 2.5, with plasma adrenaline levels increasing by a factor of 1.7 (Haze 2002).

The effectiveness of scents, however, is not just down to the essential oils used. In fact, effectiveness highly depends on molecular concentration in the inhaled air (Buchbauer et al. 1993). The release of odors into ambient air via a diffuser will lead not only to a small amount of therapeutic odor molecules being inhaled, but also to rapid habituation due to constant exposure. As a result, any positive effects there might be are lost or greatly reduced (Chaudhury 2010). When working with scents therefore, an important aspect lies in the delivery method. This is where the AromaStick comes in: it delivers scents in a high molecular concentration directly to the nose, while greatly reducing exposure time. This has the additional advantage in that it forces the user to sniff, which is important for transporting scent molecules to the epithelium in the nose, the region where we "smell". At the same time the exposure time is kept to a minimum to avoid habituation. This makes AromaSticks 300% more effective than a scent released into ambient air (Schneider 2016).

To test the stimulating properties of the AromaStick Energy, peripheral capillary oxygen saturation (SpO<sub>2</sub>) was measured using pulse oximetry. The results showed that the effects of deep breathing could be amplified by a factor of 2.5. In addition, the heightened level of oxygen was provided three times longer than compared to normal deep breathing. In absolute terms, the AromaStick Energy increased SpO<sub>2</sub> saturation by 1.6%.

Considering the narrow range of oxygen saturation in healthy individuals (between 94 to 98%), this represented an increase of 40% (Schneider 2017).

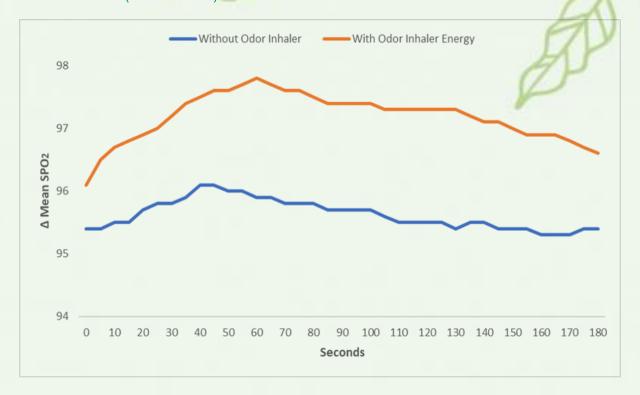


Figure 1: Mean changes in blood oxygen levels vs normal deep breathing. Original data and figures [Schneider R., 2017]

The AromaStick Energy rapidly boosts blood oxygen levels for cells to produce energy and helps the mind to stay alert and focused.

AromaStick natural inhalers are not medicines and are not intended to be used in place of medicines to treat, alleviate or prevent a health problem or an illness. The purpose of this product information leaflet is solely to provide an introduction to the AromaStick and the essential oils it contains. AromaStick natural inhalers are intended to improve wellbeing in healthy individuals.

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