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Clinical Aromatherapy for Sleep Restoration

*What is essential in essential oils for sleep disorders and
the recovery of inner peace after sleep deprivation.*

Michael Scholes

Master Essential Oil Expert & Natural Fragrance Formulator

The Laboratory of Flowers · 1990–2026



“Inspired by nature — supported by science. Where flowers meet science.”

Traditional perfume, reimagined for the 21st century — the therapeutic craft of scent brought to modern needs.

The Aromatic Apothecary — formulas from the past rebuilt through alchemy and chemistry into synergistic blends for specific conditions and symptoms.

Dedicated to preserving the past — organic resources wherever possible, designing for health and well-being.



650+

essential oils

*One of the most extensive collections in the world
our living “Library of Fragrance.”*

Sleep is Chemical. Essential Oils are Chemistry.



Sleep begins the moment we wake — shaped by all we experience and how we meet the day.

- I have always known that sleep was at the center of everything we do, see, think, feel, digest and focus on. Without it our everything is compromised.
- Unless you sleep well, symptoms rarely disappear — chronic conditions persist and mental decline follows.
- Sleep is backward – tired in the morning and energized in the evening
- Without sleep, everything is compromised.
- At the center of sleep is our nervous system and our gut.
- If you want to live a long life several things have to occur and then all you have to do is practice these every day for as long as you live. For some this will be when you enter deep sleep at the end of your life.

Fragrance reaches what we cannot see within — stress, anxiety, fear, worry etc.

- Even partial sleep deprivation has a significant effect on mood.
- Falling and staying asleep is a delicate balance of chemistry — and essential oils are some of nature's most complex chemical structures.
- Inhaled and absorbed in sequence, oils change how we prepare for, enter and benefit from sleep.
- All synthetic smells are a nuisance to society and are a key factor in dementia.

CHEMISTRY WITHIN

Confused
Hopeless
Empty
Manic
Inconclusive
Scattered
Regretful
Yearning

The chemistry itself: essential oils are complex mixtures of volatile organic compounds — terpenes, hydrocarbons and oxygenated derivatives (alcohols, aldehydes, ketones) that carry both aroma and therapeutic action.



Why Sleep Escapes Us

The causes are many, tangled and personal — there is no single fix, and no two people are alike.

🌙 **1 in 8** people die in their sleep — an estimated 25,000–45,000 each day. Some in peace and completion; others from chronic illness; others who simply no longer wish to be here.

BODY & CLOCK

- Aging-related changes
- **Cortisol dysregulation**
- **Hormonal changes (pregnancy, menopause)**
- **Neurological & nervous-system stimulation**
- Frequent nighttime urination
- Night work & **jet lag**

INTAKE & HABIT

- Caffeine, nicotine, alcohol, substances
- Heavy meals late at night
- Excessive daytime naps
- Irregular schedule, screens before bed
- Lack of activity — or late, heavy exercise

HEALTH & ENVIRONMENT

- **Pain, asthma, reflux, thyroid, inflammation**
- **Gut dysfunction & inflammation**
- Medications that interfere with sleep
- **Insomnia, apnea, RLS, narcolepsy**
- **Stress, anxiety & depression**
- Noise, light, temperature, bedding
- **Toxicity — the liver between 2–4am**



What Sleep Used to Be — and How Much We Need

For most of history we slept in two halves, waking to a quiet hour called “the watch.”

IN HISTORY — BIPHASIC SLEEP

First sleep 9–11pm, 3–4 hrs.

“The watch” 1–2 hrs. awake — prayer, reflection, reading, company

Second sleep *until dawn*

- Whole families often shared one bed
- Documented 8th c. BC → early 20th c.
- Ended with industrial light — merged into one block
- Average then: 7–9 hours

HOW MUCH WE NEED

Newborns 0–3 mo **14–17 hrs**

Infants 4–11 mo **12–16 hrs**

Toddlers 1–2 **11–14 hrs**

Preschool 3–5 **10–13 hrs**

School 6–12 **9–12 hrs**

Teens 13–18 **8–10 hrs**

Adults 18–64 **7–9 hrs**

Older 65+ **7–8 hrs**

THE OPTIMUM CYCLES

5% Stage 1 · Light

drifting off, minutes

50% Stage 2 · Light

deeper, still light

25% Stage 3 · Deep

slow-wave — body repair

25% REM · Dream

memory & emotion

If we wake often the cycles never complete and we experience exhaustion even after eight hours.

What Is Essential in Sleep



How you sleep is the barometer of your entire life.

It dictates what you can focus on, achieve and overcome — and your resilience against stress and immune collapse. Lack of sleep is the number-one driver of chronic illness.

“As soon as your body warms by even a degree or two and senses any light, it wakes — mistaking it for the sun calling you into your day.”



“Decide how long you want to live — and how long you want to think clearly — then adjust your lifestyle accordingly.”

— Michael Scholes

THE SLEEP CHAMBER

- Clear of clutter — one book, no TV
- Black out every light source
- No caffeine after your first cup
- No alcohol after 7pm (it raises blood pressure)
- No food after 6pm — avoid gluttony
- No work or devices after 6pm
- No calls after 8pm
- No heavy workouts after 6pm
- Minimal fluids after 7pm
- No blue light two hours before bed
- Wake with the sun in summer; sleep longer in winter



The Consequences of Not Sleeping Enough

Sleep quality is driven by circadian rhythm — the body clock that governs sleep, digestion, immunity and health.

WHY WE DON'T SLEEP

- Too much of everything – Gluttonous life-style
- Nervous-system overload
- Focus on the external world
- Overthinking & excess activity
- Consumer-driven, avoidance of stillness
- Fear · no time to feel
- Unresolved trauma · lack of intimacy
- **Running from — or toward — something**

THE BODY CLOCK

- Regulates sleep, digestion, immunity, health
- Relies on light, routine and timing
- Artificial night light disrupts melatonin
- Needs consistent signals to stay aligned

MODERN DISRUPTIONS

- Too much indoor time
- Late-night eating
- Irregular schedules — “social jet lag”
- Sugar, caffeine, alcohol, heavy meals
- Poor sleep hygiene
- Dopamine junkies



Long-term: cardiovascular disease (hypertension, heart attack, stroke), type-2 diabetes, obesity and weakened immunity — with cognitive decline, memory loss, a 33% higher dementia risk, and depression, anxiety and severe mood swings.



Better Sleep = Light + Timing + Consistency

Four levers realign the body clock. An asterisk marks where a blend can help.



Light

Bright daytime light strengthens rhythm; night light — even dim — suppresses melatonin and disrupts sleep.



Timing

Eat earlier. No meals in the three hours before bed.



Temperature

Sleep cool — a warm room mimics the sun's warmth and wakes you.



Consistency

Sleep and wake at the same time every day.

WHEN SLEEP FALTERS

Reduced focus*, cognition*, mood* and reaction time — and, long-term, heart disease*, diabetes* and depression*. The body clock governs sleep*, digestion*, immunity* and health; artificial night light throws it off.



** There is a blend for this.*



The Dose Response of Sleep Loss

Chronic deprivation impairs focus, memory and mood now — and compounds risk the less you sleep.

< 2 hrs

PER NIGHT

- Severe inflammation
- Weakened immunity
- Major mental-health disorders

< 4 hrs

PER NIGHT

- 70% higher obesity risk
- Heart disease, stroke, T2 diabetes, early mortality
- Immune function ↓ up to 72%
- Accelerates aging ~8 years

< 6 hrs

PER NIGHT

- 48% higher heart-disease risk
- 38–50% higher obesity risk
- Diabetes, hypertension, anxiety, depression
- Testosterone ↓ 10–15% — libido & function

< 7–8 hrs

PER NIGHT

- Depression, anxiety, memory loss
- 33% higher dementia risk
- Poor focus, slower reactions, more accidents
- Hormonal imbalance & reduced health

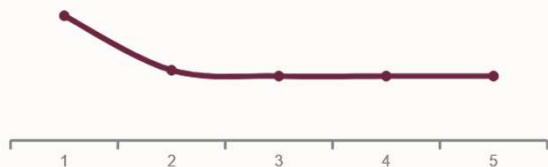
“Good sleep improves and protects brain health.”

How Much Sleep Do We Need?

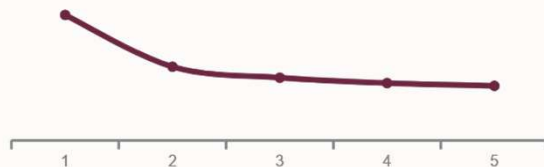


A U-shaped curve: both short and long sleep — and fragmented sleep — raise the odds of disease.

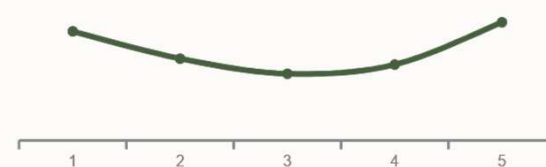
Diabetes



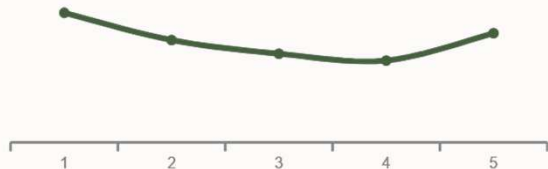
Obesity



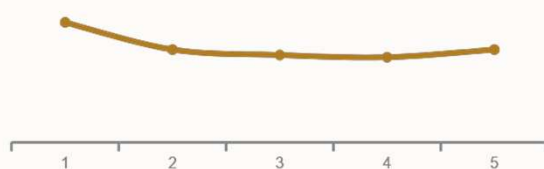
Mood disorders



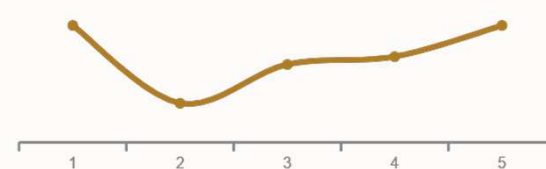
Blood-vessel disease



Hypertension



Organic mental



Zhu G, Cassidy S, et al. Sleep as a Risk Factor for Poor Metabolic & Mental Health — UK Biobank, 84,404 participants. *Nat Sci Sleep*. 2021;13:1903–1912.



The Chemistry of Sleep Architecture

As you move through sleep, the neurochemical profile shifts to serve distinct functions.

PHASE	CHEMICAL SIGNATURE	BIOLOGICAL PURPOSE
Non-REM	High GABA & adenosine; low monoamines (serotonin, norepinephrine, histamine).	Lowers heart rate, drops core temperature, initiates physical tissue repair.
REM	Peak acetylcholine; monoamines fall to their lowest.	Generates vivid dreams, processes emotion, consolidates long-term memory.



THE CASE FOR FRAGRANCE IN SLEEP RESTORATION

A scientifically backed, non-pharmacological tool — acting directly on the brain's emotional and memory centers. Scents such as lavender and chamomile can lower cortisol **by up to 45%**, deepening slow-wave sleep and easing restlessness. To calm the mind: Lavender, Bergamot, Roman Chamomile, Frankincense.

The Flip-Flop Switch



Sleep is a chemical balance — homeostatic sleep pressure against the circadian clock, toggling brain and body between waking and sleep.



SLEEP PROMOTERS · “DOWNERS”

Adenosine builds during waking — raises sleep pressure and drowsiness

Melatonin released in darkness — sets circadian rhythm, prepares for sleep

GABA inhibitory — suppresses wake-promoting brain activity



WAKEFULNESS DRIVERS · “UPPERS”

Orexin (hypocretin) stabilizes alertness and wakefulness

Histamine promotes cortical arousal and alertness

Norepinephrine & serotonin sharpen attention, muscle tone, brain activity

These neurotransmitter's behave like a biological switch — tipping the brain, cleanly, from one state to the other.

Essential Oils Meet the Neurotransmitters



Each messenger has its oils — steady, calming or lifting the chemistry of the mind.

Adrenaline

Black pepper · rose · grapefruit stimulate epinephrine; inhaled rose lowered it 30%.

Noradrenaline

Peppermint · rosemary · lemon aid focus, calming excitatory drive.

Dopamine

Oregano · thyme · lavender · rosemary · lemon help balance the pleasure signal.

Serotonin

Lemon · lavender · linalool (geranium, basil) support mood and reuptake.

GABA

Lavender binds calming receptors — quiets the mind, deepens slow-wave sleep.

Acetylcholine

Lavender · ylang · blue tansy soothe the parasympathetic / vagus nerve.

Glutamate

Lavender helps regulate the main excitatory, memory receptor.

Endorphins

Ylang ylang releases endorphins; vanilla reduces anxiety.

Where Oils Meet Chemistry — Distillation & the Nose



The body is always distilling adapting under stress to make what it needs.

Steam distillation extracts oils from fresh or dried plants.

It is alchemical — some constituents appear in the oil that never existed in the plant.

Over 3,000 constituents across 1,000+ aromatic plants — a receptor in the body for each.

The more balanced our lifestyle and chemistry, the more powerfully oils can work.



THE OLFACTORY PATHWAY

- 1 Volatile molecules are inhaled and dissolve in the nasal mucus.
- 2 They bind G-protein-coupled receptors on olfactory neuron cilia.
- 3 A biochemical cascade fires an electrical impulse.
- 4 The signal lights up the limbic system — memory and emotion.
- 5 One second per breath — but the effects linger far longer.



Why We Don't Sleep — An Essential-Oil Answer for Each

The signature five: Lavender (calms) · Clary Sage (steadies mood) · Bergamot (uplifts) · Rose (happiness) · Sweet Orange (resets the spirit)

Alcohol / Addiction

cardamom · clary sage · clove

Allergies

myrtle · bergamot · lemon balm

Anger

rose · roman chamomile · linden

Anxiety

lavender · ylang ylang · blue tansy

Balance (lack of)

copaiba · clary sage · cinnamon

Bedlam

cedar leaf · muhuhu · rhododendron

The Blues (light)

lavender · marjoram · bergamot

Breathing

ravensara · frankincense · cajeput

Caffeine

coffee absolute

Calm

blue tansy · lavender · mandarin

Compulsion

wild orange · copaiba · angelica

Congestion

sage · camphor · inula

Creaky joints

birch · spearmint · juniper

Depression

clary sage · jasmine · sandalwood

Fear

clary sage · sandalwood · carrot

Feminine balance

fennel · geranium · mugwort

Focus

peppermint · rosemary · lemon

Gut balance

ginger · rosemary · lemongrass

Grief

rose geranium · sandalwood · rose

Heart ache

rosewood · ylang ylang · bergamot

Hormone imbalance

geranium · chamomile · ho wood

High blood pressure

marjoram · neroli · ylang ylang

Hot flash

sage · clary sage · geranium

Inflammation

frankincense · ginger · wintergreen

Itch

roman chamomile · palmarosa · tansy

Jet lag

rosemary · lemongrass · peppermint

Joy (or lack of)

frankincense · cedarwood · eucalyptus

Kidney / adrenal - Vitality

pine · lemongrass · ginger

Liver / detox

rosemary · lemon · everlasting

Menopause

rose · neroli · chamomile

Muscle tightness

vetiver · spearmint · pepper

Nausea

peppermint · spearmint · ginger

Over-stimulated

cananga · siam wood · marjoram

Pain — chronic

birch · lavandin · clove

Peace (or lack of)

litsea · lemon · petitgrain

Poor circulation

lime · sage · spearmint

Prayer

tree of life · palo santo · galbanum

PTSD

wild orange · vanilla · neroli

Remembrance

agarwood · tobacco · mitti

Sadness

basil · palmarosa · ylang ylang

Safety

vetiver · patchouli · cedarwood

Sleep deep

marjoram · vetiver · jasmine

Stomach soother

roman chamomile · tarragon · tangerine

Stress relief

marjoram · benzoin · sweet orange

Sunrise

lavender · vanilla · patchouli

Trauma

galbanum · angelica · guaiac wood

How to Use Essential Oils for Sleep



Follow nature — less is more. The smallest molecule can have the deepest effect.

Absorb

outdoors — draw in the aromatic molecules of nature.

Apply

often, every day, as though your life depends on it.

Choose

single notes for simplicity, or blends for complex, layered needs.

Customize

unscented products, cleaners, diffusers, mists, candles.

Create

an aromatic sanctuary at home that mirrors the outdoors.

Identify

The root cause — physical, emotional, psychological, or trauma.

Microdose

single drops, inhalation, points and massage — continuously.

Regulate

how much, when and how often — a drop 30–60 min before bed.



A Five-Year Return to Restorative Sleep



Male, 67. Good health; lives and works alone; overthinks, overworks. Sleep unraveled after losing a parent, then a relationship. Often fatigued, restless, unmotivated — an overachiever, and also committed to change.

STAGE 1

Foundations

- More hydration & yoga
- Leaving the house daily
- Bookending each day
- Being in community
- Practice gratitude — Joy over grief

STAGE 2

Rhythm

- Yoga 5x/week
- Daily coffee-shop visits
- Joined a men's chorus
- Attended church

STAGE 3

Discipline

- Added cycling
- In bed by 9 pm
- More home-cooked meals
- Eased his workload
- Daily trauma-recovery work

STAGE 4

Restoration

- Swimming 2x · weights 3x
- Bed 9pm, up 5am
- Gave up coffee · 80% home-cooked
- No devices, full blackout
- Sauna & cold plunge 3x

Essence 1 & Essence 2

Anointing oils extracted from thousands of vials, in hiding for thirty-five years — the ultimate blends that formulated themselves.

Essence 1 2025

*From 3,000+vials that were forgotten, left behind, sitting still and waiting.
A one-of-a-kind fragrance that cannot be replicated — limited in supply,
formulated to heal what lies within that cannot be seen but we know exists.*

INTENTION

*For those lost in the shadows — left behind, forgotten, not yet
actualized — who need healing and transformation into their true
selves.*

Essence 2 2026

From 4,500+ vials — 38 oils in 14 purposeful formulas: Abundance, Beginnings,
Courage, Dreams, Energy, Gratitude, Healing, Renewal, Romance, Uplifting,
Serenity, Sensual, Spirit, Well-being.

INTENTION

*To shift from the separateness of the past and reconnect to all the
parts of us that are pure and true — through transformation.*

Summary



Breathe..... sleep is 50% lifestyle and 50% chemistry, and we prepare for it while awake.

- Sleep is a complex, chemistry-driven equation.
- Essential oils are complex chemical solutions — nearly 1,000 worldwide.
- Each oil is its own equation; each person is another.
- Combined oils create still greater complexity.
- At incompatible doses, oils can disrupt sleep.

- Best used throughout the day — products & diffusion.
- In preparation for sleep, use less — inhalation & microdosing.
- To get the most from oils, study to find what works for you.
- Use daily, continuously — as though your life depends on it.

Breathe · smile more · move your body · eat less · pray some · love what you do.



HOW TO BE HAPPY ALL THE TIME



“The rose plant of our happiness can grow only on the fertile soil of our peace. It can never grow on hard, unfeeling soil. We have to dig constantly into peace with the spade of our good actions — and keep our happiness plant well-watered with our spirit of love and service.”

— Paramhansa Yogananda