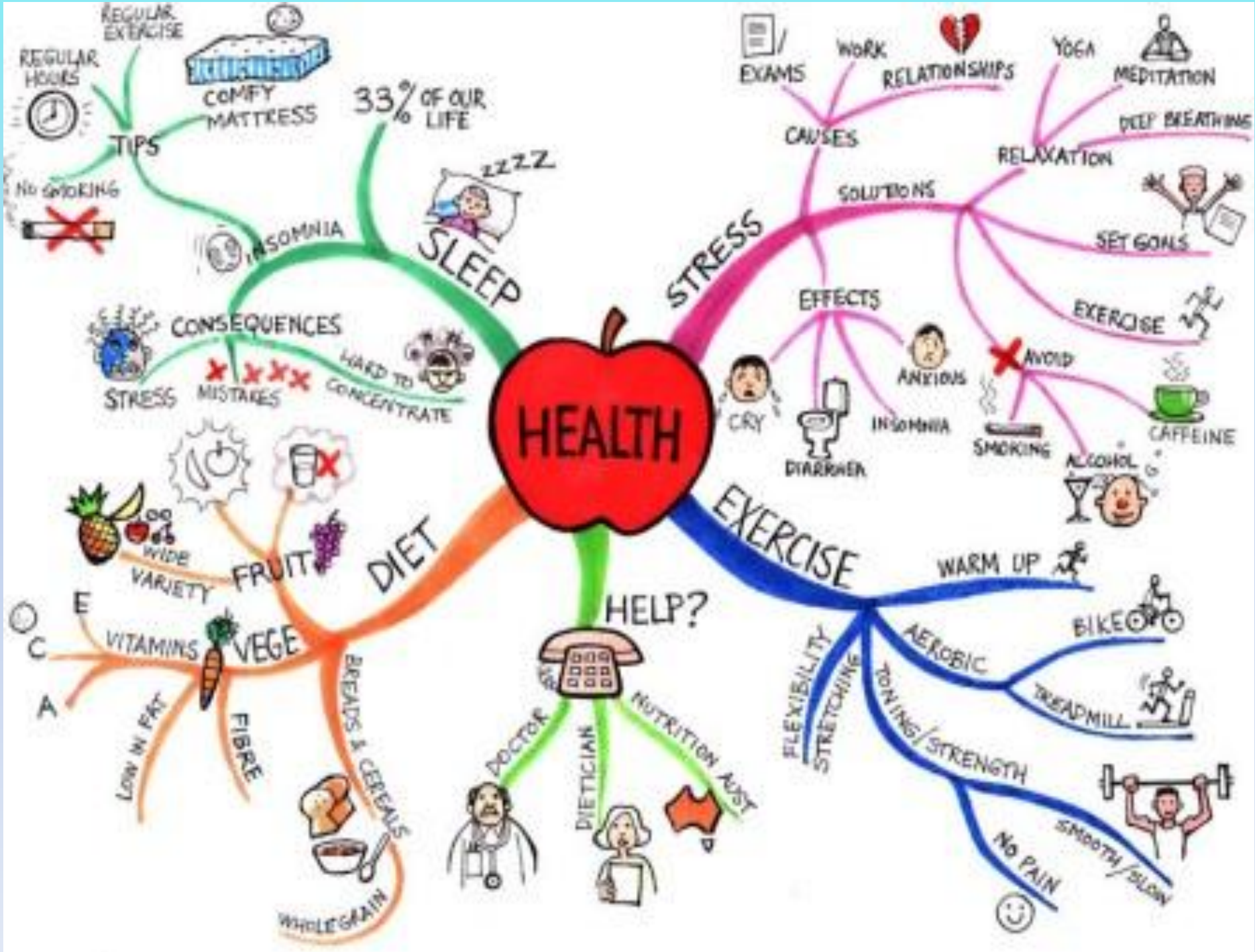
HEALTHY LIFESTYLE

HEALTH

- WHO definition
  - Not simply absence of illness or ailment, but a condition of physical, mental and social well-being
- VP Petlenko
  - A normal psychosomatic condition and the ability of a person to satisfy their bodily and spiritually optimally


HEALTH
SLEEP
33% OF OUR LIFE
TIPS
REGULAR EXERCISE
REGULAR HOURS
COMFY MATTRESS
NO SMOKING
INSOMNIA
zzzz
CONSEQUENCES
STRESS
MISTAKES
HARD TO CONCENTRATE
STRESS
CAUSES
EXAMS
WORK
RELATIONSHIPS
SOLUTIONS
RELAXATION
YOGA
MEDITATION
DEEP BREATHING
SET GOALS
EXERCISE
EFFECTS
CRY
DIARRHEA
INSOMNIA
ANXIOUS
AVOID
SMOKING
CAFFEINE
ALCOHOL
DIET
FRUIT
WIDE VARIETY
VEGE
VITAMINS
E
C
A
LOW IN FAT
FIBRE
BREADS & CEREALS
WHOLEGRAIN
HELP?
DOCTOR
DIETICIAN
NUTRITION AUST
EXERCISE
WARM UP
BIKE
AEROBIC
TREADMILL
FLEXIBILITY
STRETCHING
TONING/STRENGTH
NO PAIN
SMOOTH/SLOW

Health is determined by:

- Hereditary 20%
- Environment 20%
- Lifestyle 50%
- Medicine and public health s

10%

20%

50%

20%

VALEOLOGY

- A science about individual health of the person consisting of two divisions:

  a) valeosophy

  -science about wisdom of health

  b) valeometry

  -science about measuring health

VALEOLOGY

- Public health of the future
- Prevention of disease → Management of individual disease

OBJECTIVES

- Formation of valeologic awareness
  - make sure people know that health is a valuable possession

LIFE STYLE

- A way of life activity of a person, a social group or a society
- A way of satisfying the needs within the framework of existing natural and social restrictions

HEALTHY LIFESTYLE

- A complex of hygienic norms and rules a person follows during their life
- Complex concept including:
  - Social aspecty
  - Economic aspect
  - Biologic aspect
  - Medical aspect
  - Ethic aspect
  - Psychological aspect

COMPONENTS OF HEALTHY LIFESTYLE

- 1. **Rational work and rest**
  - Several breaks during working day
  - Mental work → active rest
  - Physical work → passive rest

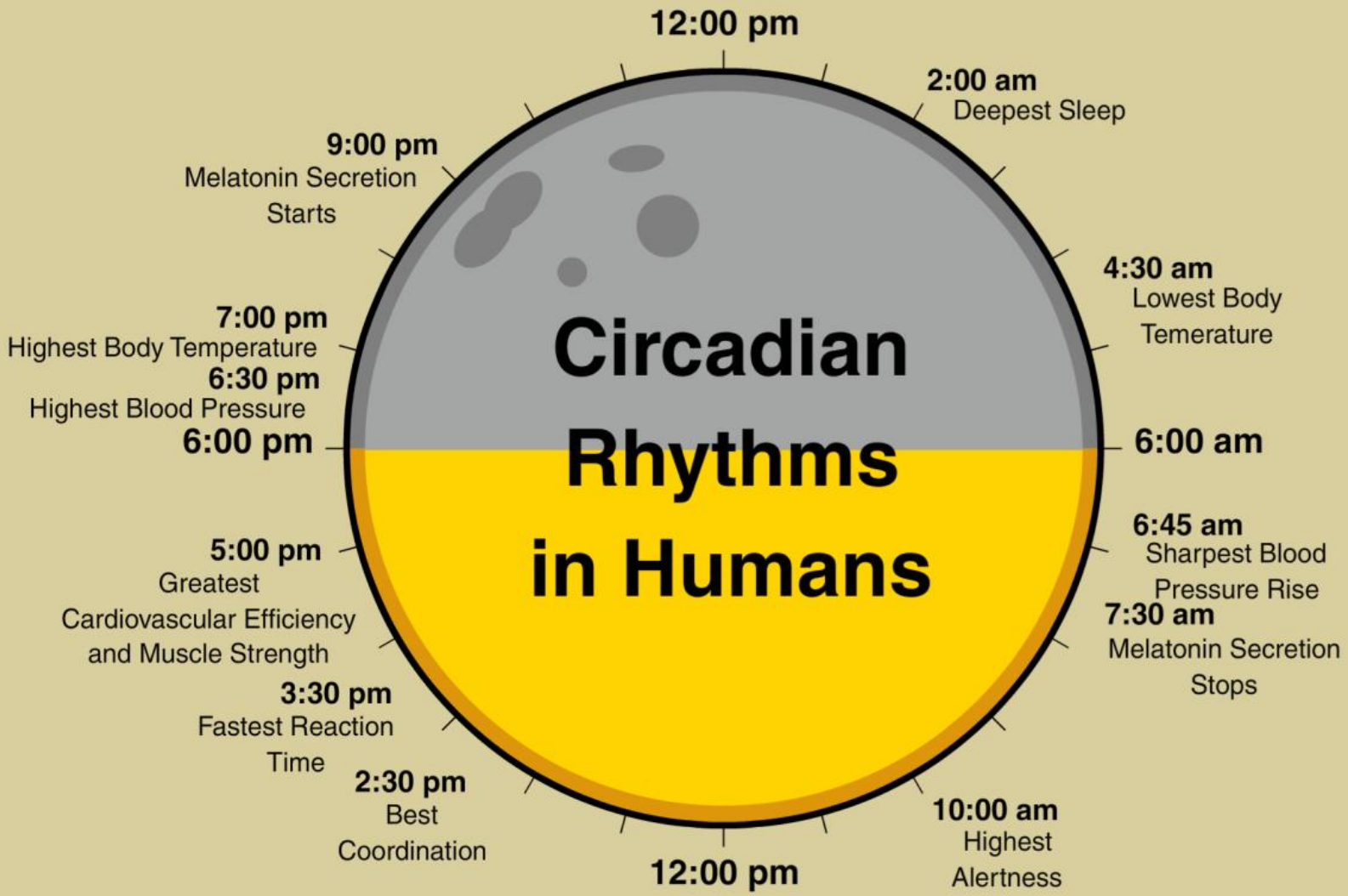

8+ hours of sleep:
Okay...
Just under 8 hours of sleep:
Even worse...
3 or less hours of sleep:
Out of my way everybody, I've got places to be and people to see!
GAGFUL.COM


Sleep Mode
99% complete
ICANHASCHEEZBURGER.COM

Circadian Rhythms

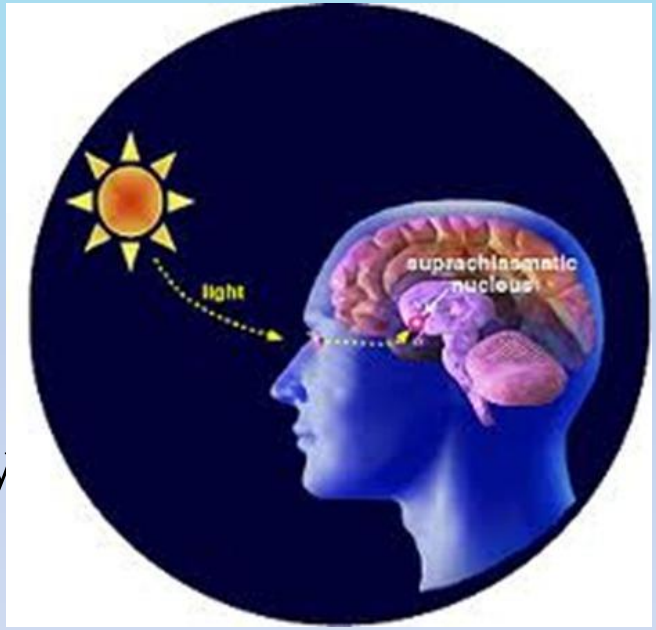
- circa = approximately; dies = a day
- Daily cycles of light and dark

- 24-hour biological clock; genetically programmed; regulates physiological responses
- Circadian rhythms (in brain) coordinate:
  - Sleep/wake periods
  - Body temperature
  - Hormones
  - Digestion
  - Cardiovascular responses
  - Performance

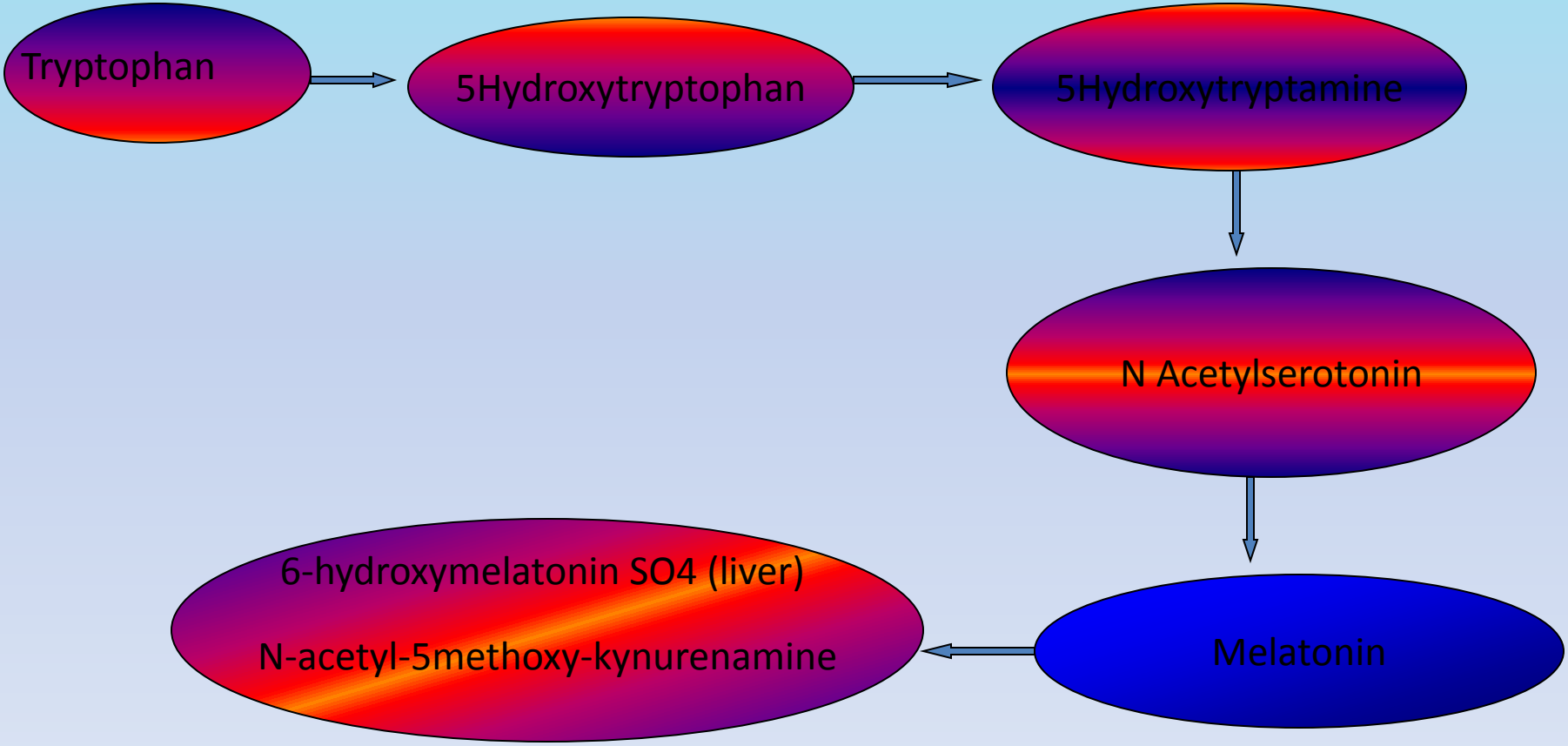

Circadian Rhythms in Humans
12:00 pm
2:00 am
Deepest Sleep
4:30 am
Lowest Body Temerature
6:00 am
6:45 am
Sharpest Blood Pressure Rise
7:30 am
Melatonin Secretion Stops
10:00 am
Highest Alertness
12:00 pm
2:30 pm
Best Coordination
3:30 pm
Fastest Reaction Time
5:00 pm
Greatest Cardiovascular Efficiency and Muscle Strength
6:00 pm
6:30 pm
Highest Blood Pressure
7:00 pm
Highest Body Temperature
9:00 pm
Melatonin Secretion Starts

Normal Pineal Function and Melatonin

- Melatonin is the primary circadian pacemaker that synchronizes the internal hormonal environment to the light–dark cycle of the external environment.
- Melatonin is produced and secreted by the pineal gland, which is stimulated by darkness and suppressed by light as perceived by the retina.
- Melatonin is synchronized to the daily light/dark cycle

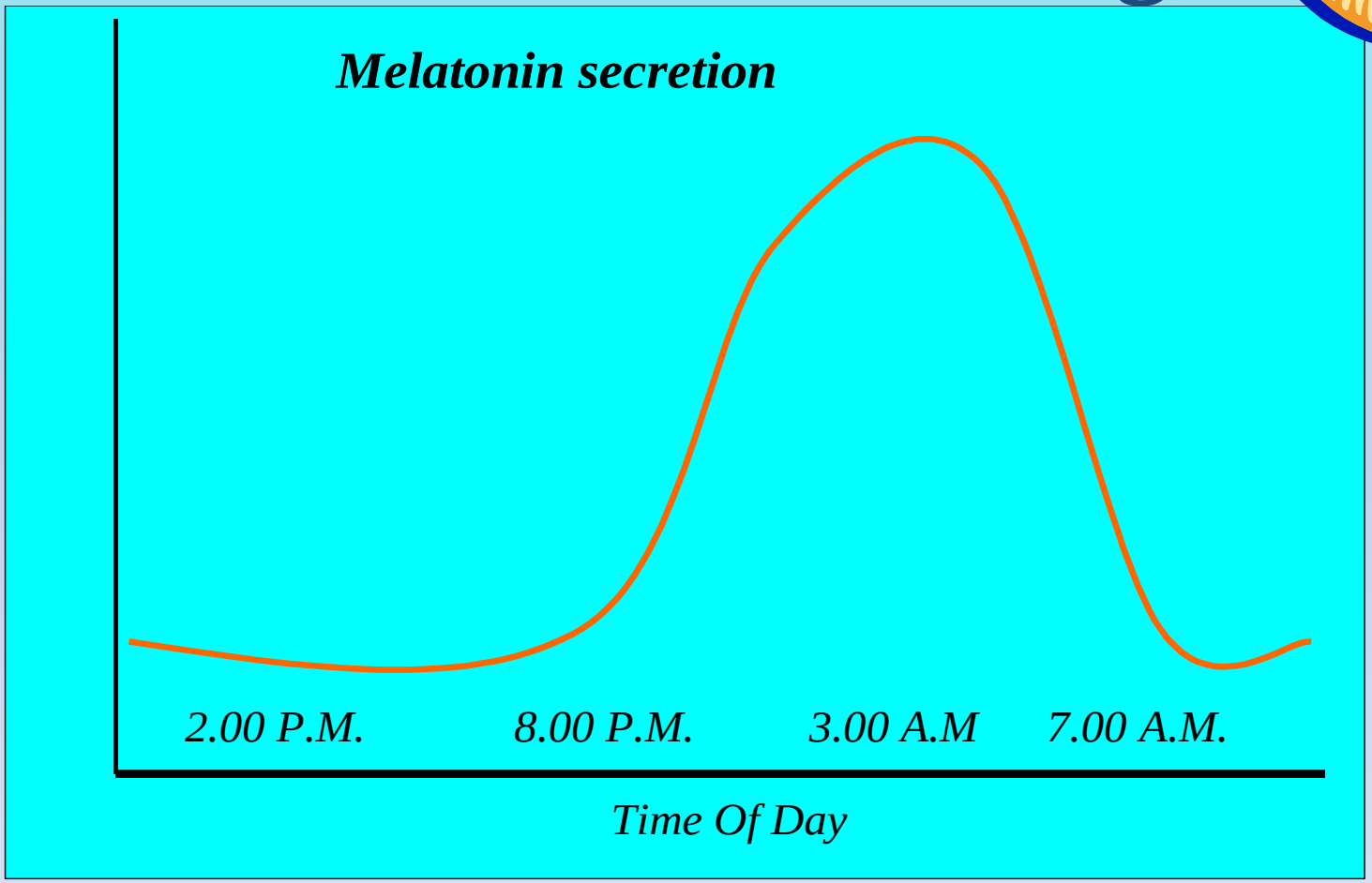


Melatonin Metabolism



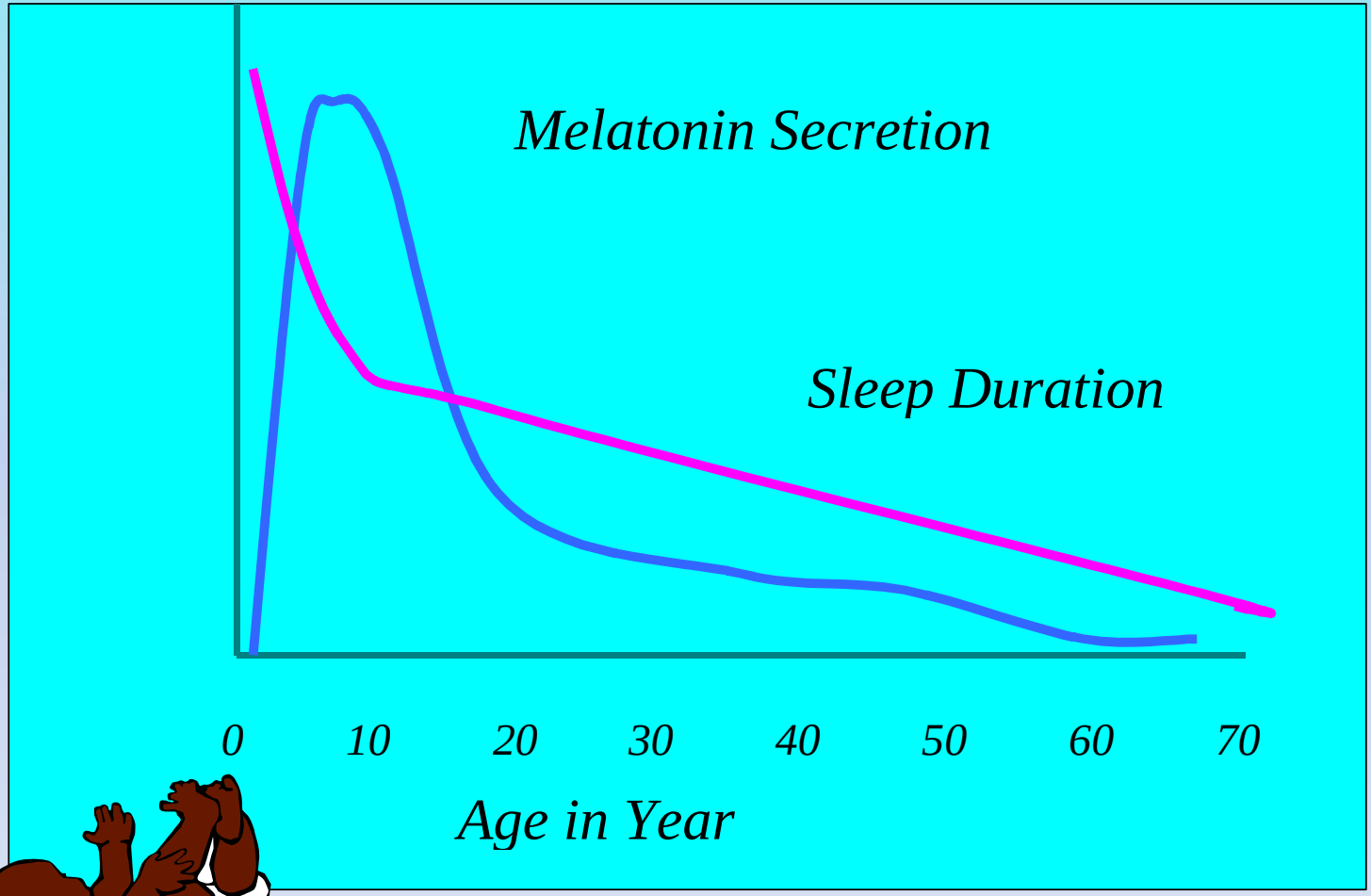
Melatonin is produced in pineal gland through tryptophan

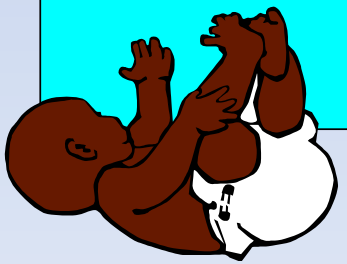
Melatonin secretion at night



Melatonin secretes at night and signals brain that it is time to sleep

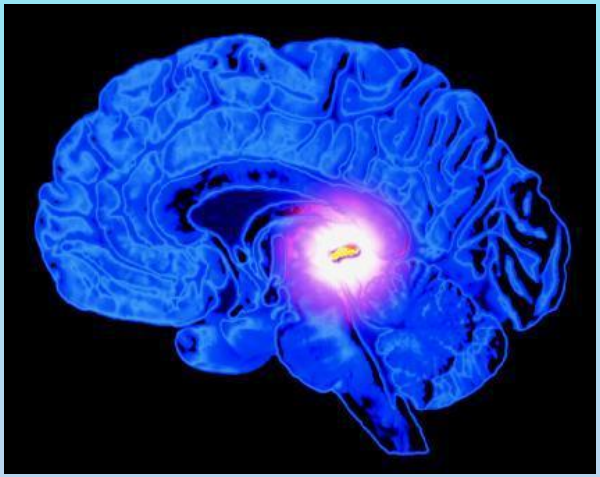
Melatonin levels sleep and age





Melatonin secretion starts at 3 months of age and reaches peak by puberty. Thereafter there is progressive fall over whole life.

Melatonin function



- Regulate circadian rhythm
- Control other hormone through pituitary
- Immunomodulator
- Oncostatic (Inhibit the development and/or growth of tumors in a variety of experimental animal models)
- Act as a free radical scavenger, and can detoxify carcinogens via activation of antioxidative pathways

- **Underlying biological mechanisms which could provide an explanation for the observed associations between night shift work and breast cancer risk may be related directly to the effects of light exposure and/or sleep disruption, or more fundamentally to altered pineal function and the resulting effects on hormonal regulation.**

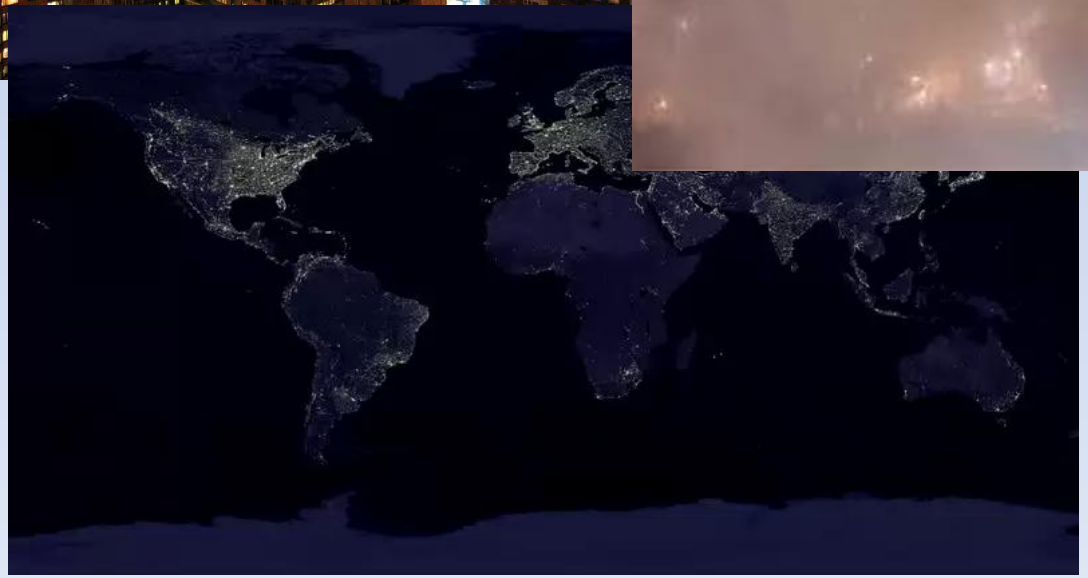
Hormonal Regulation

- **Melatonin appears to be involved in the regulation of gonadal function**
- **There is evidence that indicates that decreased concentrations of circulating melatonin can result in increased release of the gonadotropins LH and FSH from the pituitary and estrogen release by the ovaries.**
- **Thus, melatonin may exert an important modulatory effect on ovarian function and estrogen production and consequently have an inhibitory effect on hormone-dependent tumors, including breast cancer.**

Light's Impact on Sleep

- Research:
  - Exposing eyes to lots of light during the day increases melatonin production at night
  - Exposing eyes to light in the evening decreases melatonin production at night
- Blue Light is the biggest melatonin suppressant

Artificial lighting



Sleep environment

7 Ingredients of healthy sleep environment:

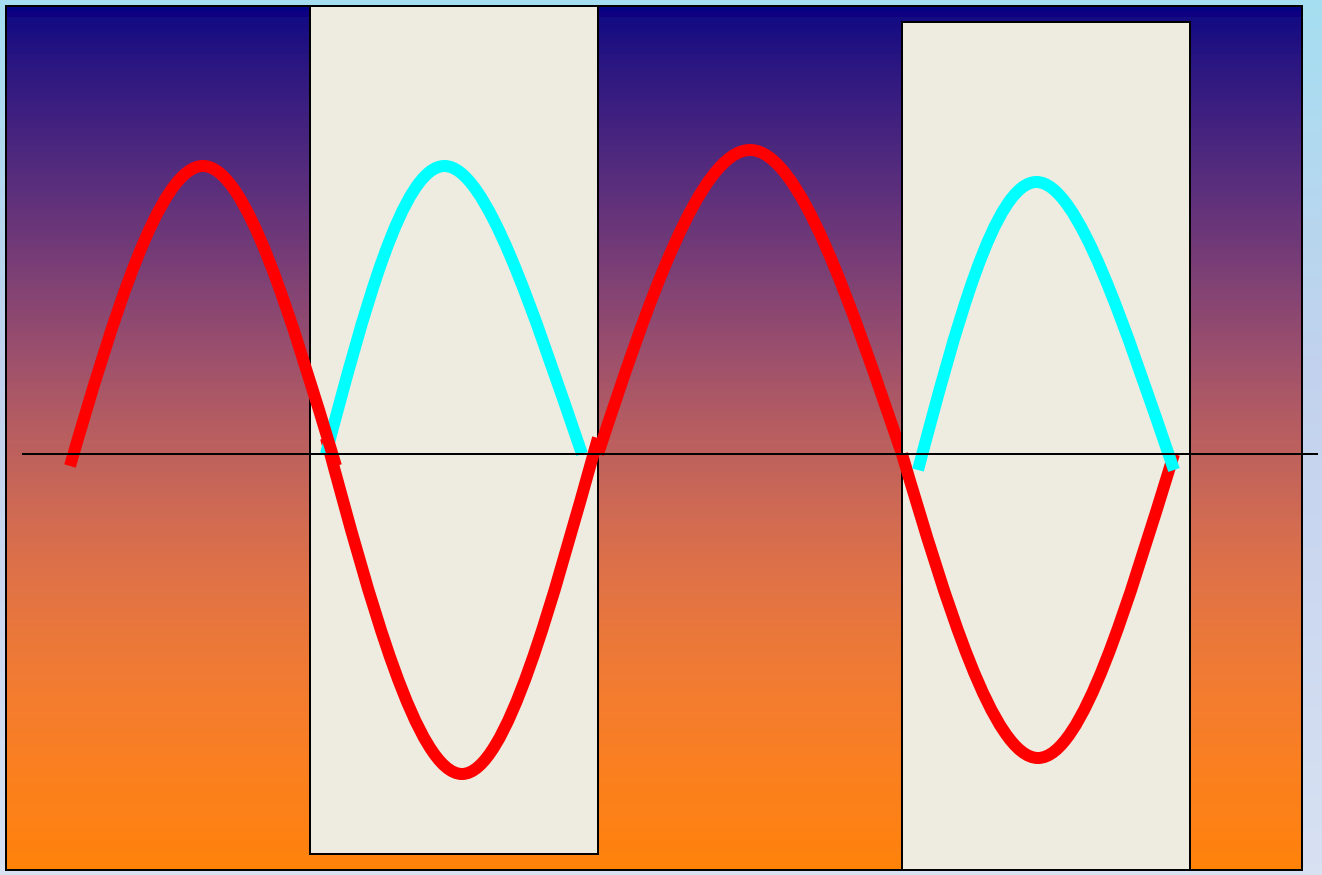
- Dark
- Quiet
- Comfortable
- Low-stimuli
- Cool, not too dry (humidity)
- Consistent
- Safe

To boost melatonin production at night: dim lights, no TV, no active games

Adverse Effects

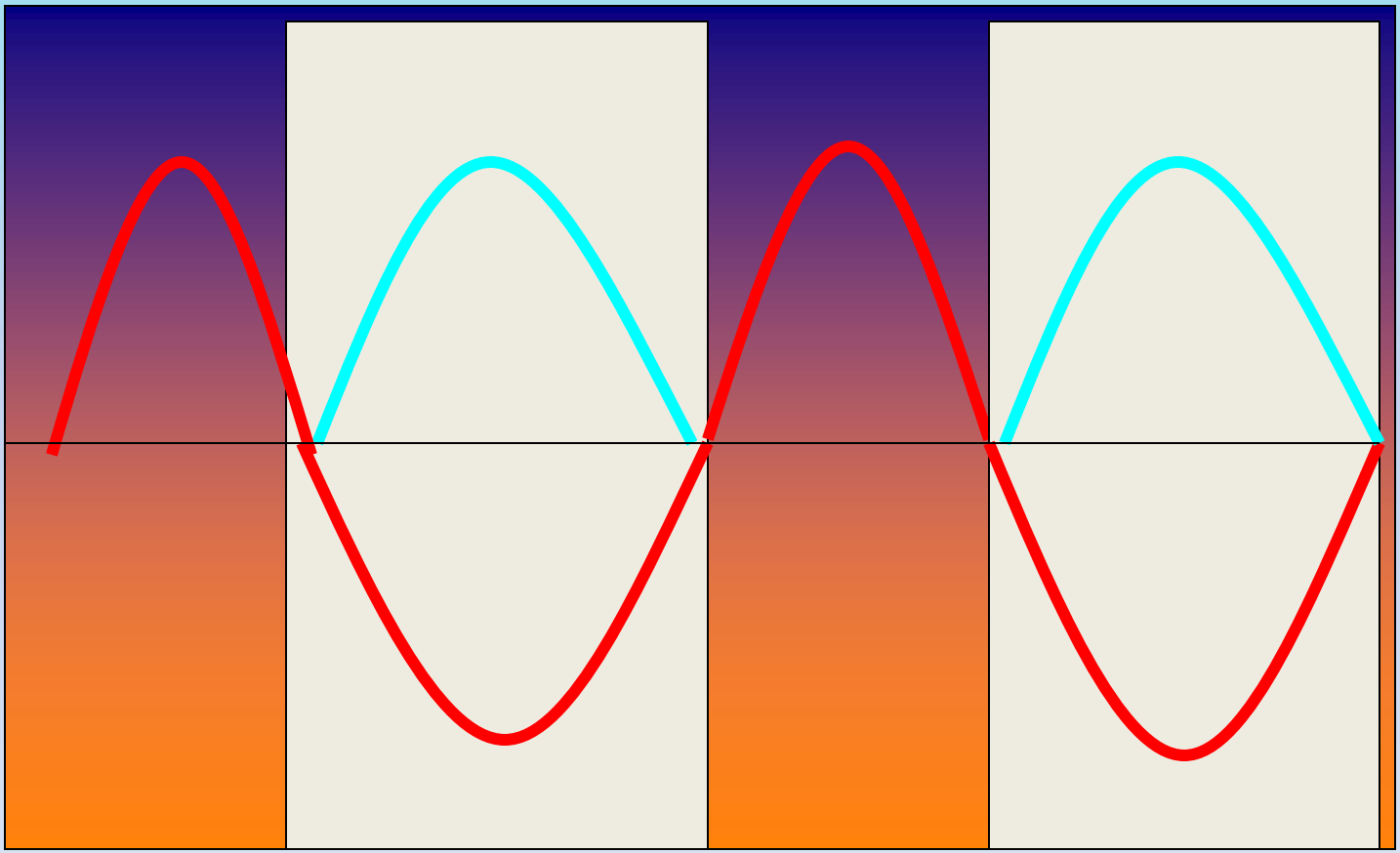
- Excess melatonin can lead to daytime sleepiness, impaired mental and physical performance, hypothermia, and high levels of prolactin
- Menstrual irregularities, galactorrhea

Normal circadian rhythm



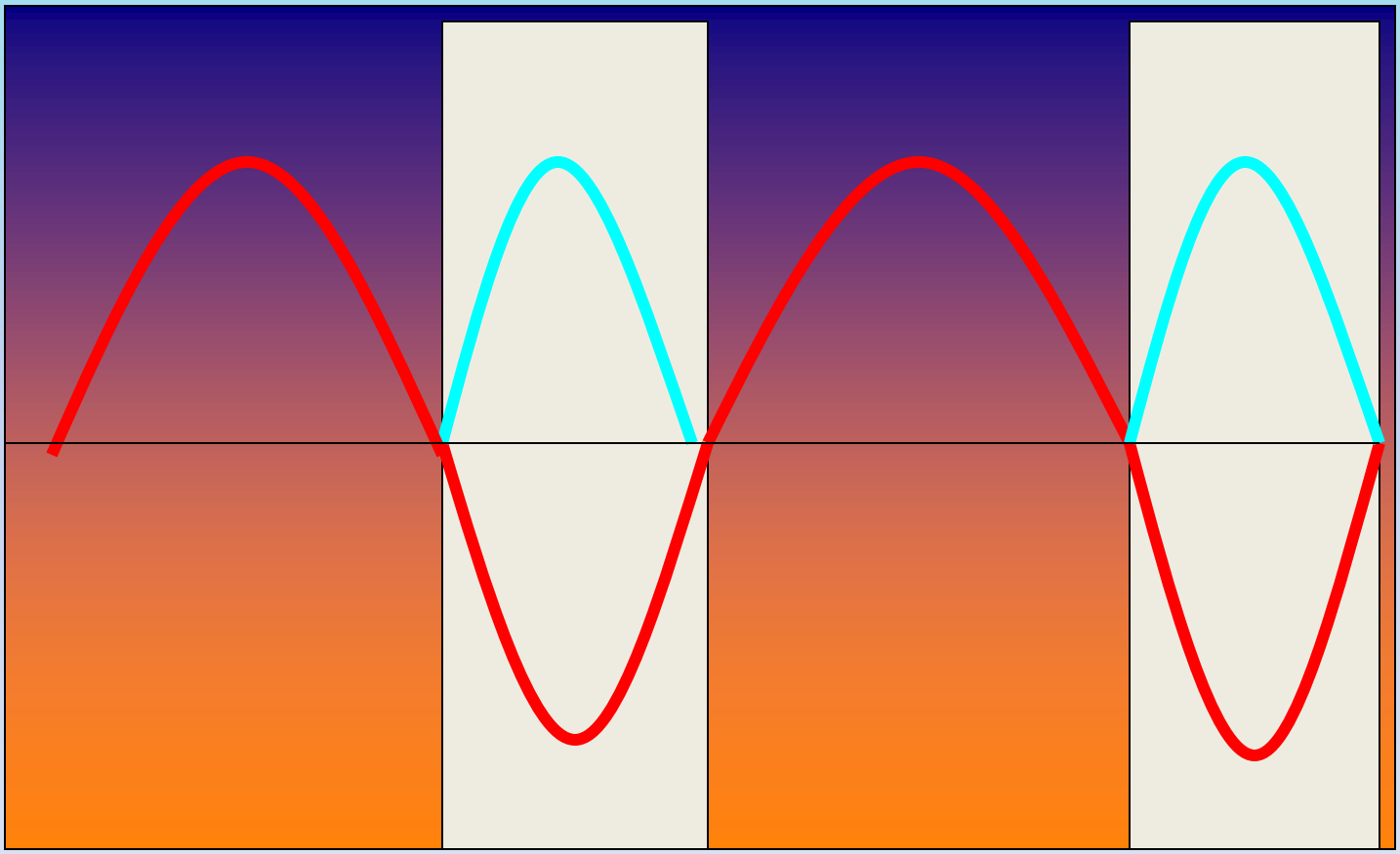
Red line is hypothetical normal pacemaker. With darkness at night there is melatonin secretion phases with sleep and circadian cycle.

Winter circadian rhythm



In winter nights there is increases duration of melatonin secretion.

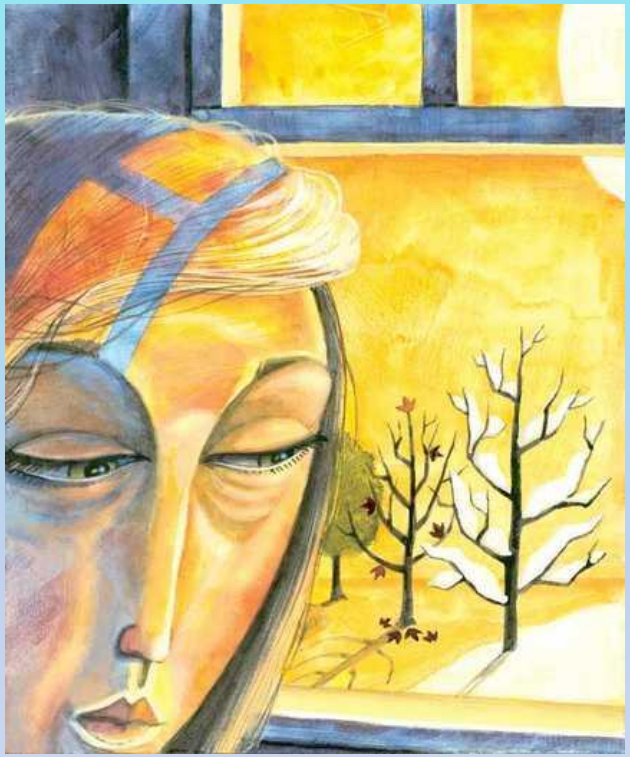
Summer circadian rhythm



Summer nights melatonin secretion reduces with longer days

Seasonal affective disorder (SAD)

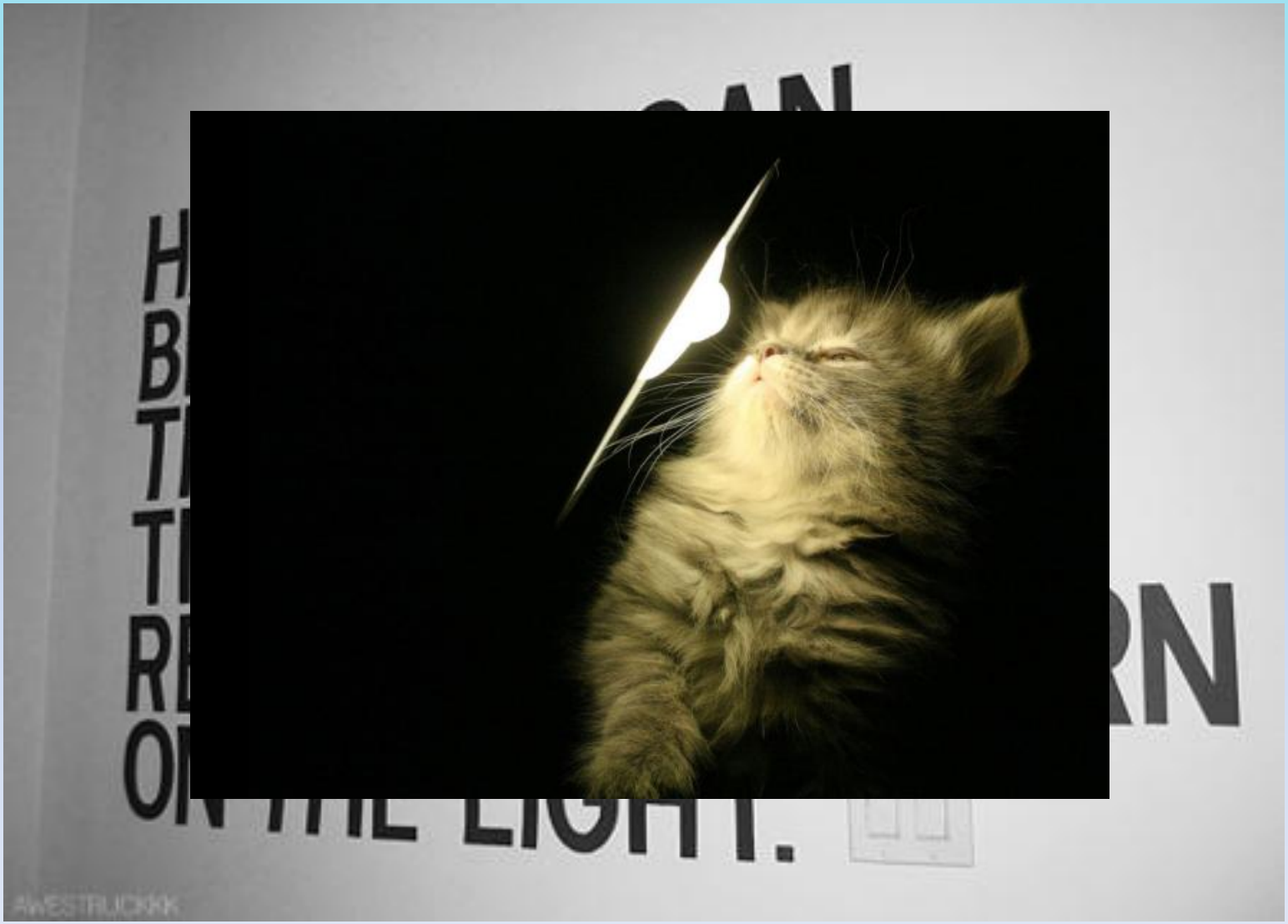
- Extreme fatigue and lack of energy
- Increased need for sleep
- Carbohydrate cravings
- Weight gain
- Reduced work productivity
- Withdrawal from social contacts



Light therapy

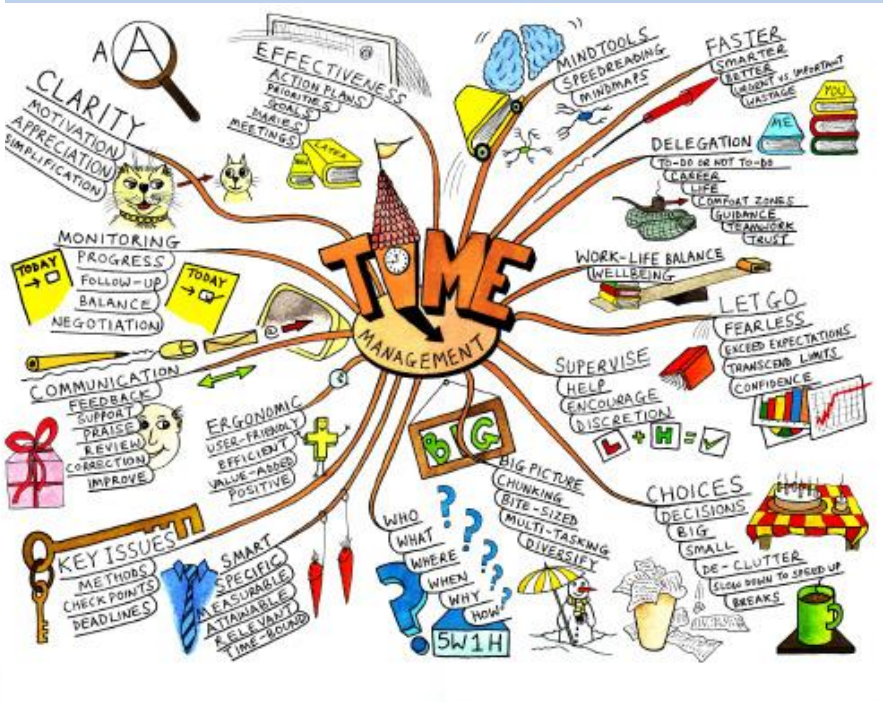
- Light therapy does seem to have some effectiveness. Light therapy boxes are available that mimic the outdoors. The best time to use light therapy is in the morning. You sit in front of the box in the morning before going to work and give yourself some sunshine. Light therapy typically takes about 30 minutes a day. Note: Do not try to use tanning beds as a treatment for SAD. Tanning beds use ultraviolet rays, which can be harmful to your eyes and your skin.

Keep the indoor lights turned on



Exercise and get outdoors

Stick to a routine



Take a vacation

Avoid known stressors

HOW MUCH SLEEP DO I NEED?

How Much Sleep Do You Really Need?

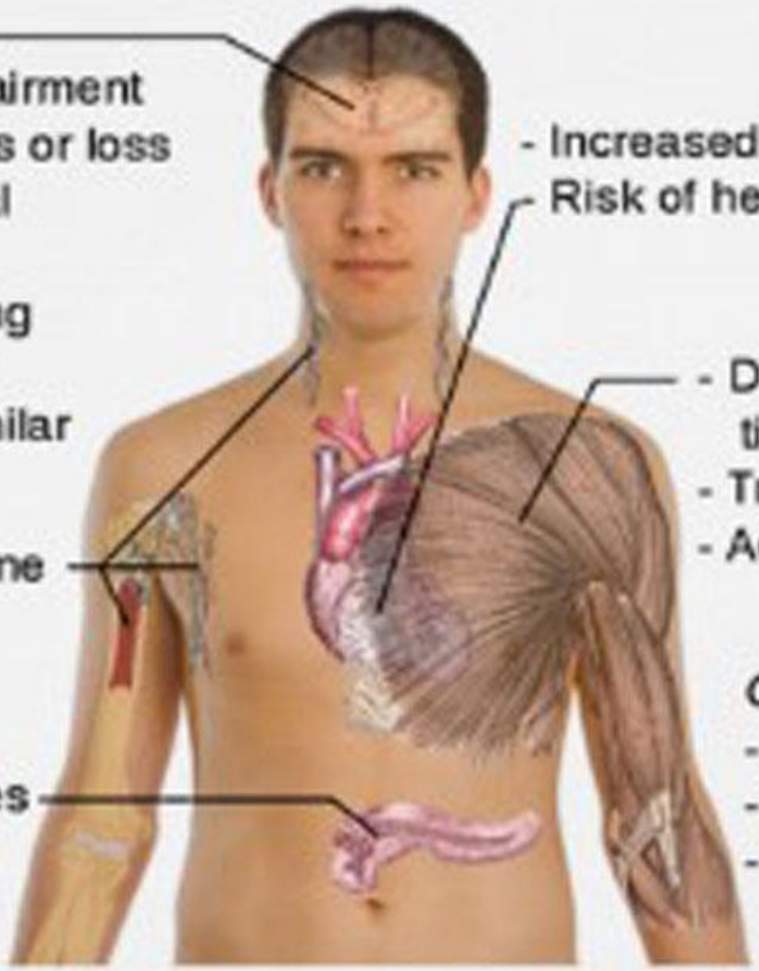
Age	Sleep Needs
Newborns (0-2 months)	12-18 hours
Infants (3 to 11 months)	14 to 15 hours
Toddlers (1-3 years)	12 to 14 hours
Preschoolers (3-5 years)	11 to 13 hours
School-age children (5-10 years)	10 to 11 hours
Teens (10-17)	8.5-9.25 hours
Adults	7-9 hours

Source: National Sleep Foundation

Sleep Disorders

	Definition	Associated with
Insomnia	Failure to get enough sleep at night	Daytime - fatigue, impaired concentration, memory difficulty, lack of well-being
Sleep Apnea	Repeated periods during sleep when a person stops breathing	Daytime - exhausted; chances of developing increases when overweight, use alcohol or sedatives
Narcolepsy	Suddenly falling asleep or feeling very sleepy during the day	Daytime – sleep attacks accompanied by REM sleep

FEELING THE EFFECTS OF SLEEP DEPRIVATION



- Irritability
- Cognitive impairment
- Memory lapses or loss
- Impaired moral judgement
- Severe yawning
- Hallucinations
- Symptoms similar to ADHD

- Impaired immune system

- Risk of diabetes Type 2

- Increased heart rate variability
- Risk of heart disease

- Decreased reaction time and accuracy
- Tremors
- Aches

Other:
- Growth suppression
- Risk of obesity
- Decreased temperature

- 2. **Physical training and hardening against cold**
  - Improves defense reaction of body against external factors

Benefits Of Regular Physical Activity

- Improved cardiorespiratory fitness
- Reduced risk of heart disease
- Prevention of hypertension
- Improved blood lipid and lipoprotein profile
- Reduced cancer risk
- Improved bone mass
- Improved weight control
- Improved health and life span
- Prevention of diabetes
- Improved immunity
- Improved mental health and stress management

Levels of Physical Activity

History

- Using thermal water for therapeutic purposes: balneotherapy, spa therapy, hydrotherapy
- Hippocrates (460-375BC) used hot and cold water immersion to treat many diseases
- Romans used baths for hygiene
- 19th-20th century: therapeutic & pleasure

Hydrotherapy

- a variety of activities aimed at strengthening the immune system. The purpose of the procedures is to increase the body resistance to harmful influences of meteorological properties.

- Hydrotherapy - is increasing the body's resistance to the effects of natural factors in the range of physiological stress. It does not only strengthens the body, improves circulation, normalizes metabolism and increases the tone of the central nervous.

Hydrotherapy of child

- is important to begin in childhood, when thermoregulation is still developing and emerging mechanisms of immunobiological protection.
- A seasoned child is not afraid of hypothermia, changes in temperature, wind chill . Tempered children are rarely very sick and almost did not get cold

Hydrotherapy of cold

- is the most common and practically most important, because It helps in the prevention of acute respiratory viral infection, by stimulating immune responses and improve the processes of thermoregulation.
- In the people who are resistant to cold, they have more intensive heat build up in them, increasing blood circulation thus reducing possibility of overcooling.

- • **Increase metabolism.** The effects of exposure to cold on metabolism are well documented.
- • **Enhance immunity**. Cold water stimulates the release of substances vital to immune function, such as *cytokines*.
- • Stabilize blood pressure **and other bodily functions**.

- **Reduce pain**. Cold water causes the body to release endorphins.
- **Improve mood.** Not only does cold water stimulate the release of mood-boosting endorphins, it also activates sensory nerves leading to the brain.

- **Improved Lymphatic Movement**
- Lymphatic system takes toxins away from cells to help fight disease. When you take a cold shower it forces your lymphatic system to push lymph fluids throughout your entire body. This stops them from being concentrated in one area and improves their flow.

How to Use Cold Water Methods of cold hardening

- Is usually achieved with outdoor activities
- Aerotherapy
- Hydrotherapy
- The most effective and convenient ways are water treatments - **wiping, pouring, showers**, which begin with the use of water at room temperature. Slowly lower the water temperature, and increase duration of treatment . Also great benefits are achieved by **swimming**. Water treatment, as winter swimming, , swimming in open water in winter, can be taken only after prolonged pretreatment with a doctor's permission and under constant medical supervision.

Foot baths

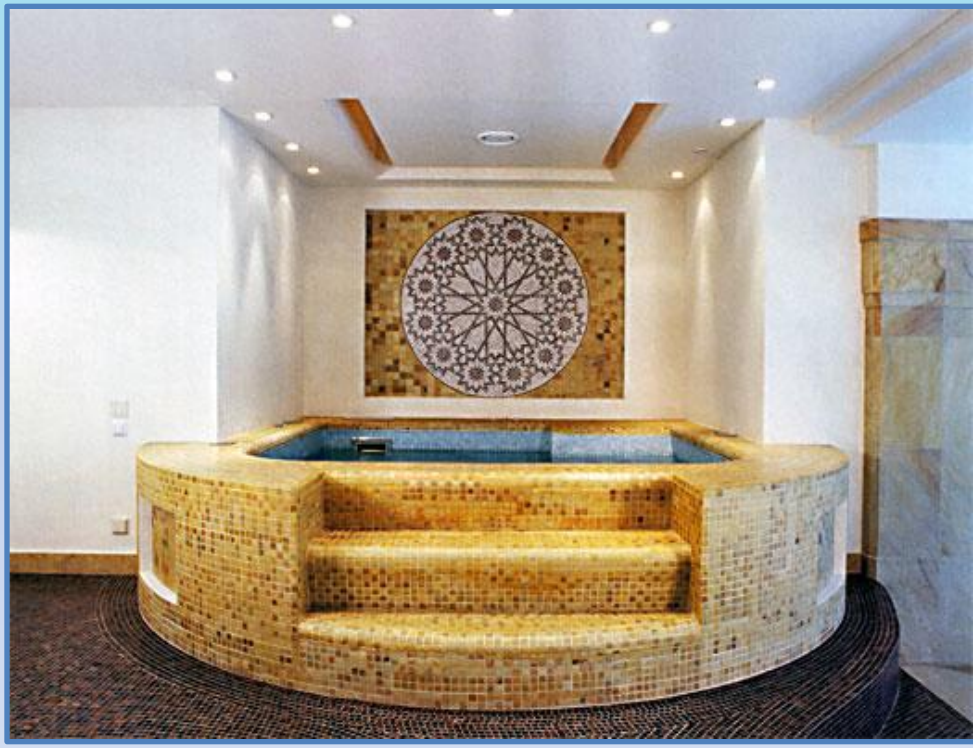
Hot water

- As a result of repeated and prolonged exposure of the organism of high temperature the body's resistance to heat is increased by increasing sweating and changes in the composition of sweat (elevated levels of fatty substances, a decrease in chloride concentration), and also due to the reduction heat formation.
- Heat has an analgesic, or pain relieving, effect due to its ability create more effective blood flow.

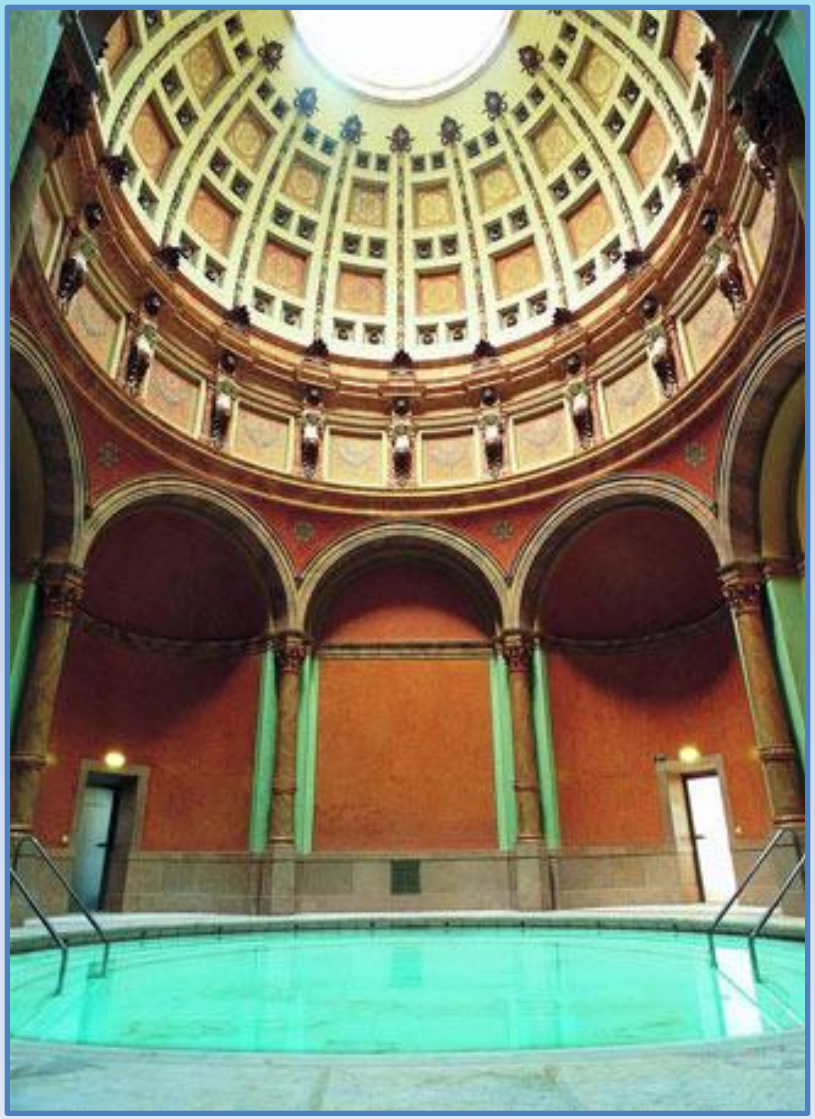
Types of sauna:

- DRY and WET.
- Wet saunas are sometimes called steam rooms, and are kept at lower temperatures than the dry sauna-usually between 37-56 Celsius. This, to prevent the superheated water from scalding the skin on contact.
- Dry saunas may be kept at much higher temperatures of up to 121 Celsius, by keeping the surrounding moisture down to nearly zero.

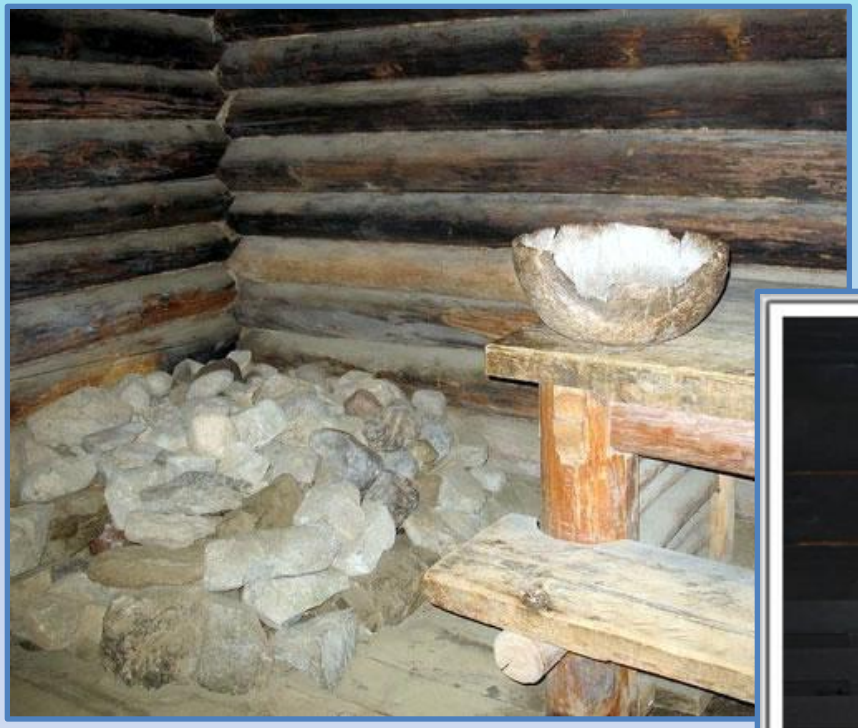
Turkish sauna



Roman-Irish baths



Russian bath «black»



Russian bath «White»

The city baths

Finnish sauna

Finnish sauna

Japanese water baths

Benefits

- ***Heat***- The organ effected most is skin. The heat causes blood vessels **to dilate**, increasing blood demand to the skin, **blood pressure to drop,** heart will beat faster and more efficiently to compensate. Blood pressure is lowered. This is only a temporary effect.
- quick change in temperature from splashing on cold water or a dive in the lake will **restrict the blood vessels in a hurry**. This will temporarily but dramatically increase blood pressure. Take it easy with this treatment if you have a concern about high blood pressure.

Skin treatment

- This is a way to clean and rejuvenate skin.

  The skin is meant to be a pathway for the elimination of toxins and waste material from your body. Creams, deodorants, oils, dead skin cells, will clog skin pores and lock waste in. Skin conditions like **acne, pimples and blackheads** can be caused by clogged and infected pores.

  Heat from a sauna opens the pores and sweat will flushes out the toxins. The newly cleaned out pores have a long lasting effect on the ability of your skin to function.

  Dilated blood vessels increase the flow of oxygen and fluids to skin cells. Cleansing eliminates dead skin cells and other material exposing a new layer of fresh, clean, health cells. Your skin not only looks and feels younger, it will also function more efficiently.

Weight loss

- You will loose weight from taking a sauna. The bad news is that most of the weight will come right back.

  Saunas are a great way to sweat some of that water out. This can drop your weight by pounds (a good thing). As soon as the water is replaced it will be retained (a bad thing).

  Here is some good-good news. Weight loss from a sauna can be more than temporary. The increased heart rate in a sauna will burn calories. about **300 extra calories** (a cookie or two) are burned in typical sauna session. same amount of calories burned when you are walking.

Mental health

- Endorphins, feel-good chemicals in the brain, are released due to the increase in cardiovascular activity. This combination would give anybody a positive attitude adjustment for the day.

Muscle relaxation

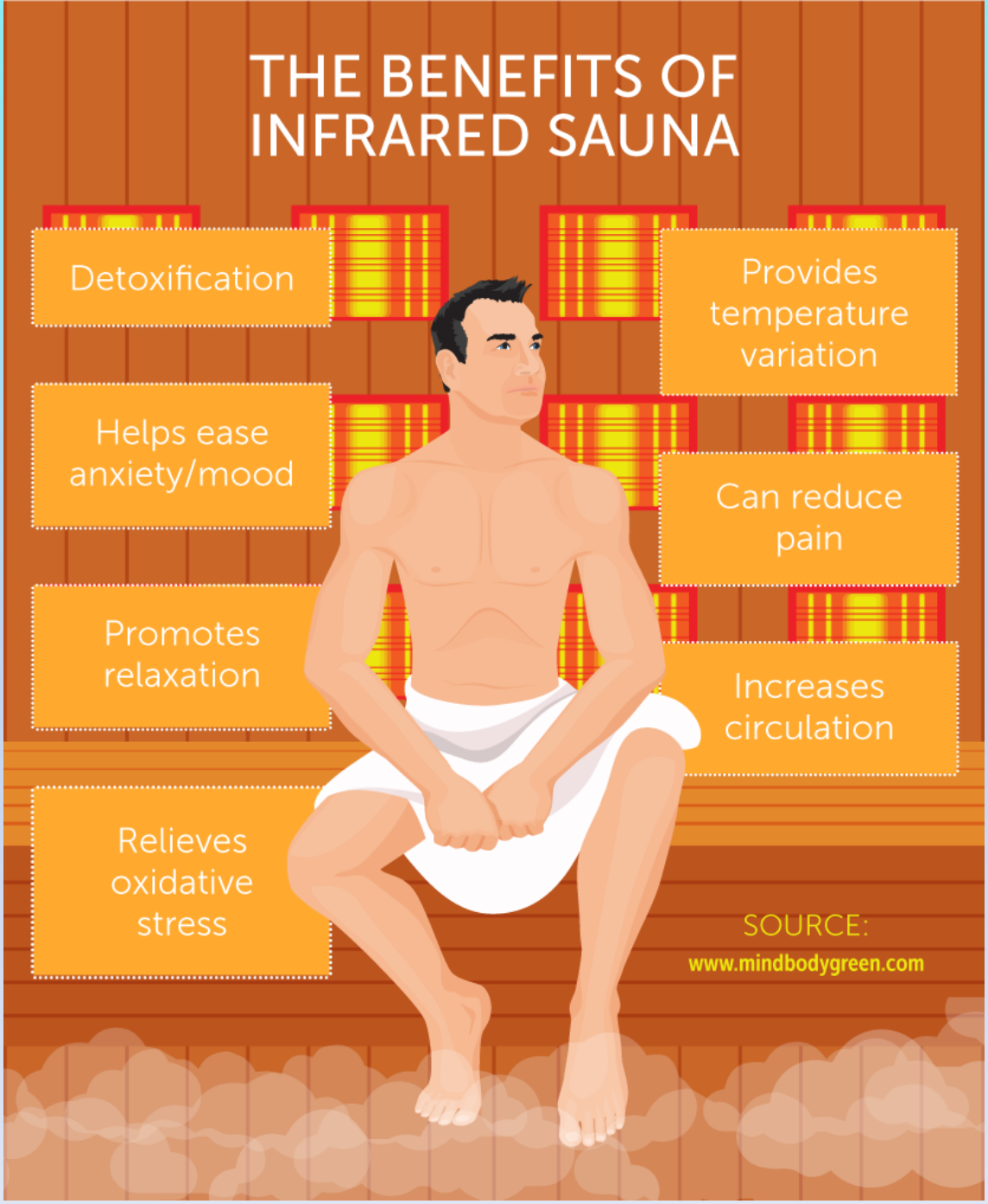
- muscle soreness occurs after a workout comes from excess lactic acid. Microscopically can see torn and swollen muscle cells. Whichever the case, a sauna will help relax the muscles and ease the soreness.
- The process of sweating helps rid the muscles of excess lactic acid. Dilated blood vessels increase the flow of oxygen to muscles, reduces swelling and aids in the repair of tears.

Contraindications

Avoid sauna use completely in the case of :

- Stroke (type caused by bleeding into the brain)
- Severe aortic stenosis
- Recent myocardial infarction (heart attack)
- Unstable angina pectoris
- If you are on steroids (interferes with blood circulation)
- Brain tumours
- Multiple sclerosis
- Silicone implants

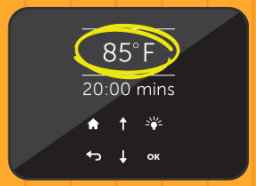
- Avoid alcohol and medications that may impair sweating and produce overheating before and after your sauna.
- Stay in no more than 15–20 minutes.
- Cool down gradually afterward.
- Drink two to four glasses of cool water after each sauna.
- Don’t take a sauna when you are ill.


THE BENEFITS OF INFRARED SAUNA
Detoxification
Provides temperature variation
Helps ease anxiety/mood
Can reduce pain
Promotes relaxation
Increases circulation
Relieves oxidative stress
SOURCE:
www.mindbodygreen.com

RECOMMENDATIONS FOR THERAPEUTIC INFRARED SAUNA USE

1

Start your session when the cabin temperature is 80-90 degrees F and let your body warm up the rest of the way with the sauna.



2

Start slowly. 20 minutes maximum for the first few sessions.

3

Make sure you hydrate before and after your sauna

4

Do not overheat. If you feel lightheaded or queasy, crack the door open or exit the sauna and lie down for a few minutes.

5

Increase in heartbeat is normal. Commonly up to 30%

6

Lay towels underneath you to absorb the sweat

7

Allow your body to cool to room temperature in a relaxed position after completing your sauna session.

8

Take a shower after your sauna is completed.

9

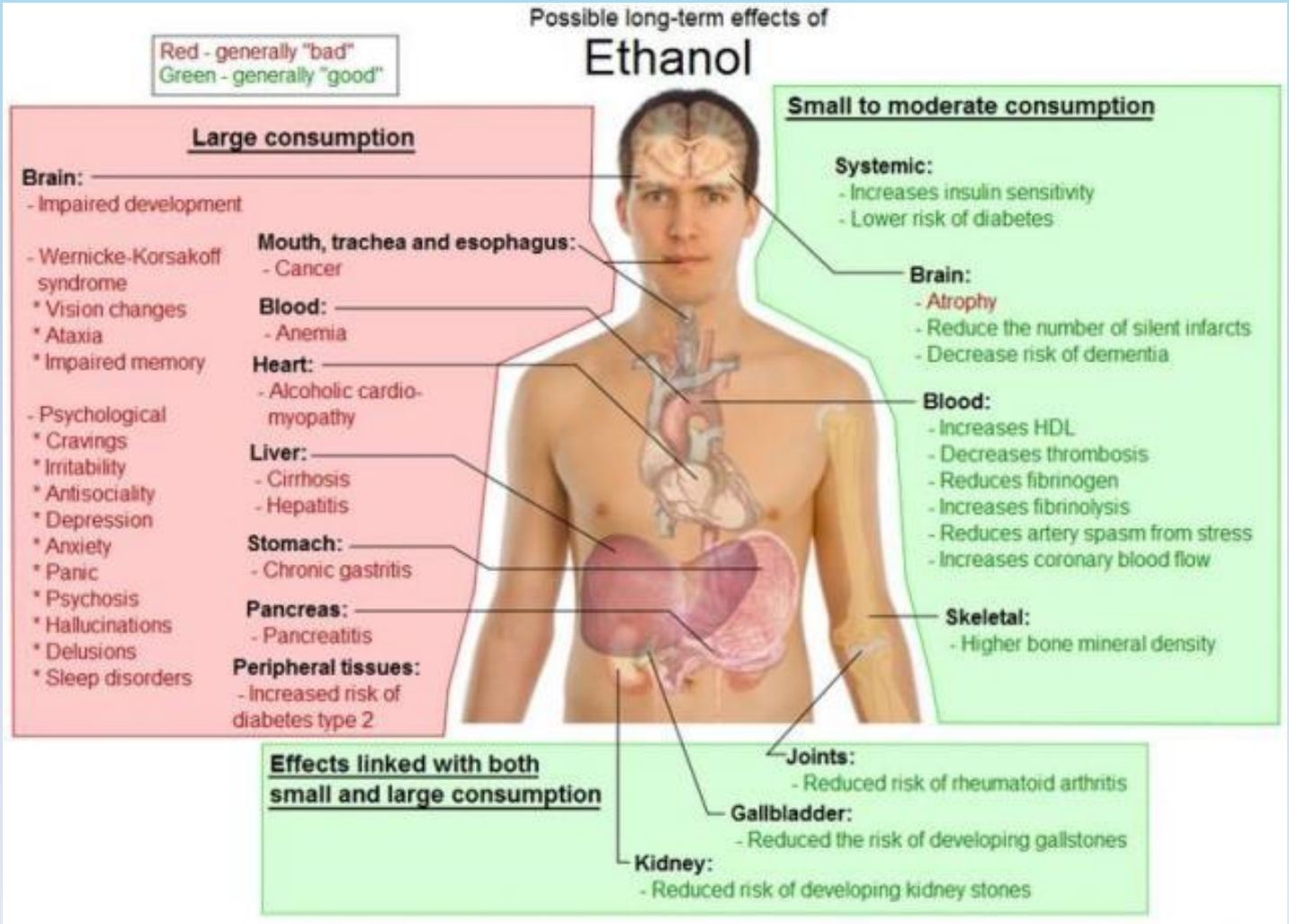
Sauna should be fine for most people but if you have diabetes, circulatory issues, cancer or another condition, **be sure to consult your doctor before beginning** your sauna practice.

- 4. Psychological culture
  - Prevention of depression
  - Improving self confidence
  - Knowledge about disorders
  - (Schizophrenia)
- 5. Sexual culture
  - Prevention of STDs
  - Sex education

| For a story about pumping up ones confidence

- 6. Environmental culture
  - Keeping environment safe, clean
  - NB: 20% of health depend on environment
  - Know about different environment-related diseases

- 7. Prevention of alcohol addiction
  - Alcoholism brings about social, psychological, health problems



- 8. Prevention of smoking addiction
  - Smoking causes different diseases

- 9. Prevention of drug and toxic substances addiction
  - Mind-altering substances are dangerous

- 10. Individual prevention of AIDS and other infectious diseases
  - Get oneself tested
  - Prevention of transmission

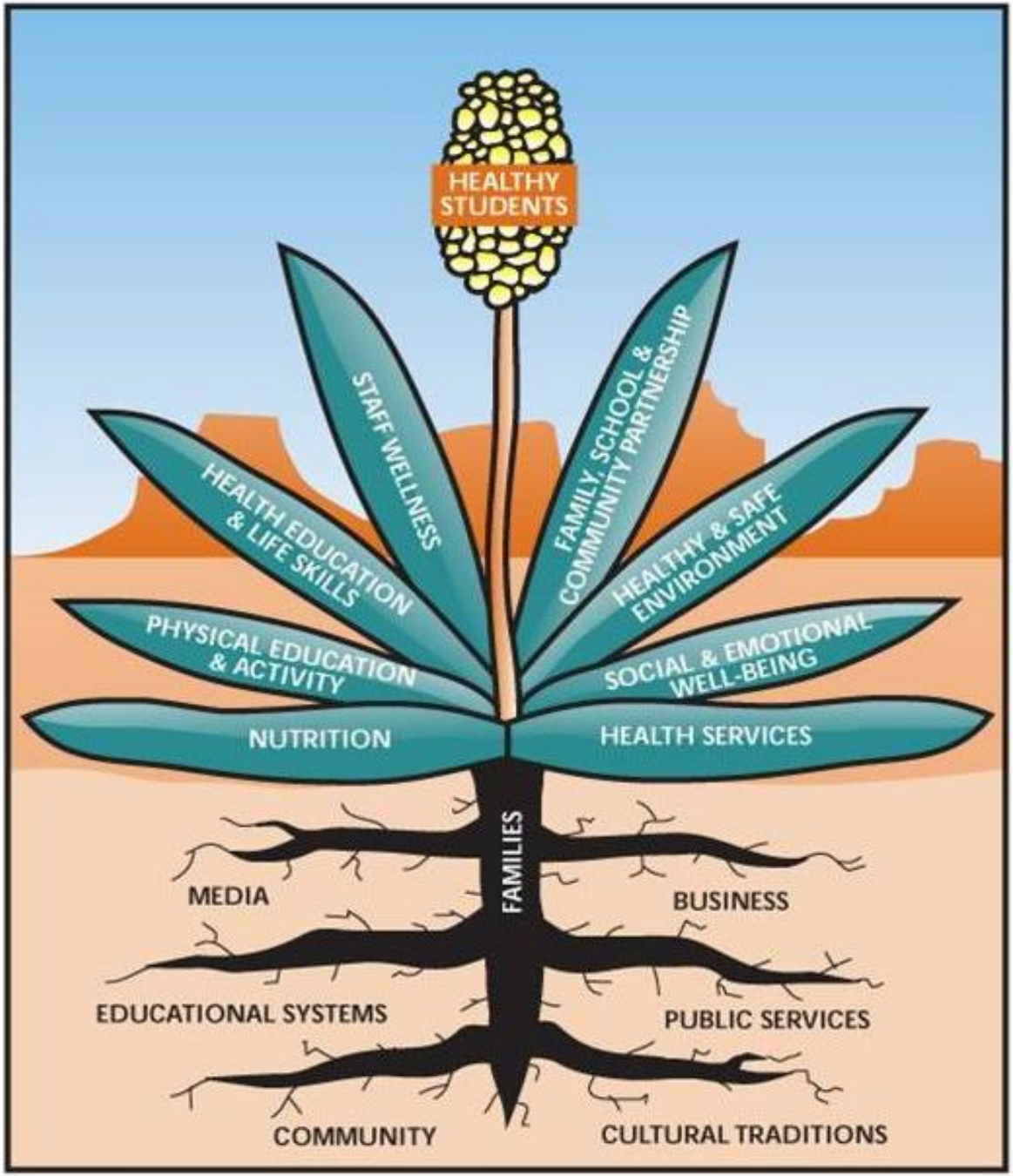
- 11. Self treatment and its harm: methods of helping oneself and others in extreme situation
  - Never take drugs without doctor prescription or advice
  - Know basic first aids

- 12. Personal hygiene

METHODS OF POPULARIZATION OF HEALTHY LIFESTYLE

- 1. Person-to-person interaction
- 2. Person-to-group interaction
- 3. Mass media

- Nutrition
- PE & Activity
- HE & Life Skills
- **Staff Wellness**
- FSC Partnership
- Health & Safe Environment
- Social & Emotional Well-being
- Health Services



- Doctor’s role
  - Personal conversation
  - Instruction
  - Consultation
  - Group conversation
  - Lectures
  - Discussion
- Doctor’s action
  - Examination/Screening
  - Preventive recommendation (Correction of lifestyle)
  - Therapeutic and preventive administration