

BIOLOGICAL AND THERAPUTIC EFFECT OF LASERS

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ABSTRACT: This paper deals with the application and theraputic effect of laser light applied to the human body and substances taken into the human body. The yeard stick measurement used to determine the benefit or detriment of the laser light is standard kinesiological muscle testing.

The word laser is of English origin and stands for Light Amplification Stimulated Emission of Radiation. The principle of the generation of laser beams is accomplished by subjecting a laser medium; which could be a solid, liquid or gas, to energy from a suitable source, whereby a sufficient quantity of molecular systems are stimulated. The resulting radaiation is reflected back and forth between the two resonator mirrors along a fixed axis until it has amplified its own energy sufficiently and it then emerges through the resonator mirror; which is only parially reflecting.

Lasers are divided into solid, liquid and gas lasers according to the type of laser medium employed. For example, helium lasers are gas lasers, liquid lasers are, for the most part, those which employ dyes. At the present time there are a large number of dyes used in suitable solvents. Solid state lasers, such as the ruby laser, are noted for their compactness and high efficiency. Today by varying the laser medium we can generate laser beams of particularly every wave length between ultraviolet and infra-red. The source of energy can, according to the type of laser, be an electrical discharge, a chemical reaction, light energy from a gas discharge lamp, molecular heat or even another laser. A distinction is drawn between permanently active lasers; which produce more or less constant beam, and pulsing lasers which produce a series of very brief but very intense impulses. Modern pulsing lasers can achieve an output in the gigawatt (billion) range. While permanently active lasers have an output which varies from a few microwatts to several hundred kilowatts. The beam produced by the above process has three (3) typical characteristics; which have many interesting applications.

1. THEY ARE MONOCHROMATIC. This means only one particular wave length is reinforced or amplified so that the beam shows only a very narrow line on the spectroscope. Laser beams therefore give colors of a purity, not normally found in natural circumstances.
2. THE BEAM IS COHERANT. Because of the amplifying effect there is a fixed phase relationship between the various parts of the laser beam. Therefore, it is highly resistant to interference. In

other words, all the waves in the laser beam oscillate uniformly. They keep in time; which is not the case of ordinary light. This is generated by a number of individual sources emitting their light independently. Laser beams therefore have a high degree of uniformity and coherence; which cannot be achieved by normal light.

3. THERE IS LITTLE SCATTERING. Since only those beams in the vicinity of the axis of the resonator mirror are amplified, the beam emitted is to a large extent parallel. It is therefore possible with the aid of lenses or mirrors to reduce it to a very small focal point.

Because tissue has varying optical properties, laser beams do not proceed in straight lines in our bodies as they do in the air. Any number of scattering processes take place which cause the beam to change direction frequently. This scattering is also greatly dependent upon the wave length and type of tissue, but in general red and infra-red light are scattered less than blue and ultraviolet.

Soon after the first experimental application of laser beams in medicine, a surprising discovery was made. It was found that it was possible to accelerate the healing of resistant ulcers to marked extent by irradiating them with a very low intensity helium beam.¹ Up to the present time no satisfactory physiological explanation of these results have been given. Perhaps the theory recently advanced by ²Fritz Albert Popp may provide a starting point. Popp considers that in addition to the commonly recognized chemical regulating process which takes place in a cell, there is a second system of at least equal importance. According to him, light and sound waves are responsible for the distribution of a greater part of the information required by the cell system; both internally and externally in the associated organism. Such exchange of information can only take place optically in the red or infra-red range where the cells' substance has the greatest transparency. A cell and its organelle have a light and sound spectrum of their individual waves similar to that of a simple regularly constructed crystal chain, such as the sodium chloride crystal. Naturally a cell is a far more complicated structure from a physical point of view than a single crystal. It is therefore understandable that the individual wave spectrum of a cell is a very complexed thing.

Moreover individual wave systems are connected with each other by processes which exchange energy and information. From this point of view, a cell is in a pathologic condition when its oscillations vary or when, for example, they are weakened by the absorption of foreign matter into the cell. A pathological cell is no longer plugged into the common communication system, it is out of step, so to speak, and can actually behave in a harmful way.

We now know these influence the entire relationship of the organism with its environment and can help to counteract the disturbances which

arise therefrom. We can regard the meridian system as a kind of defense mechanism against environmental disturbances and it is therefore clear that any irregularities in the system must have a harmful effect on the body as a whole. From what has been said, it is easy to comprehend how laser beams can be used. Because of their coherence and ease of control, and their spectroscopic purity and selectivity. Laser beams can help to restore the wave structure of the cell to its normal healthy state. One can describe the effect as a wave field resonance induced by low powered lasers. In other words, kind of a physical homeopathy.

Other medical applications of lasers include cutting. For example, carbondioxide lasers and those with wave lengths of more than five (5) micrometers are very suitable for cutting tissue without loss of blood, as long as only capillary blood vessels have to be severed.

Another application is for use of coagulation. Argon lasers are suitable for trouble free long term deep coagulation. And also in some cases, for the removal of small pieces of tissue. Such laser systems have been used very successfully in endoscopy. In such cases the light conductor is inserted in the biopsy tube of the endoscope. Other important applications are the stopping of bleeding in the esophagus, stomach and bowels.

The most effective method of treating many skin diseases is the radiation of large areas with a red laser beam. The end of the light conductor is angled in such a way that a broad infra-red beam is obtained when the conductor is held a short distance away from the area which is to be irradiated. When the laser's frequency is adjusted to the optimum frequency of the cell, a healing influence can be exerted and wounds resulting from burns, operations, scrapes and cuts can be healed much quicker.

Another application is acupuncture therapy. According to the bio-electric diagnosis, the local resistance of the skin can be used as a yard stick to determine whether certain organs or groups of organs are in a normal or pathological state. By applying a small charge, about .25 volts, for measuring purposes a small electrical current is made to flow between a hand electrode and a point electrode. While normal readings are less than one (1) milliamp, there are certain points in the body where the current rises between four (4) and ten (10) milliamps. These points are, for the most part, those which are known in classical acupuncture. For purposes of bio-electrical diagnosis a current of four (4) to five (5) milliamps is a normal healthy reaction, and any considerable variation above or below this figure indicates a pathological state.

Experiments which have been carried out prove that even weak laser beams can produce a measurable effect. For example, radiation with one (1) milliwatt out-put of a helium laser can normalize the skin resistance in a few seconds.

What we have seen with patients kinesiologically, is that a substance that the patient is allergic to, can be changed. This is demonstrated by a previously strong muscle going weak when that substance is placed in the patient's mouth. If we take that substance and apply the laser light to it and then retest the substance in the patient's mouth, no change takes place. But if we have the patient hold the substance while the laser light is applied to it, and then replace it in the mouth we see that the previous weakening does not occur. This would suggest that the substance is now compatible with the patient's body. What has taken place is the previous allergic reaction has been done away with. In an effort to explain why it made a difference, when the patient held the substance, we point to an explanation from the scientist Fritz Albert Popp.³ He claims that the skin emits an ultra weak photon emission. The fact that the skin emits this radiation has been the subject of many experiments for over 20 years. The fundamental biological property of these photons has been disputed. On the other hand, there are grounds for suspecting that they play an important part in cell communication and related phenomena. It is not only believed that this radiation can be utilized for communication within the living system, but that is also transfers genetic information. It is believed that the cells mainly emit photons even before mitosis.

The key assumption here is that ultra-weak photon emission from biological systems is governed by photon storage within the cell population. Provided that biological systems have the ability to store coherent photons they cannot exist in thermal equilibrium. The more the molecules are excited the higher is the spectral emission rate in the corresponding spectrum range. Furthermore, this increases with increasing spectral photon density because of stimulated emissions. The stimulated electromagnetic wave is thereby amplified, hence, the end result is Light Amplification by Stimulated Emission of Radiation; which as previously stated is abbreviated to laser. This boils down to the fact that ultra-weak photon emission must be attributed mainly to the spontaneous emission of excited molecules within the cell population. This fact alone implies the ultra-weak photon intensity can regulate the whole cell metabolism.

The measured intensities can be truthfully interpreted in terms of feedback mechanism within the cell population; which are responsible for stabilizing the spectral energy density.

So what we think is happening when the patient holds the substance in their hand to be radiated by the laser light, is that the micro laser light beam emitted by the person's skin is penetrating that substance and when that substance itself is radiated by our mechanical laser light, the combination of the two laser emissions (one coming from the skin and one coming from the mechanical laser) are producing a change in the vibratory rate of the substance that the patient previously showed to be allergic to. In effect this neutralized the allergic reaction by tuning that substance to the patient's body. Now this sounds like a great way

to treat allergies, but the catch is it only works on the substance that was held at the time. In other words, if the patient is allergic to wheat you can treat the wheat with the laser that is held in the patient's hand and that wheat will no longer show an allergic reaction to the patient, but that patient is still allergic to wheat which has not been treated by laser light. The effect of what we are describing is so pronounced that it becomes beneficial for a person to treat all the substances they take into their body by first holding it in their hand and then having the laser light applied to it. We originally did this by having a patient hold a bottle of vitamins that they would be taking and treat it with a laser while they held it. Then we found that that meant the bottle of vitamins was tuned to their body only and was no longer suitable for anyone else in the family to use vitamins out of that same bottle. We found a better technique is to have the patient use the laser light on the vitamins, after they had counted out the ones to be taken at that time. Which means that the vibratory rate would be tuned to their body at that time assuming that their own vibratory rate may change from day to day. This was an improved method and also did not change the vibratory rate of the vitamins in the bottle, so that someone else in the family could use them. We found out the hard way that this procedure seems to increase the potency of these nutrient substances. We had some bad experiences with actually overdosing some patients, not realizing that this procedure was in effect increasing the strength of the dosage. As a result of this, we now find that the patient actually requires less of the nutrient substance after it has been treated with the laser light than they did prior to using this laser treatment method.

CONCLUSION: Experiments have shown that biological systems exhibit an extraordinary ability to survive even after they have separated from the complete system.⁴ This is in fact an ample indication of coherence. This means for instance that in optical devices that all structures appear with the greatest contrast or visibility. Consequently biological systems must exhibit holographic properties to an extremely high degree. The successful trials in finding "pictures" of various organs in each other organ, such as the ears, hands and eyes. Examples of this would be acupuncture, iris diagnosis and auricular therapy; which support these conclusions. Our assumption is that the entire genetic information of DNA is stationarily delocalized over the entire body in the form of harmonics, so that the body language speaks to us in many ways, in many locations. Or as we often say, "the body is constantly expressing externally what is going on internally."

- REFERENCES:
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