I. EMOTIONS AND DISEASES

Most of our sicknesses are caused by our emotions/sins of anger, resentment, bitterness, jealousy, fear, worry, anxiety, etc. However, the healing of our emotions results naturally from the therapy of love, peace, and joy.

90% of all physical diseases are aggravated by toxic emotions. Psychosomatic illnesses account for 50% of cases treated by doctors. They are caused by stress, anxiety, rage, depression, guilt, shame, resentment, and bitterness.

Simply remembering an unpleasant event can activate the sympathetic autonomic nervous system and release stress hormones that impact the immune system.

What happens to your heart rate when you think of a person who, in the past, hurt you? What happens when you come face to face with a person who rejected you? What happens inside you when you remember an abuse you experienced? In such situations, the immediate response is fear that you will again get hurt, accompanied by emotions of anger, betrayal, and shame. Feelings or emotions of fear, anger, betrayal, and shame immediately create an alarm reaction in you.

Imagine that a car backs up onto a child and stops on top of him. The brain of the mother puts her entire body in a state of high tension (stress) which allows the mother to act faster than usual and have more strength than usual. Without thinking, she can lift the car to save her child. To do this,

- The brain orders the release of much noradrenaline and adrenaline (called norepinephrine and epinephrine in the US) throughout the body;
- Blood vessels are constricted to pass the most blood as quickly as possible;
- The heart starts beating very fast, pumping more blood to the muscles and brain;
- The lungs breathe faster to supply a lot of oxygen to the blood;
- The liver releases huge amounts of sugar in the blood to energise muscles;
- Muscles exhaust all their energy reserves to create a superhuman effort because the situation is critical and stressful;
- The skin starts to sweat to maintain the heat balance of the body (homeostasis);
- The immune system (glands) slows or stops;
- Digestion decelerates; and
- Cleaning, repair and, replacement of the body’s cells decreases to focus all attention on the urgent task.

Once the danger has passed, the brain directs the autonomic nervous system to function in the relaxation mode (the parasympathetic nervous system) to digest food, repair damaged cells, and restore the body’s normal operation (“rest and digest”).

II. SOME BASIC BIOLOGY

I. The Nervous System

The human nervous system is responsible for sending, receiving, and processing of nerve impulses. All the muscles and organs of the body depend on these impulses to operate. Three systems work together to fulfill this mission: the central, peripheral, and autonomic nervous systems.

We recognise in ourselves two nervous systems: central and peripheral. When I want a pencil, my eyes find one on my
table. I extend the hand I open, I place my fingers on it, I clamp them on each side of the pencil, and I pick it up. My will instructs my brain to activate the muscles, bones, organs, etc. to perform the desired operation. I learned how to do things like that when I was a young boy. Now, I do it without even thinking, through active routines I initiate at will, unless I am sick.

The body has another nervous system that operates independently of my will. This is the autonomic nervous system. It controls digestion; respiration; heart rate and blood flow in arteries and veins; blood pressure; secretion; and excretion. This system works in two modes: under stress (sympathetic nervous system) or when relaxed (parasympathetic nervous system).

2. The Parasympathetic Nervous System
(Relaxation: “Rest and Digest”)

Normally, the body works in relaxation mode (parasympathetic nervous system).

- After a meal, brain and muscle activity decreases slightly for a time for the body to focus on the metabolism (digestion, absorption of nutrients to digest, and elimination of the remainder.) The stomach and intestines filter all nutrients, water, vitamins, proteins, fats, sugars, etc. and send them to the liver for distribution to various body parts as they need them.
- The blood transports these things to every cell of the body, which integrate them and transmit their genetic code.
- The immune system fights injuries and intruders in the body to neutralise and repair the affected organ.
- The water in the blood picks up all cellular waste to be filtered by the liver to be recycled elsewhere or eliminated.
- The brain directs all this work almost continuously without the individual being aware of it.

The parasympathetic nervous system initiates the general slowdown of most of the organs and stimulates the digestive system. Thus, the body functions in relaxation mode. This state is associated with a neurotransmitter\(^{117}\), **acetylcholine**\(^{118}\), which slows down the organs and stimulates the digestive system.

Acetylcholine intervenes in the control of muscles through neuromuscular terminations or viscera and glands, and sometimes both. Thus, it modulates the functioning of certain organs such as the heart, salivary glands, sweat glands, bladder, lungs, eyes, and intestines. Acetylcholine also allows the contraction of striated skeletal muscles, which are muscles that are only under voluntary control. Finally, we find this neurotransmitter in the basal ganglia which are groupings of grey matter located within the brain, and also called grey basal ganglia. The grey nuclei in each of the two cerebral hemispheres are arranged symmetrically. The basal ganglia are involved in motor control and voluntary movements. When they are affected, a decrease in the amount of neurotransmitters results. Acetylcholine and dopamine\(^{119}\) are the best known neurotransmitters; they allow the coordination of movement. Enzymes called cholinesterases allow rapid inactivation of acetylcholine.

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\(^{117}\) **Neurotransmitter**: a substance released from the axon terminal of a presynaptic neuron on excitation, which diffuses across the synaptic cleft to either excite or inhibit the target cell. (Dorland's Medical Dictionary for Health Consumers, 2007).

\(^{118}\) **Acetylcholine**: a direct-acting cholinergic neurotransmitter agent widely distributed in body tissues, with a primary function of mediating the synaptic activity of the nervous system and skeletal muscles. Its half-life and duration of activity are short because it is rapidly destroyed by acetylcholinesterase. Its activity also can be blocked by atropine at the junctions of nerve fibers with glands and smooth muscle tissue. It is a stimulant of the vagus and autonomic nervous system and functions as a vasodilator and cardiac depressant. Acetylcholine is used therapeutically as an adjunct to eye surgery and has limited benefits in certain circulatory disorders because of its short half-life. (Mosby's Medical Dictionary, 8th edition, 2009).

\(^{119}\) **Dopamine**: a naturally occurring sympathetic nervous system neurotransmitter that is the precursor of norepinephrine. It is produced in the substantia nigra and transmitted to the putamen and caudate nucleus. It has an inhibitory effect on movement. A depletion of dopamine produces the symptoms of rigidity, tremors, and bradykinesia that are characteristic of Parkinson's disease. It is available as an intravenously injectable drug. DOPamine has potent dopaminergic, beta-adrenergic, and alpha-adrenergic receptor activity. See also DOPamine hydrochloride. (Mosby's Medical Dictionary, 8th edition, 2009).
3. The Sympathetic Nervous System

(Stress: “Fight or Flight”)

The sympathetic nervous system or systema nervosum, serves to place the organism on alert status and readies it for physical and mental activity. It is associated with two neurotransmitters: noradrenaline\(^{120}\) and adrenaline\(^{121}\) (norepinephrine and epinephrine in the US) (bronchiectasis [bronchial dilation], accelerated heart and respiratory activity, dilated pupils, and increased secretion).

The hypothalamus\(^{122}\) is the region of the brain that coordinates the sympathetic nervous system. The nervous system controls all of the autonomic functions of the human body and adjusts the internal environment through a process called homeostasis\(^{123}\).

The sympathetic nervous system also affects cells and certain organs through the action of substances it synthesises itself: neurotransmitters. These are catecholamines\(^{124}\). These mediating substances or neurotransmitters include noradrenaline, adrenaline, and acetylcholine (which has a specific action on blood vessels and sweat glands). The action of the sympathetic nervous system results in:

- An increase in blood pressure (hypertension);
- Tachycardia (increased heart rate frequency);
- Slowing of peristalsis (lower intensity of bowel movements);
- Mydriasis (pupil dilation);
- Peripheral vasconstriction (decrease in the size of vessels in the periphery leading to ischemia and therefore pallor, that is to say a white bluish colouration of the skin: “white as a ghost”);
- Excitation of the sweat glands, causing an abnormal production of sweat (hyperhidrosis);
- Increased secretion of adrenaline and noradrenaline from the adrenal glands;
- Relaxation of the bladder;
- Sudden release of glucose from the liver;
- Stimulation of ejaculation; and
- Bronchial dilatation (diameter increase of the lung passages).

The sympathetic nervous system or systema nervosum, serves to place the organism on alert status and readies it for physical and mental activity. It is associated with two neurotransmitters: noradrenaline and adrenaline (norepinephrine and epinephrine in the US) (bronchiectasis [bronchial dilation], accelerated heart and respiratory activity, dilated pupils, and increased secretion).

III. SOME OPINIONS

1. Ayla Seugon\(^{125}\)

<table>
<thead>
<tr>
<th>Psychosomatic Illnesses</th>
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<tr>
<td>“Psychosomatic illnesses are characterised by physical symptoms that affect an organ or a physiological system and the causes of which are primarily emotional. The illness echoes a state of anxiety or emotional distress. Clearly, a traumatic psychological experience (death, divorce, separation, accident, job loss...) is able to bring down our natural defences and trigger an affection(^{126}), As Freud said, “the psychic then makes a leap into the organic.”</td>
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\(^{120}\) Noradrenaline / Norepinephrine: n. A neurotransmitter released by the adrenal gland; part of the fight-or-flight response and also directly increases heart rate, blood pressure, energy release from fat, and muscle readiness. (Jonas: Mosby's Dictionary of Complementary and Alternative Medicine, 2005).

\(^{121}\) Adrenaline / Epinephrine: A sympathomimetic catecholamine hormone synthesised in the adrenal medulla and released into the circulation in response to hypoglycaemia and sympathetic nervous system—i.e., splanchnic nerve stimulation due to exercise and stress; it acts on α- and β-receptors, resulting in vasoconstriction or vasodilation, decreased peripheral blood flow, increased heart rate, increased force of contractility, increased glycogenolysis and increased lipolysis. Pharmacologic doses of epinephrine are used as bronchodilator for acute asthma, to increase blood pressure and in acute myocardial infarctions, to improve myocardial and cerebral blood flow. (Segen's Medical Dictionary, 2012).

\(^{122}\) Hypothalamus: A structure within the brain responsible for a large number of normal functions throughout the body, including regulating sleep, temperature, eating, and sexual development. The hypothalamus also regulates the functions of the pituitary gland by directing the pituitary to stop or start production of its hormones. (Gale Encyclopedia of Medicine, 2008).

\(^{123}\) Homeostasis: The tendency of biological systems to maintain relatively constant conditions in the internal environment while continuously interacting with and adjusting to changes originating within or outside the system. See also balance and equilibrium. adj., homeostatic. The term is considered by some to be misleading in that the word element-stasis implies a static or fixed and unmoving state, whereas homeostasis actually involves continuous motion, adaptation, and change in response to environmental factors. It is through homeostatic mechanisms that body temperature is kept within normal range, the osmotic pressure of the blood and its hydrogen ion concentration (pH) is kept within strict limits, nutrients are supplied to cells as needed, and waste products are removed before they accumulate and reach toxic levels of concentration. These are but a few examples of the thousands of homeostatic control systems within the body. Some of these systems operate within the cell and others operate within an aggregate of cells (organs) to control the complex interrelationships among the various organs. (Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003).

\(^{124}\) Catecholamine: Any of a group of sympathomimetic amines (including dopamine, epinephrine and norepinephrine), the aromatic portion of whose molecule is catechol. The catecholamines play an important role in the body's physiological response to stress. Their release at sympathetic nerve endings increases the rate and force of muscular contraction of the heart, thereby increasing cardiac output; constricts peripheral blood vessels, resulting in elevated blood pressure; elevates blood glucose levels by hepatic and skeletal muscle glycogenolysis; and promotes an increase in blood lipids by increasing the catabolism of fats. (Saunders Comprehensive Veterinary Dictionary, 3 ed., 2007).

\(^{125}\) Maladies psychosomatiques: quand l'esprit joue sur les maux, Doctissimo website, article by Ayla Seugon,

\(^{126}\) Affection: A morbid condition or diseased state. (Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003)
“Psychosomatic illnesses illustrate the relationship between the nervous system and the immune system. When morale is subjected to a harsh test, the physical does not take long to show signs of distress. The reasons are known today: as a result of stress, the body produces corticoid hormones that lower immune defences. If the external stimulus is brief, the body restores the things itself. Conversely, if its intensity is strong, repetitive, and persistent, immune defences are lowered, inevitably making the person vulnerable to illnesses. Let us nevertheless avoid generalities: each individual will react in his own way, depending on his ability to manage stress and to channel his anxieties.

“The physical disorders that appear are located generally at the most sensitive level of our organism. Psychosomatic illnesses account for more than half of the cases treated by physicians and an estimated 90 per cent of all diseases are compounded by negative emotions.

“What Are the Main Symptoms?

“In general, gastrointestinal disorders are the most common psychosomatic illnesses: the liver, the intestines, and the colon are indeed the target organs of neuroses. It has also been established that skin diseases—if they are not related to another disease or a virus—would have a psychological origin. Psoriasis, which affects 2 per cent of the population of France, warts, herpes, excessive sweating, rosacea, sores, and mouth cankers appear when frustrations and emotions arise.

“These conditions also affect children. Unable to express his discomfort in words, the infant will express his distress otherwise through eczema, insomnia, sleep disturbance, vomiting, asthma, and stunted growth...It would nevertheless be extremely simplistic to assume that these symptoms are always signs of mental imbalance in the child. “The loss of libido may also be explained by a negative psychological state.

“The growth of certain cancers would, according to some scientists, be attributable to mental imbalances. The American scientist Lawrence Le Shan determined that brutal isolation, violent emotional trauma, or a desperate psychological state could contribute to cancer morbidity.

“High emotionality can also lead to imbalances in nutrition. Bulimia and anorexia are the main examples, with alcoholism, obesity, and cardiovascular diseases related to excessive consumption of certain fatty or sugary foods...

“High blood pressure and migraines are also found among the many symptoms presented during emotional disturbances. “This list is not exhaustive; other symptoms may be indicative of psychosomatic illnesses.”

2. Dr. Chantal Guéniot

When the Human Spirit Speaks to the Body

“Emotions and psychological conflicts are well known triggers. Thus, stress is often the spark that triggers epileptic seizures127, a condition that is not psychological.

“However, be prudent. Gastric ulcers were a typical example of a psychosomatic illness. The discovery of a bacterium responsible for it and the effectiveness of a course of antibiotic treatment now relegates what was once thought to be a prime psychic outcome to what is more likely a purely physical ailment.

“Recently, several studies have shown that after a heart attack, one third of patients exhibit symptoms of depression. In turn, the presence of depression appears to greatly increase the risk of death in the months following a myocardial infarction. In the past, the psychological impact of the disease was simply ignored. Today, cardiologists are seriously considering the value of an antidepressant treatment to relieve the patient, but also to improve the prognosis of myocardial infarction. This trend toward including the psychiatric sphere in therapeutic management could be extended to encompass many other diseases, such as cancer.”

3. Dr. Sylvie Coulomb128

“We are talking about illnesses or symptoms of psychological origin (anxiety, stress, emotional distress, overwork...) that can affect many organs.

What Causes Psychosomatic Illnesses?

Psychological problems (anxiety, anxiety, burnout, depression). Stress alters the balance of the nervous, immune, and hormonal systems of the body, which can cause or contribute to many pathologies.

Certain hormones secreted by the pituitary gland, located at the base of the brain, are likely to increase or inhibit the ability of immune cells to fight against disease.

Catecholamines (particularly adrenaline or stress hormone), synthesised by the adrenal glands, function to prepare the body for action. In case of prolonged stress, cortisol129, also secreted by the adrenal glands, mobilises the body’s energy reserves, but also has the effect of diminishing resistance to infection. This explains such problems as outbreaks of nasal-labial herpses, which occur more commonly in people who are stressed.

Furthermore, catecholamines contribute to increased cardiac

127 Seizure: n. 4. a sudden attack, as of epilepsy. (Random House Kernerman Webster's College Dictionary, 2010).
129 Cortisol: The major natural glucocorticoid elaborated by the adrenal cortex; it affects the metabolism of glucose, protein, and fats and has mineralocorticoid activity. (Dorland's Medical Dictionary for Health Consumers, 2007).
risk factors for myocardial infarction and hypertension.

In others patients, stress triggers reactions in the digestive tract: the person is then more prone to the risk of stomach ulcers or spastic colitis.

The skin is closely related to the psyche. **Skin problems such as psoriasis, eczema, or hair loss are more common among people subjected to anxiety.**

4. Ayla Seugon and Alain Sousa

**Stress-Related Illnesses**

“Fatigue, irritability...or even cramps and rheumatism: stress can sometimes cause these adverse reactions. These effects are more or less severe, depending on the event that provokes them and the individual’s resilience to anxiety.

“Overview of Stressful Events and Their Consequences to Health:

“Stress is a normal reaction of the organism. It allows it to cope with some unexpected events or to adapt to major changes. However, it can sometimes be related to so-called “adaptation” diseases. They occur when our body is unable to cope with persistent and repetitive strain. Note that stress alone creates no pathology. Instead, it will be the cause of the progression of certain pre-existing conditions such as asthma, migraine, diabetes, etc.

“Alarm Signals

“When our body is subjected to too much stress, it starts sounding the alarm. If you experience one or more of the following signs, it may be time to consciously reduce the tensions around you:

• Fatigue, especially upon waking, which is not alleviated by sleep; sleep disorders;
• Anxiety;
• Irritability;
• Nervousness;
• Rheumatism: joint pain, osteoarthritis, arthritis;
• Muscle contractions, including hunched neck or back and cramps;
• Sexual dysfunction with decreased libido;
• Memory loss: forgetfulness, error-proneness.

“Various Effects

“If you have not been able to listen to your body, excessive stress can cause real health problems, depending on your predispositions and your background. **In women, they manifest themselves primarily as anxiety, obsession, and depression. In men, they tend to manifest themselves more physically: ulcers, cardiovascular disorders, and sexual problems.** In general, we can identify some “diseases” that are often correlated with too much stress:

• **Digestive diseases:** spasms, dry mouth, bloating, diarrhoea, gastritis, ulcers, irritable bowel syndrome;
• **Cardiovascular disorders:** palpitations, pain, chest discomfort, hypertension, angina pectoris or myocardial infarction;
• **Hyperthyroidism;**
• Persistent **viral or bacterial infections** due to a decrease in immune defences;
• **Skin conditions:** eczema, red pimples, psoriasis, herpes, hair loss, itching;
• **Gynaecological disorders:** late or missed periods, benign breast diseases.

“Too much stress?

“Of course, these problems can occur in the absence of strain. But, if you frequently experience any of these evils, do not hesitate to identify potential stressors so that you may avoid them.”

To determine whether stressful events are the cause of your health problems, take the test in Chapter 23: The Holmes-Rahe Stress Scale.

5. Don Colbert, M.D.

“**Psychiatric diseases** that have been linked to long-term stress include generalized anxiety disorder, panic attacks, post-traumatic stress disorder, depression, phobias, obsessive-compulsive disorder as well as other more rare psychiatric diseases.

“The manifestation of long-term stress may also take the form of **physical diseases or ailments.** Playing games with chronic stress places nearly every organ system of the body at grave risk. Unmediated chronic stress has been linked to a long list of physical problems:

• **Heart and vasculature problems:** hypertension, palpitations, arrhythmias, dizziness and lightheadedness, Mitral valve prolapse (a loss of tone of the mitral valve of the heart, which may cause leakage of the valve) Paroxysmal atrial tachycardia (an arrhythmia) Premature ventricular or atrial contractions (irregular heartbeats)

• **Gastrointestinal Problems:**
Gastroesophageal reflux disease (GIRD/acid reflux);
Ulcers, Gastritis, Heartburn, Indigestion, Constipation, Diarrhea and bowel irregularities, Irritable bowel syndrome, Inflammatory diseases of the bowel (including Crohn’s disease and ulcerative colitis);

• **Headaches:** Migraine headaches, Tension headaches;


131 Taken from Don Colbert, M.D., *Deadly Emotions*, 2003 pp. 25-30.
“Skin Conditions
Psoriasis,
Eczema,
Hives,
Acne;

“Genitourinary Tract:
Chronic prostatitus (an infection of the prostate);
Chronic and recurrent yeast infections;
Frequent urination;
Loss of sex drive and impotence;
Frequent urinary tract infections;
Lower of progesterone and testosterone levels.

“Pain and Inflammation:
Chronic back pain;
Fibromyalgia;
Chronic pain syndromes;
Tendonitis;
Carpal tunnel syndrome;
TMJ (temporomandibular joint) problems

“Lung and Breathing Problems:
Chronic or recurrent colds; sinus infections; sore throats; ear infections;
Chronic or recurrent bronchitis; pneumonia;
Asthma;
Shortness of breath;
Hyperventilation.

“Immune Impairment:
Chronic fatigue,
Chronic and recurrent infections of all types.

“…The brain regulates the body’s immune response and when the regulatory influence of the brain is disrupted, the result may not be a lessening of immune response (less activation of the natural “killer” cells) but an overstimulation of the immune response. In these cases, the immune system goes into overdrive—it’s as if the throttle gets stuck and the system remains in perpetually high gear. The result is that the body’s immune system not only turns against bacteria, viruses, parasites, mycosis, fungi, and cancer cells, but also against healthy cells. Eventually the result is an inflammatory autoimmune disease, such as rheumatoid arthritis or lupus.

What disrupts the regulatory influence of brain when it comes to immunity? Chronic stress is one of the major disrupters!

“The Link to Allergies:
Allergic diseases are all directly linked to the body’s immune system, including allergic rhinitis, food allergies, skin rashes, eczema, and asthma. Essentially, the body’s immune system becomes confused, causing a reaction to an essentially harmless substance as if it were a dangerous substance. Excessive stress can cause that confusion. The body then views allergens such as dust, animal dander, and mold foreign as invaders, and the immune system mounts an assault against them. During the attack, the white blood cells (“mast” cells) release histamines, which in turn create symptoms such as sneezing, itchy eyes, runny nose, and nasal congestion. The body is doing its best to expel the irritating item.

“If the allergen is in a food or beverage, the body triggers GI tract and skin reactions in attempt to expel the irritating substance. In its severest form, this physical reaction can cause an anaphylactic reaction and death—such intense reactions can result from insect stings from wasps or bees, medications such as antibiotics, and foods such as shellfish and peanuts.

“…Jaws stay clenched and teeth grind at night when a person is chronically stressed.”

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133 Allergen: Etymology: Gk, allos, other, ergein, to work, genein, to produce. An environmental substance that can produce a hypersensitive reaction in the body but may not be intrinsically harmful. Common allergens include pollen, animal dander, house dust, feathers, and various foods. Studies indicate that one of six Americans is hypersensitive to one or more allergens. (Mosby's Medical Dictionary, 8th edition, 2009).