

Chapter One
MELATONIN — ITS MEDICAL IMPORTANCE

*The Pineal gland and its hormone melatonin.
Their critical importance to medicine,
psychiatry, consciousness and spirituality
studies. Their anti-cancer, anti-aging,
anti-stress and spiritual properties.*

SUMMARY OF KEY POINTS

- What is melatonin, why is it so critically important to our health?
- About the groundbreaking research findings using this technique and its ability to increase melatonin levels in all cancer patients and in all healthy persons.
- The essence of this scientific study: This technique stimulates the pineal gland to produce higher levels of melatonin; therefore humanity may now for the first time have a non-pharmacological technique for cancer therapy, slowing down the aging process, psychiatric disorders, insomnia, cardiovascular disorders, high blood pressure, etc.
- Latest medical research findings on the healing effects of melatonin for cancer (particularly breast and prostate), cardiovascular and psychiatric disorders, Alzheimer and Parkinson diseases, AIDS, high blood pressure, high cholesterol levels, anti-aging, immune system disorders, insomnia, jet lag, epilepsy, diabetes, asthma, and more.
- Your self-production of melatonin can improve your life and the lives of the hundreds of millions of persons who suffer from the above diseases and medical conditions.

- Why the self-production of melatonin and self-stimulation of your pineal gland (as this book shows) is **necessary** and **superior** to merely taking melatonin pills or injections.
- The solid medical and scientific validity of this research, state-of-the-art methodology, research design, biochemical analyses and statistics (see part B).
- Melatonin, the anti-cancer, anti-aging and anti-stress hormone.
- The techniques in this book lower heart rate, lower mood disturbances and anxieties. Increase finger temperature and elicit positive altered states of consciousness.
- Important terms and definitions (see appendix pg. 136).
- The link between melatonin, spirituality, and healing.

About melatonin and the pineal gland

Since its banishment to its powerful re-emergence over the past decade, the study of the pineal gland and melatonin has changed from a subject that evoked scepticism and facetious comments to one that is not only respectable, but to one that is the most interesting in all of medicine. In fact some scientists³⁸³ now say, "he or she who knows melatonin, knows medicine."

WHAT IS MELATONIN?

A natural hormone produced primarily by the pineal gland, melatonin is N-acetyl-5-methoxytryptamine, a derivative of tryptophan (one of twenty-two amino acids). Tryptophan comes from certain proteins that we eat, and a diet rich in certain substances (discussed in Chapter Eight) influences the amount of melatonin we can produce. Melatonin is even found in the retina of the eye and the large intestine and works in a variety of ways to enhance numerous bodily functions and maintain their regularity. Tryptophan with tissue oxygen produces serotonin which is then converted to melatonin.

The main reason that melatonin has such all-pervasive effects on the body is its ability to cross cell membranes: it is a tiny molecule that is both fat and water soluble. It can penetrate cell walls and even the nucleus, and protects the sensitive DNA (the genetic material) from free radical damage. It acts as DNA's personal body guard.

Melatonin and cancer

Consistently, it has been observed that cancer patients show **lowered** (about 30 - 40 %) levels of circulating blood melatonin and a poorly functioning pineal gland^{136,141}. Fortunately for us, the technique detailed in this book has been medically **proven to increase** melatonin levels significantly (on average two to three times higher than before) in cancer patients and in normal healthy persons as well³¹⁶. These changes in melatonin levels are illustrated in the bar-graphs (histograms). See section B.

Self-produced melatonin versus pills. Self-production has far superior therapeutic effects.

Moreover, regarding the magnitude of effect, it was found that with this technique the ***self-produced*** higher melatonin levels were at least as high as, if not higher, than the increases obtained after ingesting 5 mg of melatonin tablets orally³⁶². ***You should learn the technique for self-production of melatonin***, especially because as already explained, melatonin alone (orally or injected) is not sufficient to cause genuine health and healing.

Melatonin levels

In this medical study, the results indicated that using this technique, there was a statistically significant difference between pre- and post-test levels, strongly suggesting that the technique was responsible for causing these increased melatonin levels. The technique seems to be *endogenously (from within oneself)* regulating the activity of the pineal gland (directly or indirectly) and causing it to produce much more melatonin. The hypothesis of this study that this technique will cause an increase in urinary melatonin, signifying increased pineal gland activity, was supported by the research. (See table: A & B and in section B, Figures 20, 21, 22, and 23.)

	BEFORE	AFTER	
SUBJECT CODE	RATIO Ng/mmol PRE-TEST	RATIO Ng/mmol POST-TEST	PERCENTAGE INCREASE % (ROUNDED)
S	0.4	2.6	550 ↑
T	2.0	3.6	80 ↑
W	1.3	2.3	77 ↑

Table A

MELATONIN RESULTS - CANCER PATIENTS ONLY - CLINICALLY SIGNIFICANT LEVELS

Melatonin results for (3) cancer patients (S, T, W). Showing percentage increase between pre-test and post-test (after the intervention). These levels are clinically significant. See table B footnotes.

	BEFORE	AFTER	
SUBJECT CODE	RATIO Ng/mmol PRE-TEST	RATIO Ng/mmol POST-TEST	PERCENTAGE INCREASE % (ROUNDED)
A	0.7	1.7	143↑
B	0.6	0.8	33↑
C	1.4	1.5	7↑
D	0.4	4.4	1000↑
E	0.7	0.8	14↑
F	2.7	11.6	330↑
G	1.1	2.5	127↑
H	0.5	0.8	60↑
I	0.7	1.0	43↑
J	0.5	1.1	120↑
K	0.8	2.9	262↑
L	0.6	0.9	50↑

Table B

MELATONIN RESULTS - HEALTHY PERSONS' PERCENTAGE INCREASE - CLINICALLY SIGNIFICANT LEVELS

Percentage increase between pre-test and post test (after the intervention) in 12 subjects (A-L) inclusive. Very recent and extensive studies indicate that very low doses of melatonin (within the post-test ranges observed in this study) can have therapeutic effects on human neoplasms.

From the medical data to be presented, you will witness the abundant scientific evidence showing that an etiological factor (or cause) of cancer is very low levels of circulating melatonin. This technique *ideally practiced daily, 1 hour before bedtime, for no more than 10 to 30 minutes each session*, can help you self-produce and increase your blood melatonin levels to possibly prevent cancer and cause cancer remission and give you a very restful sleep. There is also a shortened (5 to 10 minute) technique for those on the fast track. *Particularly fascinating are the results from the cancer patients who all showed significant increases in melatonin levels after using this technique.* Increased melatonin levels self-produced by this technique rather than taken orally or by injection would promote physiological balance and cellular resonance especially among the pineal, pituitary, thymus glands, the hypothalamus, immune, and limbic systems. This condition allows for health and healing and possibly cancer arresting behaviour (oncostasis) and remission.

An exceedingly essential point to note is that lowered melatonin levels are merely symptomatic that the pineal gland is not functioning properly. In fact, it is symptomatic that the pineal-pituitary-thymus glands and hypothalamus-immuno-endocrine-limbic, cellular and bioelectric systems are not functioning properly. *This is because all these systems work together and regulate each other. Therefore, if we were to take our traditional medical model (a pharmacological drug treatment approach) and give a patient melatonin orally or intramuscularly (by injection), to correct their low melatonin levels, then all we do is increase circulating melatonin levels temporarily (1-2 hrs).* We get caught in our conceptual rut of reductionistic thinking—of thinking of the human being as a car or a machine. *We mask the symptoms but have not repaired the poorly functioning neuro-immuno-endocrine-cellular-bioelectric system.* This could be why over the past decade in spite of several studies where melatonin was administered from external sources, there has not been higher rates of cancer remission or prevention. On the other hand, the good news is that these studies show that melatonin administration alone, externally, does cause a certain degree of anti-cancer effects and increased immunocompetence (a stronger immune system). **I strongly maintain that the**

endogenous self-production of melatonin using this technique, not only significantly increases melatonin levels, at least as well as the external administration, but simultaneously, it re-harmonizes the activities of the regulator of regulators—the pineal gland. This technique will assist the neuro-immuno-endocrine cellular and bioelectric systems *to once more* attain physiological balance thereby re-establishing the conditions for achieving genuine and long-term good health and healing. This technique can also work *synergistically (together)* with chemotherapy and should cause faster cancer remissions and lower the incidence (rate) of cancer.

Melatonin therapeutic levels and magnitude of effects. Oral administration vs. self-production.

There is considerable individual variation in melatonin levels. Research at Monash University, Australia on the plasma melatonin profile after ingesting (orally) 5 mg of melatonin in a healthy adult male indicates a peak after 60 minutes at 11.0 Ng/ml and after three hours levels stabilize between (1-3) Ng/m¹⁵⁸². What is significant is that the results obtainable from using the technique offered to you here in subsequent chapters can raise your melatonin levels equally and more effectively than taking melatonin from external sources.

Results of this current study

After using the technique in this study one subject's level was 11.6 Ng/mmol and most other subjects including the cancer patients had levels ranging from (0.4 - 4.4) Ng/mmol. *These results indicate that the technique is able to self-produce melatonin within the levels produced after taking melatonin tablets at 5.0 mg. In fact, it would seem that this technique can produce more blood circulating melatonin than when melatonin tablets are taken.* In addition, by using a self-producing technique, your neuro-immuno-endocrine bioelectric system is also simultaneously stimulated in a health-producing direction.

Based on previous studies *it is reasonable to expect that if this technique is practiced daily, the circulating melatonin levels*

can be maintained at more correct physiologically therapeutic levels thereby possibly causing: cancer remissions, cancer prevention, slowing of the aging process, lowered incidence of Alzheimer's disease, lower cardiovascular and psychiatric disorders, less stress, deeper and more restful sleep and increased immunocompetence (immune system well-being).

Key medical updates on melatonin

What follows are key recent scientific findings and statements by scientists on the importance of melatonin in certain psychological and physical disorders. This book will clearly demonstrate that the correct pineal-limbic (emotional) activity and melatonin circulating levels are crucial to proper health and healing. Then, the following chapters will explain the technique in detail. This technique involves: (A) specialized breathing, (B) vivid visualization, (C) emotionalized intonations, (D) deep mental immersion (absorption) and focusing, (E) spiritual attunement—for higher states of consciousness, (F) energy medicine and therapeutic touch, (G) certain exercises and lifestyles, (H) certain diet (mental and physical), and behavior (life-style) changes.

IMPORTANT MEDICAL FINDINGS AND STATEMENTS ON MELATONIN, CANCER AND OTHER DISORDERS.

The following is based on extensive research published in over 150 scientific journals and books spanning the past 12 years, and over 1800 journal articles up to 1996. See references.

Melatonin and cancer

- Many studies^{136,382} have found a close relationship between altered melatonin levels, pineal rhythmicity and cancer. So strong is the relationship that oral administration of melatonin is now being used at times for the treatment of certain types of cancer.
- A very small quantity of melatonin stopped breast cancer cell growth by over 75 percent. In fact, research (with abundant

evidence) shows that melatonin's anti-cancer effect is particularly promising in the areas of breast and prostate cancer.

- Melatonin had the greatest cancer cell inhibition effect in a very specific concentration range, the range that normally exists in the blood stream of a healthy person.
- That melatonin is part of a woman's built-in defense against breast cancer. It has a primary direct effect of **inhibiting** growth of human breast cancer cells.
- Tamoxifen is one of the currently used anti-breast cancer chemotherapeutic drugs. *Yet, when melatonin was added to cells treated with tamoxifen— the power (potency) of tamoxifen increased 100 times. Over 85 percent of the women showed either reduction in the size of their tumors or no further progression in tumor size³⁷⁷. In fact it is now known that melatonin shares several characteristics with tamoxifen. They are **both** non-steroidal anti-estrogens. Melatonin has been hypothesized as the body's **endogenous** (from within) anti-estrogen, whereas tamoxifen is an **exogenous** (from external sources) anti-estrogen.*
- Melatonin significantly inhibits the growth of prostate cancer cells²⁸³. Furthermore, men with prostate cancer, like women with breast cancer, usually have **low** melatonin levels.
- There is now considerable evidence that the pineal gland and its hormone melatonin exert powerful oncostatic (anti-cancer) or "cancer killing" effects on neoplastic growth especially in breast and prostate cancer, but including leukaemia, lung carcinoma, ovarian, bladder, colon, uterine and several other types of cancer.
- Continued clinical and basic research should virtually secure a place for melatonin as an important chrono-oncostatic (timing and cancer arresting) hormone in the battle against cancer.
- **Melatonin prevents the proliferation of cancerous malignant cells** by preventing cell division (mitosis). It does so together with the pineal by re-setting the cell division and timing mechanisms to their homeostatic (normal /correct) levels.
- Starr³²⁹ initially reported on the therapeutic effectiveness of constant melatonin doses in cancer therapy. **In all cases**

melatonin was quite effective in either causing substantial tumor regression or in eradicating the disease all together.

- Dibella reported the successful use of melatonin in the treatment of various types of cancer.
- Scientists²⁰⁶ studied nineteen cancer patients—**all of whom had failed to respond to standard anti-cancer therapies or had untreatable malignancies.** Melatonin was administered intravenously and it was observed that five out of ten patients showed increased stability of cancer proliferation, with one showing complete regression.
- Scientists²⁰⁸ (1994) later studied forty-two cancer patients. They measured the pre-test levels of melatonin before chemotherapy and also four weeks after the end of their treatment. **They found a direct correlation (relationship) between patient improvement and a rise in melatonin levels.** Out of the sixteen patients who had shown a rise in melatonin levels, tumors shrank in twelve and did not progress in the rest. Out of the twenty-six patients who had shown a continuous *fall* in melatonin, only two showed any improvement. This study suggested that melatonin levels may indeed be a marker that can help doctors predict the prognosis of their cancer patients.
- Scientists²⁶⁷ (1995) cited Dr. B. Neris' work which suggests that **melatonin may enhance the effect of traditional chemotherapy, while sparing the patient some of its unpleasant side effects.**
- Scientists¹⁴¹ also found serious degeneration of the pineal gland in patients with cancer. This group observed at autopsy, pineal atrophy (shrinkage) and decreased weight in almost all cases where patients had cancer. This finding supported the current view that a causative factor in cancer could be impaired pineal morphology (structure) and function.
- In (1991) scientists⁷⁹ investigated the effect of melatonin on cell cycle kinetics (activities) and the results supported the anti-cell multiplication effects of melatonin, and it was found to be cell cycle specific. They too have suggested that melatonin might have clinical potential in the treatment of breast cancer. (To the reader, all cells go through certain timed stages /cycles before they multiply).

- The scientist^{36,37} has found that the pineal gland, through its hormone melatonin, has an anti-mitotic (anti-cell division and multiplication) effect, influences the cell cycle, has a colchicine type effect and acts as a brake on cell division. Colchicine is a chemical used by biologists to arrest cell division at a certain stage.
- It is suggested³⁶ that *the emergence of the pineal as an oncostatic (cancer-arresting) gland is just over the horizon.*
- Scientists³⁹ stated "there is no longer any question that pineal melatonin has potent oncostatic effects on neoplastic (cancer) growth in both *in vivo* (in the body) and *invitro* (in the lab) models of human breast cancer. Melatonin's emergence as a potentially important "chrono-oncostatic hormone in both the diagnosis and treatment of breast cancer is an extremely exciting prospect."
- It was found that³⁴² when the carcinogen DMBA which stimulates the growth of breast tumors was injected in rats fifty percent (50%) of the rats that were *not* treated with melatonin had tumors compared with 0 % (none) for those that *were* treated with melatonin.
- Melatonin can be a powerful treatment for lung and skin cancer. The scientists (1994)¹⁷⁸ discuss a cancer patient where neither radiation nor interferon worked, yet with melatonin treatment over an 8 month period, this "terminal" patient had an "almost total regression of her disease." She is still alive and well at 87 years old. The melatonin treatment caused no significant side effects, no hair loss or nausea, no damage to her immune system, heart, liver or other organs.

Melatonin and the pineal gland - Additional medical findings

- It is now well established that melatonin relieves premenstrual syndrome (PMS). This is the group of irritating symptoms that occur just before and after menstruation eg: headaches, insomnia, irritability, cramps, etc. Melatonin also plays a therapeutic role in menopause, sex-related and reproductive conditions. For example, in men melatonin is known to maintain a normal libido (or sex drive).

- The pineal gland plays a pivotal and critical role in the neuro-immuno-endocrine modulation (regulation) of aging, stress, cancer, psychiatric and physiological disorders.
- The pineal gland is a fundamental modulator of the entire neuroendocrine system. It functions as a true biological clock for our circadian (daily) and other biological rhythms.
- Overall, cells communicate by means of frequency specific periodic signals, and by periodic pulses of cyclic AMP (energy molecules). There is a specific frequency amplitude and wave form of these cellular signals. **It is well established that the pituitary and pineal glands exert their influences via hormones in a cyclic, rhythmic and pulsatile manner. It is likely then, that when the melatonin blood concentration levels and rhythmicity of the master pacemaker (pineal) become dysfunctional, then cellular communication and physiological balance is disrupted and multiple diseases occur.**
- There is an intricate physiological inter-relationship among the pineal, thymus and pituitary glands: the thymus playing an important role in aging and the immune function, the pineal important for anti-stress, anti-psychiatric, anti-cancer, and anti-aging activities, while the pituitary modulates the activities of the two glands.
- In humans, alterations in circadian (rhythmic) production of melatonin are associated with rapid aging and cancer.
- Factors that severely **depress** and **inhibit** the proper functioning of the pineal gland are illegal drugs, alcohol, nicotine (from cigarettes and tobacco), excessive ibuprofen, diazepam (a tranquilizer), beta-blockers, intense electromagnetic fields and bright lights. There are also factors that have **positive** effects on the pineal gland (they will be discussed in greater detail in the chapter on diet and lifestyles).
- In addition, in a rather unique 1995 study at the University of Massachusetts Medical Center, scientists²²⁵ found that the regular practice of mindfulness meditation is associated with increased physiological levels of melatonin. Also, they confirmed that not only is the pineal gland photosensitive (light-sensitive), but it is "psychosensitive," (mind influences it). Their study does support my research findings on the importance of a meditative state as part of the technique.

Melatonin: Its powerful anti-oxidant (cell and DNA protection) abilities.²⁸³

- Melatonin and DNA (the genetic material in cells) have bioelectronic properties and various quantum states. They can share, transfer and accept electrons, maintain cellular resonance and health. *The Nobel Prize winner, Szent-Gyorgi says that cancer is caused when there is a lack of bio-electronic resonance at the cellular level.*
- Researchers²⁴ have provided extensive evidence that melanin—a derivative of melatonin—should be considered *the organizing molecule in cells, because it is extensively represented in cells of the body.* It was concluded that melanin plays a central if not controlling role in cellular processes and in controlling the major homeostatic (balancing) regulatory systems: autonomic, neuroendocrine and immunological.
- Many diseases have as their basis, free radical damage. Melatonin is now known to be perhaps the most powerful free-radical scavenger known, and this ability and activity allows it to provide extensive protection to cells and their DNA, thereby minimizing the potential for disease initiation while at the same time slowing down the aging process. Free radicals interfere with the electronic nature of cells; they also deform and destroy enzymes, genetic material and cell membranes. The anti-oxidant melatonin seeks out, eliminates, destroys, and inactivates these free-radicals.

Melatonin, pineal, stress-reduction and age-reversal (longevity and youthfulness) effects.

- Melatonin helps determine how fast we age.
- *One of the main targets of melatonin is the thymus gland which is responsible for producing immune system cells: lymphocytes and natural killer (NK) cells which are the anti-cancer surveillance cells. The thymus gland is also responsible for youthfulness and longevity.*
- As we grow older the thymus gland atrophies (degenerates) from around the age of puberty. However, *there is now compelling evidence that thymic aging is a REVERSIBLE*

process. In certain scientific experiments old thymus glands showed changes. They looked and acted like a young thymus. This rejuvenation was microscopically confirmed by observing the histological (cell) structures^{266, 267}.

- Researchers²⁶⁶ found that melatonin may be the natural anti-aging hormone which together with the pituitary and thymus glands can slow down the aging process and promote youthfulness and longevity.
- Melatonin reverses immune impairment and thymus atrophy (shrinkage) caused by psychological and physiological stress. It does so by tuning the entire neuro-immuno-endocrine system.
- Melatonin is the anti-stress hormone that promotes restful sleep and relaxation.
- Various types of psychological stress such as anxiety cause a surge in the hormone prolactin; this then causes prominent measurable changes in the microscopic structures of the cells of the pineal gland—the pinealocytes. This negatively influences nerve impulses within the pineal gland, thus causing disruption of pineal rhythmic activity and melatonin production.
- Stress impairs the DNA repair enzymes in cells. Melatonin is the anti-stress hormone; as such, **correct melatonin levels can enhance DNA repair**. Furthermore, the element Zinc (ZN) has the highest concentration in the pineal gland and is required for the synthesis (manufacture) of DNA and RNA, which are respectively the genetic material and building blocks for the synthesis of enzymes, hormones and proteins.
- Decreased stress causes increased melatonin levels and a stronger immune system, improved mood and increased salivary IgA—all indicators of therapeutic mind-body effects.
- Melatonin is a 3 billion-year-old molecule found in all life forms within the evolutionary kingdom: from protozoans to invertebrates to vertebrates, ie. from algae to humans. It is essential to life, plays a fundamental role in cell physiology, **and determines how long and well we live**. Melatonin delays the onset of "aging" and age-related diseases such as arthritis, heart diseases, cancer, Alzheimers, Parkinsons and others. It is now known that healthy elders produce **more** melatonin than Alzheimer patients²⁶³.

Melatonin and psychiatric disorders.

- Serotonin (5 - HT) which is produced primarily by the pineal gland and used to manufacture melatonin, is attenuated (hardly produced) during psychological depression. Serotonin and melatonin play a crucial role in psychiatric disorders.
- Several psychiatric disorders such as depression and bi-polar disorders like schizophrenia, psychosis or manic-depression are associated with low melatonin. In fact, anti-depressant pharmacotherapy (medication) increases melatonin levels—just as our technique does.
- Dysfunctional pineal melatonin release has been associated with the pathophysiology of depression, seasonal affective disorders (SAD) and schizophrenia.
- **Many studies report a relationship between low melatonin levels and major depressive disorders.** Interestingly, both Lithium carbonate and chlorpromazine which are useful for their therapeutic effects in cyclic bipolar and unipolar affective disorders (psychiatric disorders) have been found to *increase* melatonin levels.
- Suicide victims generally have **low** melatonin levels²²⁷, so do schizophrenics, alcoholics and those suffering from seasonal affective disorders and chronic pain²⁸³.

Melatonin and cardiovascular (heart) disorders.²⁸³

- Melatonin prevents the oxidation of LDL cholesterol or the “bad” cholesterol. If oxidation occurs, destructive free-radicals will be produced²⁴¹.
- Melatonin significantly **decreases** blood pressure directly.
- Melatonin **decreases** cholesterol by over 35% and healthy hearts produce at least 5 times more melatonin than diseased hearts. Melatonin influences certain enzymes within heart cells.
- Melatonin also minimizes the risk of blood clots, aneurysms and strokes.
- In addition, melatonin is now known to be therapeutic for diabetes. Diabetes is a major contributing factor in over half

of all heart attacks and strokes, and people with diabetes have **low** melatonin levels.

Melatonin and other disorders.

- Melatonin and the pineal gland are important to normal child development, sexual and skeletal development, reproductive and behavioral disorders.
- Also, disrupted melatonin levels may be causative factors in Alzheimers and Parkinsons disease, hypertension (high blood pressure), asthma, diabetes, and high cholesterol levels.
- ***Melatonin, the sleep /wake cycle and the pineal gland play a very important therapeutic role in epilepsy, insomnia and jetlag.***
- Melatonin is very useful for treating jet lag and insomnia. (See several confirmatory reports from the cancer patients in this study). This is because the pineal is the biological/circadian and diurnal clock responsible for the sleep/wake cycle. It exerts its powerful effects on brain centres such as the locus raphe and coeruleus and the reticular activating system which control sleep and wakefulness, and on the neurotransmitters dopamine and norepinephrine. For epileptics it was observed that melatonin normalized their brain wave (EEG) pattern and convulsions stopped²⁸³.
- Melatonin is involved in minimizing the incidence of several crippling diseases already mentioned. In addition, it was found to play an important role in maintaining sexual vitality and libido. Moreover, low sperm motility and difficulty in fertilizing is linked to low melatonin levels³⁵⁷.

Melatonin and the brain-immune-endocrine system.

- The pineal gland is important as a regulator of the immune system, for psychoneuroendocrine balance, for opioid (mood) tone, and it exerts a stimulatory effect on thymus growth and (NK) Natural Killer (anti-cancer) cell activity.
- Melatonin is now considered to be a very good potential therapeutic agent for AIDS patients. It has been found to **slow** the progression of AIDS. Melatonin stimulates the immune system.

- Melatonin stimulates and enhances (NK) Natural Killer cell activities. NK cells attack cancer and virus infected cells. Scientists observed a 240 percent increase in NK cells *after* melatonin was taken. Melatonin also stimulates phagocyte activity. Phagocytes are cells in the blood stream that engulf and destroy bacteria. Interestingly, in a study on longevity, it was found that the *oldest* persons had *high* NK activity compared to the general population³⁰³.

Melatonin, pineal, auditory, light, seasonal, magnetic and geomagnetic influences.

- In winter, due to longer nights, melatonin production lasts for a much longer time than in summer when the days are longer.
- The pineal gland is affected by light and sound; for example, tones, types of music, and olfactory stimuli (scents /aromatherapy). Also, by magnetic fields from electrical equipment and appliances and also by geomagnetic fields (like moon phases and solar activity).
- Red and green light stimulate pineal activity.
- Several studies (1994)^{166, 167} have confirmed that the pineal gland is quite sensitive to magnetic fields and geomagnetic changes. These findings may explain why the incidence of cancer is high in industrialized countries, especially where exposure to electrical eddy currents from transformers and high tension wires is high.
- There is a nocturnal surge of melatonin production due to increased pineal activity **at the onset of sunset**—peaking at 2:00 a.m.²⁸¹. It is apparent that the geomagnetic influences, the polarized light of the moon, and decreased solar influences affect pineal activity. Here is a scientific basis for a relationship between phases of the moon, pineal activity, the reproductive cycle (menstruation etc.), psychiatric symptoms and mood disorders.
- One should be careful of prolonged exposure to intense bright light and high radiating electric power sources²⁸⁵. These inactivate (shut down) the pineal gland.

My additional research findings on participants who used this technique:

- **On Heart Rate:** The heart rate of all subjects was significantly lowered indicating increased relaxation. (See fig. 24 in Part B).

Scientists (1995)^{241, 47, 263}, indicate that melatonin is important for a “**strong heart**” and for decreasing and normalizing the cholesterol levels which cause clogging of arteries. Melatonin also protects against high blood pressure¹⁶⁵.

Taken together it is apparent that this technique by its breathing aspect and increased pineal melatonin production can **decrease** heart rate, blood pressure and cholesterol levels, as well as improve cardiovascular fitness.

- **On finger temperature:** The temperature of all subjects increased significantly. This is an indicator of increased relaxation. In fact current biofeedback techniques to treat migraines successfully, have consistently used this hand warming technique (see fig. 25, Part B). Moreover, in addition to the hypothalamus, the pineal gland is also involved in body heat regulation.
- **On mood disturbance:** All subjects showed a significant decrease in mood and anxiety disturbance. This indicates a much more relaxed state, less anxiety and stress and a more positive mood (see fig. 26, Part B). Melatonin is the anti-stress hormone. Reduced stress and increased positive mood increases the brain chemical levels (endorphins), improves immune system functioning and increases Natural Killer (NK) cell activity. High stress is also known to decrease the activity of DNA repair enzyme concentration in cells and to lower NK cell activity. (Remember that NK cells kill cancer cells).

Stress is indeed a killer. Other researchers¹⁰², have found that stress can influence and even cause a wide range of diseases such as ulcers, high blood pressure and cancer. There was even evidence that stress promoted disease at the cellular level by causing an **ABNORMAL** duplication of the genetic material (chromosomes). This condition leads to cancer, more rapid aging and cell death. Therefore, because this technique decreases stress and increases positive emotions in a major way, it is certainly quite health-producing. Also, positive moods are associated with

increased humor. Studies³³⁴ have shown that laughter is healing on a cellular level due to the increased production of certain brain chemicals. Positive moods and humor do have healing power.

- ***On experiencing different more peaceful states of consciousness (awareness):*** All subjects showed significantly increased scores for both altered experience (AE) and altered states of consciousness (AS) (see fig. 27 & 28 Part B). This is consistent with spiritual doctrines. Overall, there was a more peaceful "oneness" and a profound loss of sense of time. There was an increase in "out of body" awareness.

Some participants apparently experienced what some psychologists like Maslow²²⁴ termed "Peak Experiences" or "Mystical Experiences" according to Hood^{156,157,158}. Mystical experiences are now known to be normal and desirable and are positively associated with high ego-strength and self-actualization tendencies. Bucke, a psychiatrist, has written on the important benefits of attaining and experiencing these higher states of consciousness and eventually cosmic consciousness. The evolving and raising of our levels of consciousness enable us to attune with what some call the universal mind or the Cosmic. Regarding this "God" concept, as mentioned before, a (1995) study on why cancer patients believed they have survived concluded that cancer patients gave almost *twice* the credit for their recovery to spiritual factors than to their medical treatment³¹. The technique detailed in this book at the very least requires a sacred and reverential attitude for optimal effects.

Overall, it is clear that correct pineal activity and circulating melatonin levels are crucial to perfect health and healing (physically, mentally, and spiritually). The following chapters will provide the actual ***technique*** that you must use to stimulate pineal activity, decrease stress, increase positive mood, attain a higher, more peaceful state of consciousness and to strengthen your spirituality.