#### **Non-Conventional Therapies**

March 2, 2021

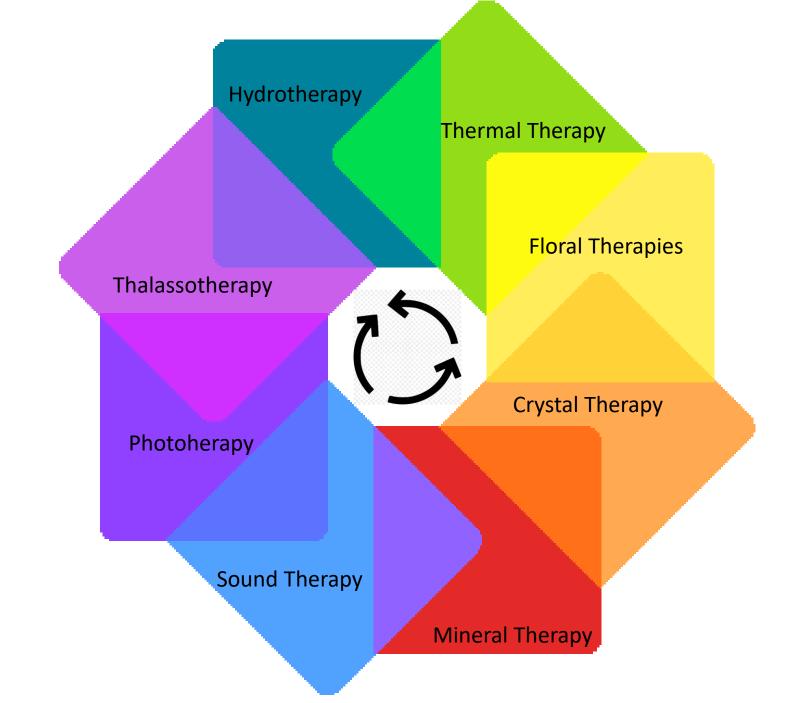
Néstor A. Ramírez, MD, MPH

#### Session 5

Therapy with Flowers, Aromas, Minerals, Crystals, Lights and Temperatures

## Plan for Session 5

- Mind-body connection and illness.
- Stress response vs relaxation response.
- Psychoneuroimmunology.
- Floral and aromatherapy basics.
- Thalassotherapy and Thermal therapy
- Light and therapies.
- Sound therapies



## Principles

• The mind-body connection exists and operates mainly under the level of conscious awareness.

• The human psyche can directly or indirectly influence all body systems and functions.

• Chronic stress is the main contributor to many psychosomatic illnesses.

# Psycho-Neuroimmunology

- Scientific study of the interactions between emotions, the brain and the immune system.
- Many links exist between
  - Mind.
  - Hormones.
  - Immunity.
  - Body functions.
- Physical symptoms deeply interact with and affect emotions and viceversa.

### Central Sensitization (2)

- Increased reactivity of the Central Nervous System (CNS).
- Maintains, prolongs and amplifies noxious messages to the components of the Autonomic Nervous System (ANS).
- CNS and ANS become conditioned to accepting and processing these noxious signals.
- Imagine a computer with a hyperactive processor playing extremely loud off-key music, accelerated videos, rapidly scrolling emails, unreadable ads and recurring *ERROR!* message windows.
- In one word: Painful chaos! (Sorry, two words)

## Central Sensitization (1)

Many "illnesses without disease" are linked to <u>central</u> <u>sensitization</u>, an upregulation of the nervous system:

- Some types of arthritis.
- Migraine.
- Fibromyalgia.
- Irritable Bowel syndrome (IBS).
- Peripheral neuropathy.
- Complex regional pain syndrome.
- Chronic fatigue syndrome.
- Restless legs syndrome.
- And many others.

Uncontrolled, Unexplained, Unbearable, PAIN!

### Non-Traditional Therapies

- Aim of most therapies is to provide a tool to manage acute and chronic stress.
- Focus the person's mental and physical energies to control the negative effects of the *Fight or Flight (FoF)* response.
- Chronic stress and anxiety may cause serious **pain**, organ dysfunction and overload.

Stress

#### **FIGHT or FLIGHT RESPONSE**



Fight or Flight (1)

 Any physical, chemical or biological agent, environmental condition, external stimulus or event which can cause in an individual's organism a reaction in its somatic defense responses because it senses that the exposure situation might be threatening to its safety and wellbeing, could be challenging, or require further action.

Ramirez 2021

The result is **Stress**.

# Fight or Flight (FoF)

- Stressors produce a *Fight or Flight* response.
- FoF is a very efficient short-term reaction which prepares the body to maximize its defenses against an attack.
- The FoF response is a real source of long-term stress which harms rather than benefits the organism.



#### Increases/Activates

- Sympathetic System
- ACTH/Cortisol
- Pupil dilatation
- Epinephrine/Norepinephrine
- Heart rate & Blood Pressure
- Peripheral Vasoconstriction
- Blood pressure
- Blood sugar
- Fatty acid metabolism
- Muscle Vasodilatation
- Shaking
- Blood clotting

#### Decreases/Suppresses

- Parasympathetic System
- Immune system
- Stomach and upper GI
- Erection
- Salivary secretion
- Tear production
- Hearing acuity
- Peripheral vision

# Relaxation

**Opposite of Fight or Flight** 

#### **Increases/Activates**

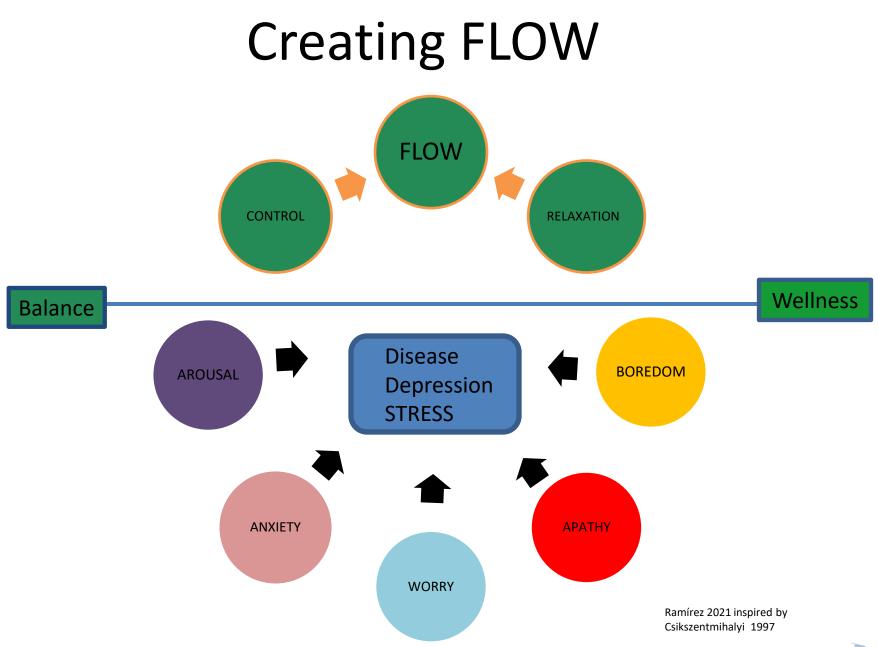
- Parasympathetic
- GI activity
- Muscle relaxation
- Acetylcholine
- Pupil constriction

#### Decreases/Suppresses

- Heart rate
- Blood Pressure
- Respiratory Rate

## Csikszentmihalyi

- Created the notion of *flow* and has worked on the study of happiness and creativity.
- He is the world's leading researcher on *positive psychology.*
- Once said: "Only through freely chosen discipline can life be enjoyed and still kept within the bounds of reason."



#### **Csikszentmihalyi** Characteristics of Flow

- Complete concentration on the task.
- Clear goals and reward in mind.
- Immediate feedback.
- Time speeds up/slows down.
- Experience is intrinsically rewarding.
- Effortlessness and ease in performing actions.
- Balance between challenge and skills.
- Actions and awareness are merged.
- Loss of self-conscious rumination.
- Feeling of control over the task.

Aromatherapy

Flower Healing Therapy

## **FLORAL THERAPIES**

Essential Oils Absolutes

#### AROMATHERAPY

#### **Animal Noses**

Humans have about 1.6 sq. in. of olfactory epithelium, whereas some dogs have 26 sq. in.

A dog's olfactory epithelium has 100X more receptors per square inch than humans.

Bloodhounds have noses 10-to 100-million X more sensitive than a human's.

They can detect a scent trail a few days old.

Grizzlies have a sense of smell 7X stronger than the bloodhound.

Bears can detect the scent of food from up to 18 miles away.

#### Smell Disorders

People may have a decreased ability to smell or changes in the way they perceive odors.

#### Hyposmia: a reduced ability to detect odors.

Anosmia: the complete inability to detect odors.

Congenital anosmia: born without a sense of smell.

#### Parosmia: change in the perception of odors:

- The smell of something familiar is distorted.
- Something that normally smells pleasant now smells foul.

Phantosmia: the sensation of an odor that isn't there.

#### Aromatherapy (1)

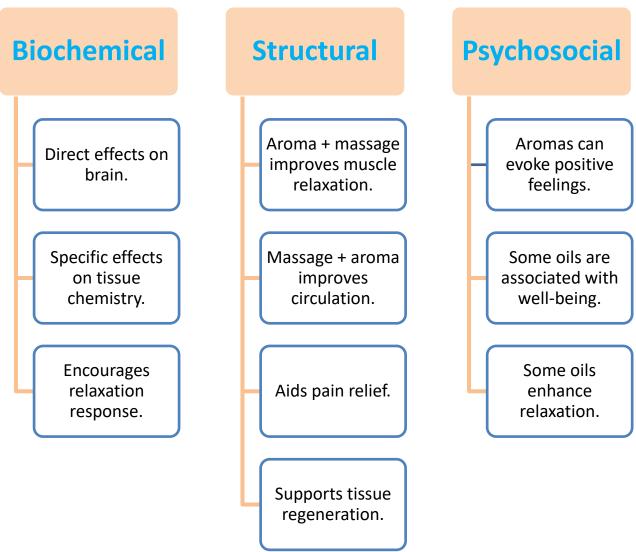
 Greek: *aroma* = "pleasant smell" and *therapeia* = "healing".

- Use of essential oils, flower and aromatic plant extracts to promote health and well-being.
- Used for thousands of years in traditional Indian, Chinese, Greek and Roman medicines.

#### Aromatherapy (2)

- Utilizes the sense of smell, located in the limbic system.
- Olfactory sensors contribute to the perception of taste.
- Modern humans have lost much of their olfactory sensitivity and discernment.
- Odors can trigger both positive and negative emotions.
- Aromas are associated with specific memories of time and place.

#### Aromatherapy (3) Effects



#### Aromatherapy (4)

- Absolutes
- Carrier Oils
- Diffusers
- Essential Oils
- Gemmotherapy

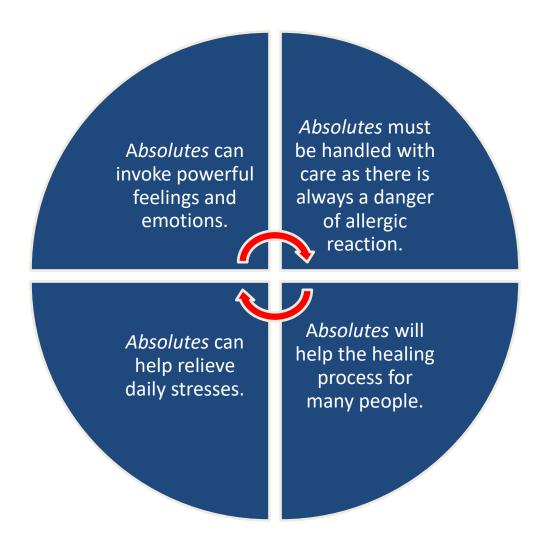
- Hydrosols
- Macerated Oils
- Mother Tinctures
- Synergies
- Winter Essential Oils

#### Absolutes (1)

Extraction of aromatherapy *absolutes* differs from that of the essential oil.

Essential oils are extracted using a steam distillation process. Extracting absolutes involves the use of chemicals and solvents. This creates a more concentrated and more fragrant version of the plant's essence.

#### Absolutes (2)



# Absolutes (3)

#### • Aphrodisiac.

- Regulates menstruation.
- Treats headaches.
- Effective antiseptic.
- Antidepressant.
- Sedative .
- Solvent extraction.

#### Jasmin



- Sweet floral, woody scent
- Helps wound healing.
- Improves sleep in patients.
- Promotes relaxation.

Lavender

- Treats hair loss.
- Antifungal.
- Alcohol extract.

- Rich damp oak aroma.
- Earthy and woody.
- Reduces inflammation.
- Antiseptic.
- Comforting in candles.
- Risk of sensitivity.
- Alcohol or solvent extract.

#### Oakmoss



- Feminine scent.
- Intense in therapy.
- Antiviral and anti-bacterial.
- Fights depression.
- Invokes joy, relaxes mind.
- Expensive to produce.
- Chemical solvents extract.

#### Rose



- Pink or white lotus flowers.
- Healing qualities.
- Helps build confidence.
- Builds tranquility.
- Promotes meditation.
- Helps self esteem.
- Alcohol or CO<sub>2</sub> extraction

Lotus



#### Absolutes (4)

#### **Advantages**

- Helps fight against:
  - Infections.
  - common colds.
  - Headaches.
  - body aches.
- Soothes sore muscles and joints when used in massage oils.
- Often enhance the effects of aromatherapy.

#### **Disadvantages**

- May cause allergic reactions.
- Trace amount of solvent may remain in the absolute.
- Cannot be taken internally.
- More costly than essentials.

#### **Carrier Oils**

Base oils or vegetable oils used to dilute essential oils and absolutes before they are applied to the skin in massage and aromatherapy.

Diluting essential oils is a critical safety practice when using essential oils.

Essential oils are volatile and their rate of dispersion will vary based on how light or heavy the carrier oil is.

Carrier oils do not contain a concentrated aroma, nor do they evaporate like essential oils, which are more volatile.

Carrier oils used should be natural and unadulterated.

Cold-pressing and maceration are the two main methods of producing carrier oils.

## Diffusers

- Breaks essential oils into smaller molecules dispersing them into the air for a pleasant or calming effect.
- Evenly disperses the particles at a comfortable concentration that doesn't overbear the room and is easy to breathe.
- Fills the air with tiny, breathable particles of essential oils, giving the room a calmer, more pleasant-smelling ambience.

## Diffusers (2)

#### Types

- **Nebulizing:** Pressurized air diffuses a mist of oil, don't require water or heat, are usually plastic-free.
- **Ultrasonic or Humidifying:** Ultrasonic vibrations create a fine mist, but the oil needs to be diluted with water. Plastic parts need cleaning as oils can corrode plastic.
- **Evaporative:** Small fan helps turn oil to gas and evaporates it into the air, but as it vaporizes, it loses some of its potency.
- Heat or Electric: Heating the oil may change its chemical properties; totally silent diffusers : candle, electric, and lamp ring sets.
- **Tricked out:** Any of the above but with ambient lighting ,sound features, automatic off timers, or hygge aesthetic.

### **Essential Oils**

• Obtained through steam/water distillation or by mechanical methods, like cold pressing.

• After extraction, the aromatic chemicals are combined with a carrier oil to allow easy use.

• Oil essences obtained by chemical processes are not considered true essential oils.

#### Effects of Essential Oils



**Calming:** 

- Bergamot.
- Chamomile.
- Clary sage.
- Geranium.
- Jasmine.
- Lavender.



- Uplifting
- Grapefruit.
- Neroli.
- Rose.
- Rosemary.
- Ylang ylang.
- Clary sage.
- Jasmine.Lavender.



#### Stimulating

- Black pepper.
- Cinnamon.
- Eucalyptus.
- Ginger.
- Peppermint.

#### • Pine.



Anti -fungal Anti-bacterial Anti-viral

- Tea tree.
- Lavender.



#### Decongestant

- Eucalyptus.
- Lavender.
- Peppermint.
- Pine.

## Gemmotherapy

(Phytoembryotherapy)

Gemmotherapy: Latin gemma = bud
 + Greek therapeia = healing

Herbal medicine that uses remedies made from:

- Embryonic tissue of trees and shrubs (buds & shoots).
- Their reproductive parts (seeds and catkins).
- Newly grown tissue (rootlets and their cortex ).
- Material taken in the spring for buds and in autumn for seeds.
- Some plant hormones and enzymes are only present in the plant at these times.

#### Hydrosols (1) (Hydrolats)

- Hydrosols ("flower waters"), are produced by distilling fresh leaves, fruits, flowers, and other plant materials.
- These aromatic waters are less concentrated than essential oils.
- Aromas are soft and subtle but have a greener note that comes from the constituents that are not present in the essential oil.

#### Hydrosols (2)

Rose White Rose Peppermint < Chamomile Douglas Fir

Are great for: 1-ingredient perfumes
Deodorants
Facial toners
Air fresheners
Aromatherapy sprays

**Flower Arranging** 

#### FLOWER HEALING THERAPY (FHT)

# Flower Arranging (1)

- Traditional therapy lacks personal creative and expressive elements.
- Incorporating flowers into a therapy session helps healing, PTSD, depression and anxiety.
- Mindful engagement with the flowers gives:
  - A sense of accomplishment.
  - A focus point for goals and accomplishment.
  - Assists relaxation, meditation and sleep

#### Floral Healing Therapy (FHT) (2) Flower Arranging (2)

• Allows patient less focus on their problems.

• Therapist is off the main stage, a sidebar.

• No rules for the floral arrangements.

• Patient takes arrangement home.

#### Flower Healing Therapy (FHT) (3)

**Distance Approach** 

Floral energies promote healing in body, mind and spirit by opening and balancing your chakras. Flowers work gently and subtly on the emotional body, helping to calm the spirit and ease the mind. Distant flower therapy uses real flowers and photos of flowers to cleanse your aura, balance your mind, body, and spirit, and bring healing into your life.

Please provide a face photo and your full name and birthday.

This is all done through a distance, energetically. No Skype or phone calls will be made for this service.

#### HYDROTHERAPY

#### Hydrotherapy

- Hot water causes superficial blood vessels to dilate, activating sweat glands, loosening joints, and removing toxic wastes from tissues.
- Cold water causes superficial blood vessels to constrict, moving blood flow away from an affected area to relieve inflammation.
- Immersing the body in water relieves joint pain and muscle injury by counteracting gravity and reducing pressure on a joint or the body as a whole.

#### Hydrotherapy

- The use of water, internally and/or externally at varying temperatures, for health purposes.
- Also known as water therapy or "water cures".
- Use of alternating hot and cold water, called contrast hydrotherapy, is still used today.
- It can sometimes be therapeutic, but it has never be considered a cure for any medical condition and should not be used as a substitute for standard medical care.

#### Hydrotherapy (3)

- Aquatic exercises: For back pain, arthritis, obesity, advanced age, or physical disability.
- Balneotherapy: Soaking in mineral-rich waters or hot springs for arthritis, back pain, fibromyalgia, or immune dysfunction.
- Compresses: Wrapping soaked towels on a body part to increase circulation or reduce inflammation, with or without aromatics.
- Contrast hydrotherapy: alternating immersion in hot and cold water to treat chronic pain or promote lymphatic drainage.
- Floatation tanks: aka isolation tanks or immersion tanks, involves floating atop a shallow pool of saltwater in a sealed, darkened tank.

#### Hydrotherapy (4)

- Ice baths (cryotherapy): for athletes to speed recovery from an injury or extreme exercise.
- Sauna: dry, warm air induces sweating to release toxins, burn calories, relax muscles, and improve skin quality.
- Steam baths: rooms filled with warm, humid aid that can amplify the benefits of a sauna.
- Therapeutic baths: Soaking in a tub of warm water with additives like Epsom salt, aromatherapy oils, Dead Sea salts, or herbs. Mud baths are a type of therapy bath.

#### **SOUND THERAPY**

## Sound Therapy (1)

- This form of sensory therapy has ben used for centuries by many cultures.
- Basic goals of sound therapy are balance and restoration; sound eases, energizes, and empowers people.
- There can be emotional release of all kinds such as crying, euphoria, laughter, and even anger.
- Treatment brings emotions to the surface, so feelings that will arise shortly after a session, or it could take up to a day.

## Sound Therapy (2)

- Music therapy uses therapist-guided sounds to enhance memory and alleviate stress.
- Sound and music are noninvasive, simple, and costeffective therapeutic tools.
- Sound baths use instruments like bowls to initiate an immersive, full-body listening experience.
- Binaural beats plays 2 separate tones in each ear, which are perceived by the brain as a single tone by the brain.

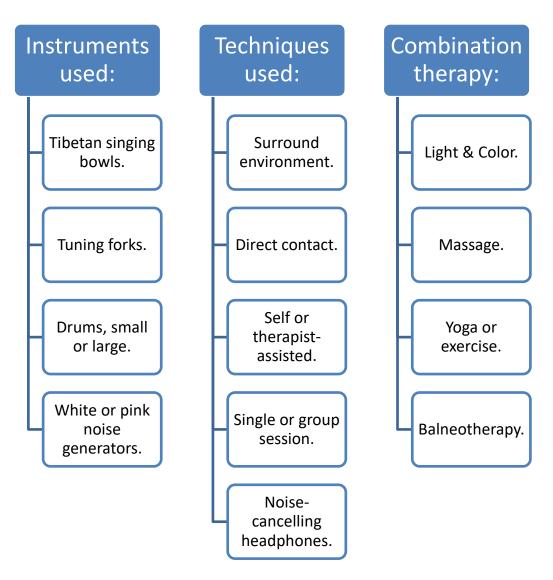
## Sound Therapy (3)

- It's more than just the meditative, relaxing effects of sound, this vibration massages every cell and works all the way through skin, muscle, tissues, and organs.
- The experience is a personal journey, the healing in a sound bath is of the patient's own making.
- Each person is the catalyst for their own change and creates the magic of the experience.

## Sound Therapy (4)

- Meditation aided by Tibetan bowls decreases stress and anger.
- Patients with fibromyalgia increased the time they could sit and stand without pain after low-frequency sound stimulation.
- Binaural beats are a way to reduce anxiety.
- Playing and/or listening to music is linked with improved overall mental and physical health.

#### Sound Therapy (5)



## Sound Therapy (6)

Sleep Assistance

- Pink noise is a type of noise that contains all the sound frequencies that humans can hear.
- The higher frequencies in pink noise are less intense so it blocks out annoying background sounds without feeling harsh or shrill.
- White noise combines all frequencies equally to generate a sound like a constant hum.
- White noise can sound like a hiss, pink noise is smoother and more soothing.

#### THALASSOTHERAPY

#### Thalassotherapy (1)

- Greek *thalassa* = sea/ocean + *therapeia* = treatment
- Systematic and simultaneous use of seawater, sea products, and shore climate to prevent and treat disease.
- Combination of hydrotherapy, heliotherapy and climatotherapy.
- Practitioners claim the properties of seawater have beneficial effects upon the pores of the skin.
- Sodium, calcium, chloride, magnesium, potassium, sulfate, bromide, iodide and trace amount ns of arsenic and strontium found in seawater are believed to be absorbed through the skin.

#### Thalassotherapy (2)

- Various forms are available:
  - Showers of warmed seawater.
  - Applications of marine mud.
  - Applications of algae paste.
  - Inhalation of sea fog.
  - Hydromassage.



- Spas make hot seawater and provide mud and seaweed wrapping services.
- This is common in the area of the Dead Sea.

#### Thalassotherapy (3)

• Several cruise lines now offer seawater pools and mud applications aboard their ships.



- These treatments, along with the inhalation of sea fog help restore your body to a state of serenity fit for a mermaid.<sup>1</sup>
- Thalassotherapy's main objective is to increase blood circulation.
- Depletion of vital minerals due to stress, poor diet, and pollution cause a decrease in circulation.

1. Aqua for Balance website 2021

Halotherapy Speleotherapy

#### **MINERAL THERAPY**

#### Halotherapy (1)

- Speleotherapy and Halotherapy are dry salt therapies.
- Speleotherapy (passive) takes place in natural underground caves that contain large amounts of salt.
- Halotherapy (active) sites create an artificial cave environment by using a dry salt aerosol generator to spread tiny particles of salt around the room.
- The salt usually contains a mixture of different minerals, including:
  - sodium chloride
  - Manganese
  - calcium
  - sulfates

#### Halotherapy (2)

- Israeli entrepreneur wants to open a chain of Halotherapy rooms (Breathewell).
- Salt rooms will treat children and adults suffering from allergy, chronic ear or sinus infections, asthma, bronchitis, lung disease and even snoring!
- Inhaling microscopic particles of sodium chloride-rich rock salt, (0.5 to 0.3 microns in size) dries up and disinfects mucous membranes in the sinuses and lungs, easing expectoration and allowing the patient to breathe more easily.
- Anyone can benefit from a Breathewell session: we all inhale car fumes, pollution and second-hand smoke.

#### Halotherapy (3) Breathewell

- Each treatment runs about an hour, twice a week, with a 48-hour break between them.
- The salt used is imported from a mine in Ukraine with a sodium chloride concentration higher than Israel's sea salt: 90% vs 16%.
- Ingestion is at a rate of about 5 milligrams per session, the same as a serving of potato chips.
- Each session will cost around \$50.

#### Halotherapy (4)

Opal Centre, Syria

- In an artificial salt cave, patients relax and have their bodies covered with sea salt.
- The cave has soft music and subdued lighting.
- Iodine-laden salt particles are pumped through the air.
- Inhalation of salt particles clears and cleans the respiratory tract and brings benefits for the skin.



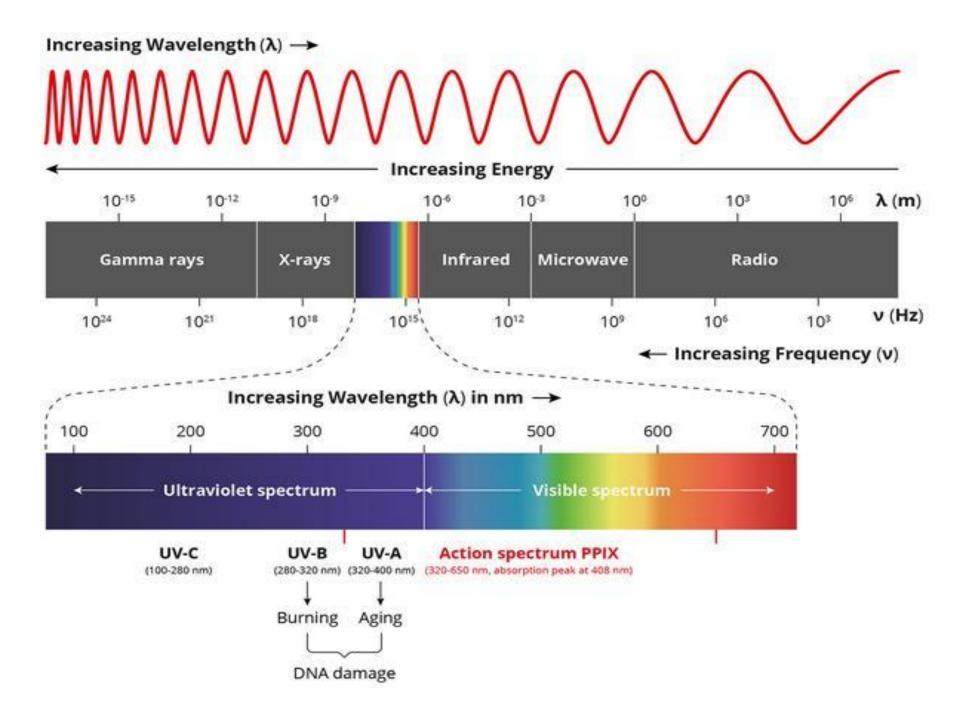
- Patients of all ages
- Sessions last 45 minutes.
- Cost about \$15- \$30 each.
- Results need several sessions.
- Treatments for asthma, eczema, sinusitis and psoriasis.

#### Halotherapy (5)

- Wet salt therapy is an alternative way using methods like:
  - saline solutions
  - nebulizers
  - salt baths
  - salt scrubs
  - gargling solutions
  - neti pots
  - exfoliation
  - Floatation tanks
- Some people use wet salt therapy for respiratory conditions, including the common cold.
- Others use it for beauty treatments and to improve skin health.
- The therapy is relaxing and may help improve general well-being.

Ultraviolet Light Red and Infrared Light Green Light Laser Scalar Light

#### PHOTOTHERAPY



#### Phototherapy (1) (Newborn)



- Treatment for newborns who have a yellow discoloration of the skin and eyes due to a pigment called bilirubin (jaundice).
- 60% of babies are born with jaundice, but few babies have a level that is high enough to cause brain damage.
- Phototherapy helps the baby's body get rid of the bilirubin by making it water-soluble and then remove it through the urine and stools.

The specific phototherapy bulbs used in bili-lights emit light in the blue-green spectrum with wavelengths of 430-490 nm.

If baby's **jaundice** does not improve, then continuous multiple photo therapies may be given (conventional + fiberoptic).

#### Phototherapy (2)

 3,500 years ago ancient Egyptians and Indians used sunlight to treat skin conditions like vitiligo.

- In 1903, Niels Ryberg Finsen treated lupus vulgaris with sunlight and ultraviolet radiation.
- Skin conditions like eczema, psoriasis, vitiligo, the skin symptoms of cutaneous T-cell lymphoma and itchy skin can be treated with phototherapy.
- Treatment involves using Ultraviolet (UV) to reduce skin cell growth and inflammation.

#### Phototherapy (3)

Ultra Violet Light

- Broadband Ultra Violet B (BBUVB) treats conditions like eczema and psoriasis with the full spectrum of ultraviolet-B radiation.
- Narrowband Ultra Violet B (NBUVB) uses a small portion of UVB radiation to treat the condition; it is more intense than broadband and it's the most common phototherapy used by dermatologists.
- Psoralen Ultra Violet A (PUVA) combines UVA light with a chemical called psoralen, which can be applied to the skin or taken as a pill.
  - Psoralen is found in plants and makes skin more sensitive to the light.
  - PUVA is more intensive and has more side effects than broadband or narrowband UVB
  - Usually resorted to when other treatments have been unsuccessful.
  - Used for vitiligo, cutaneous T-cell lymphoma, and psoriasis.

#### Phototherapy (4)

#### Mood and Sleep Disorders

- Seasonal Affective Disorder (SAD): depression brought on by changing seasons, beginning in the fall and lasting throughout winter.
  - Uses a lightbox that emits soft light at a standard wavelength.
  - Usually recommended for SAD because side effects are minimal and temporary.
  - It is an easy, relatively cheap treatment option.
  - If it works, the amount of anti-depressant medication may be reduced..
  - There's no medical consensus that it's an effective treatment for non-seasonal depression.
- Circadian Rhythm Sleep Disorders
  - Can help patients with circadian rhythm sleep disorders such as DSPS (delayed sleep phase syndrome) make the shift to normal sleeping patterns and times.
  - Timing of treatment is extremely important.
  - Exposure to the light must take into consideration the individual's symptoms.

## Phototherapy (5)

#### Photodynamic Therapy

#### Photoradiation or Photochemotherapy

- For some cancers and precancers.
- Uses a drug, called a photosensitizer, with a special kind of light.
- Photosensitizers produce activated oxygen that, when exposed to specific wavelengths, kills nearby cells.

For cancer of the esophagus, precancerous conditions like Barret's esophagus and endobronchial cancer.

#### Generally no longterm side effects.

- Less invasive and leaves less scarring than surgery.
- Costs a lot less than the other treatment options for cancer.
- Application is limited to places where light can reach, which is usually just below the skin.
- Can't help much with cancers that have spread.

#### RED and NEAR INFRARED LIGHT THERAPY

## Red & Near Infrared Light (1)

- Red and near infrared light have positive effects on cell function in animals and humans and aid in improving a wide range of conditions.
- Near-infrared (NIR) and red light therapy devices have been FDA-approved for:
  - Hair-loss reversal.
  - Anti-aging.
  - Acne.
  - Wound healing.
  - Pain relief.
  - Fat loss. and more!

# Red and Near Infrared Light (2)

- Red and near infrared light therapy increases energy production in the mitochondria of cells.
- Photons found in red and NIR light interact with a photoreceptor within our cells called *cytochrome c oxidase*.
- This stimulates the mitochondria to use oxygen more efficiently, which allows the mitochondria to produce more ATP (adenosine triphosphate).
- ATP provides the energy to drive muscle contraction, nerve impulse propagation, and chemical synthesis.
- ATP is the "currency" of intracellular energy transfer, and cells perform better when they have more energy.

## Red and Near Infrared Light (3)

1. Reduces inflammation.

2. Reduces pain.

3. Reduces recovery times after training and injury.

4. Improves fertility and increases testosterone levels.

5. Increases collagen production in skin.

6. Stimulates hair growth

7. Improves circulatory blood flow.

## **GREEN LIGHT**

## Green Light (1)

- Green light on the retina promotes production of enkephalin pain-killers in the spinal cord.
- Successfully used for migraines: patients stopped Botox and cut medications in half.
- Used for prevention, not during an episode.
- Also used for chronic pain, like fibromyalgia.

### Green Light (2)

- The color green has calming effects.
- Green light may be used as a complementary treatment to reduce the need for prescription pain medications.
- It may help patients to better handle their pain and improve their everyday functioning.
- Decreasing opiate needs will really benefit the patient's quality of life.

## **Green Light**

Other potential uses

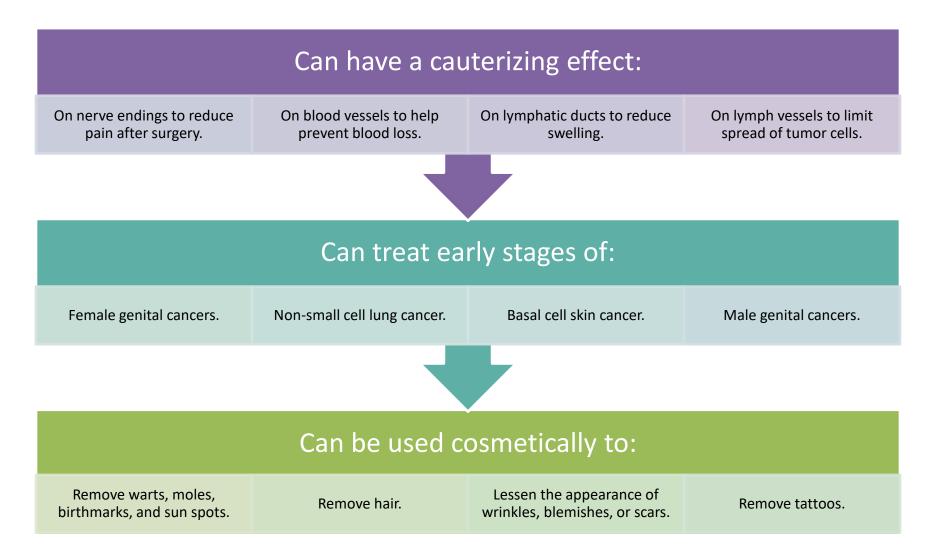
- Mood-boosting effects and even help to treat depression.
- Contributing to better sleep (unlike blue light emitted from electronic devices, which tends to disrupt sleep).
- Supporting skin healing.
- Improving dark circles, pigmentation, broken capillaries and sunspots.
- Calming irritated or over-stimulated skin.

## LASER

## Laser (1)

- Light Amplification by Stimulated Emission of Radiation is light tuned to specific wave lengths.
- Laser therapies are medical treatments that use powerful focused beams.
- Laser light is so intense that it can be used to shape diamonds or cut steel.
- Allows precision focusing on a small sick area without damaging adjacent healthy tissue .

## Laser (2)



## Laser (3)

#### Types

- Carbon dioxide (CO<sub>2</sub>) lasers make shallow cuts and are often used for superficial skin cancers.
- Argon (Ar) lasers also make shallow cuts and can be used to stimulate light-activated drugs during photodynamic therapy (combination of light with chemotherapy).
- Nd:YAG (Neodymium-doped Yttrium Aluminum Garnet) lasers travel along fiberoptic bundles and are used in Laser-Induced Interstitial Thermotherapy, (LIIT) to treat cancer.
- Low level laser therapy (LLLT) is also called cold laser therapy, and It is used to perform minor surgeries and promote regeneration in tissue.

## Laser (4)

Surgeries

- Refractive eye surgery LASIK:Laser-Assisted In-Situ Keratomileusis.
- Tooth whitening.
- Cosmetic scar, tattoo, or wrinkle removal.
- Cataract or tumor removal.

## Laser (5)

#### **Benefits**

- More precise than surgery.
- Cuts shorter & shallower.
- Less damage to tissues.
- Operations take less time.
- Often on outpatient basis.
- Tend to heal faster.
- Less pain, swelling, scarring.

### **Risks & Complications**

- The risks for skin therapy include:
  - Bleeding
  - Infection
  - Pain
  - Scarring
  - Changes in skin color
- Repeated sessions needed.
- If under general anesthesia:
  - Risk of pneumonia.
  - Risk of confusion after waking up.
  - Risk of heart attack or stroke.
- Treatments can be expensive.

## **SCALAR ENERGY**

### Scalar Energy (1)

- Created when 2 equal electromagnetic vectors come together from 2 opposite converging vectors.
- Where the energy vectors meet, the equal frequencies cancel each other leaving a spherical, standing or stationary energy field, not a vacuum.
- Does not flow but occupies space and increases in spatial mass.
- This space is alive with balanced and checked energies.
- Increases the energy level of every single cell in the body to the ideal 70-90 millivolt range.

# Scalar Energy (2) Wave Laser (?)

- Scalar Wave Laser is a "quantum cold laser rejuvenation tool which combines the most advanced low level laser technology with state of the art quantum scalar waves."
- Small unit with a wand end that shines light on the patient's skin:
  - Eight 5 milliwatt 650 nanometer (red) laser diodes.
  - Eight 5milliwatt 780 nanometer (near infrared) laser diodes.
  - Twenty 5milliwatt violet Light Emitting Diodes.
- The unit costs only \$3500.
- The laser delivers energy as photons and electrons directly to cells.
- Mitochondria convert the photons to Adenosine-Tri-Phosphate (ATP) promptly initiating healing and rejuvenation.

# Scalar Energy (3)

- Improves cell wall permeability to facilitate the intake of nutrients into each and every cell and the elimination of waste from each and every cell.
- Cleanses the blood and improves fibrin patterns.
- Improves immune function by as much as 149% as proven in laboratory studies.
- Improves mental focus and balances the hemispheres of the brain as demonstrated through EEG analysis.
- Functions as an antidepressant since it inhibits the uptake of noradrenaline

## Scalar Energy (4)

- Scalar Energy Pendant is made of volcanic materials from Japan.
- Free from radioactive materials from the Fukushima disaster.

#### Benefits:

- Improves blood circulation.
- Better stamina, endurance and strength
- Reduces inflammation, alleviates soreness, aches and pains.
- A calmer mind and sharper focus/concentration.
- Strengthens body's Bio-Energy field to protect from harmful electromagnetic waves
- Restores body's balance and harmony and increases energy levels.

## **CRYSTAL THERAPIES**

## Crystal Therapy (1) (Lapidary Medicine)

- Use of semiprecious stones and crystals such as quartz, amethyst or opals that have healing powers.
- Can boost low energy, prevent bad energy, release blocked energy, and transform a body's aura .
- Crystal healers believe that shape, color, and markings, determine the ailments that a stone can heal.
- They also believe that crystals have no intrinsic qualities but their quality changes according to both "participants".
- After selecting the stones by color or their metaphysical qualities, they are placed on parts of the body, according to concepts of grounding, *chakras*, or energy grids.

## Crystal Therapy (2)

- Master healer.
- Amplifies energy by absorbing, storing, releasing, and regulating it.
- Aids concentration and memory.





- Restores trust and harmony.
- Helps provide comfort and calm during times of grief.
- Encourages love, respect, trust, and worth.
- Support during stress.Rejects negative vibes.

Jasper:

• Promotes courage, quick thinking, and confidence.

• Supreme nurturer.

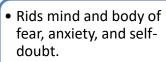
• Empowers the spirit.

- Shields against negativity.
- Promotes compassion.
- •Aids digestion & detox.
- Reduces pain & cramps.
- •Remove negative traits.
- •Encourage optimism.
- •Enhances creativity.

#### **Obsidian:**

- Heals mind, body & soul.
- Good luck charm.
- Balances emotions.
- Gives spiritual grounding.
- Benefits respiratory, skeletal, & immune systems.

Turquoise:



- Helps getting to harmony and balance.
- Helps make clear, conscious decisions.

Tiger's eye:

- •Protective & purifying..
- •Enhances humility, sincerity.
- Promotes sobriety.
- •Helps sleep.
- •Boosts hormone production.
- •Cleanses blood.
- •Relieves pain & stress.



# Crystal Therapy (3)

- Brings joy, wonder, and enthusiasm to life.
- Eliminates negative traits like fear.
- Encourages optimism, warmth, motivation, & clarity.
- Enhances creativity & concentration.

#### **Citrine:**



- New beginnings,
- Encourages inner growth & strength.
- Soothes stress & instability.
- Promotes positive thinking, intuition & inspiration.
- Attracts success & good fortune.

#### Moonstone

- Cleanses the blood & draws off bad energies.
- Improves circulation.
- Encourages selflessness, creativity, and idealism.
- Eliminates irritability, aggressiveness, and impatience.

#### **Bloodstone:**

- Wisdom and loyalty.
- Attracts prosperity, happiness, & peace.
- Opens up the mind to beauty & intuition.
- Heals eye & blood disorders.
- Eases depression, anxiety & insomnia.

#### Sapphire:

- Restores vitality & energy levels.
- Improves sensuality, sex & intellect.
- Brings self-awareness & the realization of truth.
- Removes toxins from blood & improves circulatory system.

#### **Ruby:**

Cryotherapy Thermal spas

## THERMAL THERAPY

# Thermotherapy (1)

- Applying heat and/or cold to change the cutaneous, intra-articular and core temperature of soft tissue.
- Intention is to improve symptoms of certain conditions.
- Cryotherapy and thermotherapy are useful adjuncts for the treatment of musculoskeletal injuries and soft tissue injuries.

# Thermotherapy (2)

Phases of the healing process

- Inflammatory phase: protects the injured area from further injury while the body contains the damaged tissue (2-3 days).
  - Cryotherapy can help to reduce swelling.
  - Never use heat during this phase: it increases the blood flow and increases the amount of swelling.
- Proliferation phase: new tissue and scar tissue are formed, heat can now be applied to facilitate the healing process.
- Remodeling phase: restoring structure and function to injured or diseased tissues; includes tissue mending, scarring & bone healing. Heat therapy can also be used during this phase.