



Integrative Breathing Therapy Professional Training Module 2 – The Biochemical and Psychophysiological Dimensions

Day 1 – Registration
8:30 – 9.00am

SESSION ONE: (90min)

Welcome

Housekeeping, introductions, seminar outline and aims.

Topic 1: Biochemical dimension-definition and context in multidimensional model.

Overview of hyperventilation and hypoventilation disorders, prevalence and significance.
The biochemical dimension and breathing

Topic 2: Breathing therapies that focus on the biochemical dimension by increasing and decreasing CO₂ and O₂. Overview of applications and research evidence.

Morning Tea
10.30 – 11am

SESSION TWO: (90 minutes)

Topic 3 : Review of physiology of the biochemical dimension and gas diffusion. PO₂ and PCO₂ gradients, gas exchange in lungs and tissues, gas transport, ventilation-perfusion ratios, acid/alkaline balance, bicarbonate buffering systems, Bohr and Haldane effects.

Topic 4: Chemical control and regulation of breathing. Disruptions in breathing control and relevance for hyper and hypoventilation disorders.

Lunch
12.30pm – 1.30pm

SESSION THREE: (90min)

Topic 5: Assessment of Hyperventilation Disorders. Capnometry, Breath Holding Time,

Symptoms.

Practical Capnometry assessment protocols. Capnometry at rest. Hyperventilation, exercise and mental provocation tests.

Afternoon Tea
3pm – 3:30pm

SESSION FOUR: (90 mins)

Topic 6: Correcting hyperventilation disorders. Techniques and protocols e.g. Buteyko, direct and indirect breathing relaxation techniques (detail on day 3), capnometry assisted biofeedback.

Practical Capnometry assisted biofeedback.

Session Close
5.00 pm

Day 2 - Arrival
8:30 – 9am

SESSION ONE: (90min)

Topic 7: Hypoxia and hyperoxia physiology, negative (pathological) and positive (therapeutic) effects. Hormesis and adaptive medicine. Therapeutic rationales, applications and research. Cautions and contraindications.

Morning Tea
10.30 – 11am

SESSION TWO: (90min)

Topic 8: Practical
Intermittent Hypoxic Training- GO2Alitude. Breathing techniques utilising hyperventilation and hypoventilation with Breath Hold Practice.

Lunch
12.30 – 1.30pm

SESSION THREE: (90min)

Topic 9: Introduction to psychophysiology of breathing. Interdependence of mind, emotions and the breath. Breathing as a regulator of mental and emotional states. Effects of mental and emotional states on breathing patterns, regulation control and breathing perception. Psychophysiological aspects of Dysfunctional Breathing. Direct and indirect breathing techniques. Breathing perception and interoception. Pleasantness and unpleasantness of breathing

Afternoon Tea
3 – 3:30pm

SESSION FOUR: (90min)

Topic 10: Practical Mindful breath and movement.

Session close
5pm

Day 3 - Arrival
8:30 – 9am

SESSION ONE: (90min)

Topic 11: Breathing, brain and nervous system interactions. Neural oscillations and breathing. The psychiatric functions of the nasal cycle. and its effects on the function of the brain and autonomic nervous system. Brain oscillations. Breathing and its influence on vagal tone. Oscillations, homeostasis. Resonance frequencies.

Morning Tea
10.30 – 11am

SESSION TWO: (90min)

Topic 12: Practical- Resonance Frequency Breathing. Mind-body techniques for raising vagal tone and improving ANS regulation.

Lunch
12.30 – 1.30pm

SESSION THREE: (90min)

Topic 13: Practical- Working with various patterns and rhythms and modes of breathing.

Afternoon Tea
3 – 3:30pm

SESSION FOUR: (90)

Topic 14: Clinical applications for patients with anxiety, depression, panic disorder, PTSD. Research, case studies, techniques and protocols. How to choose techniques appropriately.

Closing Discussions

Seminar closure
5pm