



By Dirk Gillabel

An invention with great healing properties, but attacked, banned, forgotten and labeled quack medicine. It is important to understand its history, how it works, how it developed and what results can be expected. This article attempts to give you this basic information about what is commonly called the Violet Ray, but also goes under several other names.

*One of the early observed and remarkable features of the high frequency currents, and one which was chiefly of interest to the physician, was their apparent harmlessness which made it possible to pass relatively great amounts of electrical energy through the body of a person without causing pain or serious discomfort.*

*Nicola Tesla, in his 1898 paper High Frequency Oscillators for Electro-Therapeutic and Other Purposes*

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## Contents:

[Electricity and the Human Body](#)

[The Pioneers](#)

[Nicola Tesla](#)

[Jacques-Arsène D'Arsonval](#)

[Paul Marie Oudin](#)

[Frederick F. Strong](#)

[Samuel H. Monell](#)

[Violet Ray Generator](#)

[Modern HFC Devices](#)

[Violet Ray](#)

[Facial High Frequency Machines](#)

[Violet Wand](#)

[The Glass Electrodes](#)

[Medical Claims of HFC Devices](#)

[Healing Results with the Violet Ray](#)

[Treatments with the Violet Ray](#)

[Safety](#)

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## Electricity and the Human Body

Electricity in the home is at 50-60 Hz, and 110-220V. 50-60 Hz is a low frequency current. This low frequency makes house current dangerous, because the body is very susceptible to low frequency currents. A current of only 1mA is hardly noticeable but can be dangerous. 5 mA can lead to injuries. Above 17 mA it is very dangerous and can lead to death.

Early researchers (late 19<sup>th</sup> - early 20<sup>th</sup> century) noticed that current at low frequencies would contract muscles and shock the body, causing burns. But low frequency current (like house current) can be modified with a spark gap and capacitor (condensor), to high frequencies. With those high frequencies, the effect electricity has on the body is different. It does not produce the dangerous effects.

## High Frequency Currents

A high frequency current (HFC) is an alternating (oscillating) current (AC) in which the frequency is beyond the point of producing muscular contraction.

In 1890, the French physician Jacques-Arsène D'Arsonval (1851-1940) made a number of tests to determine the relation of current frequency to sensory and motor nerve reaction. He found that a current alternating less than 15 Hz (Hz=times per second) produced a succession of separate, or involuntary and rhythmic muscular contractions. A frequency of 20 to 30 Hz produced a continuous contraction, in other words, a tonic spasm. Increasing the frequency beyond this point increases the tetanus. At about 3,000 alternations per second (or Hz) the maximum intensity is reached, and a further increase of frequency causes a decrease in the strength of the contractions, until at a frequency of 10,000 Hz, absolutely no effect is produced upon either the motor or sensory nerves. The absence of pain is supposed to be due to the inability of the sensory nerves to comprehend such rapid alternations.

A current, therefore, which alternates or oscillates at 10,000 Hz or more is called, from a therapeutic standpoint, a high-frequency current.

At lower frequencies, the skin works as a barrier to capacitive current flow (the skin tends to accumulate charge and act as a capacitor). As the frequency applied increases, the skin impedance (resistance to AC) decreases. Why is this important? At high frequencies, current travels on the surface of a metal conductor; it is called the *skin effect*. But with the human body it is different. HFC does not travel on the surface of the human body, but flows through the skin.

Then it flows throughout the entire body. This is because of the large amount of fluid the body contains. The path the current will take through the body varies with the electrical conductivity of the various tissues. If the current is high or applied long enough, the current will heat up the tissues from the inside. This is a different effect than applying an external heating source. Because the cells heat up from the inside, the application duration of HFC is always limited to avoid burns or overheating of the cells.

Medical devices that use high frequency currents usually work with 60,000 to 200,000 Hz, at a high voltage and a low current flow. Contact with the body is made with a glass electrode. In these higher frequencies the contractile effect is expended upon the individual cells, resulting in a cellular massage and it is one important reason why high frequency currents produce such a marked benefit.

## The Pioneers

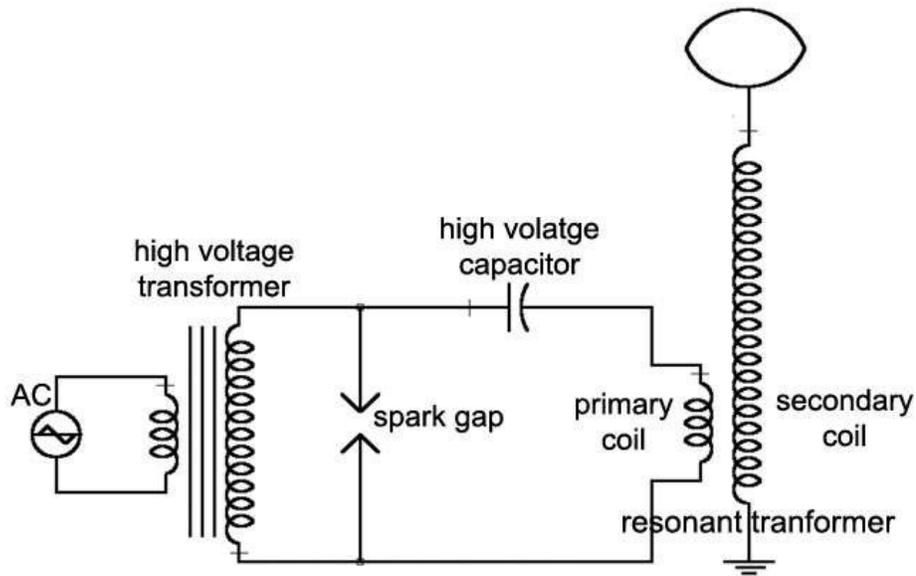
Originally the high frequency machines were large and of three types. The d'Arsonval high frequency device used low voltage and high current (1,500 mA); the Tesla high frequency device used high voltage and low current (500 mA); the Oudin Resonator was an adaption of the d'Arsonval producing high voltage and low current. All three had the same therapeutic effects.

From 1889 the French Jacques-Arsène D'Arsonval, physician and physicist, did the first research on the physiological effects of alternating current (AC) on the body. He discovered that currents with frequency over 5,000 Hz did not cause the muscular contractions and nerve stimulation effects of electric shock. Instead they seemed to have beneficial effects. He pioneered the therapeutic application of high frequency current to the body, founding the field of electrotherapy. He developed a spark-excited resonant circuit to generate currents of 500,000 to 2,000,000 Hz, called *D'Arsonval currents* for therapy, what became known as *D'Arsonvalization*.

## Nicola Tesla

It is important to understand how high frequency current is formed. As the Tesla coil is well-known, we will have a look at how this one works to produce HFC.

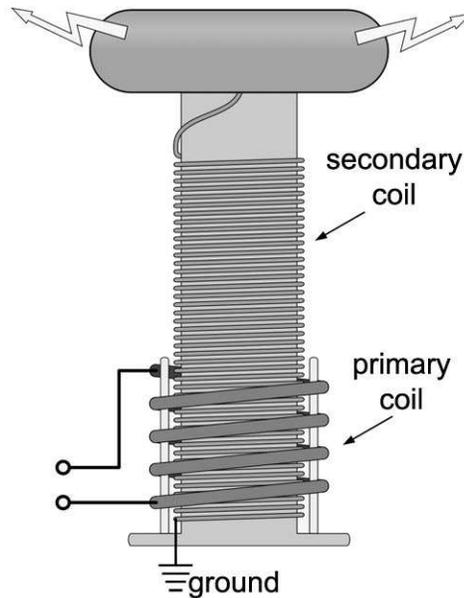
In the 1800s, high frequency currents were obtained with various alternating current circuits. Nicola Tesla also investigated high frequency currents with his own design of circuitry and transformer coil, now known as the famous *Tesla coil*. Tesla coils are air cored resonant transformers. It works by making the primary circuit and the secondary circuit to resonate with the same (or harmonic) frequency. The end result is that the voltage input is stepped up by a tremendous amount.



### *Basic Tesla coil circuit*

The AC through the high voltage transformer in the primary circuit is charging the capacitor. When the capacitor reaches a high enough voltage, the spark gap (which is adjusted according to the peak voltage of the capacitor) breaks down the air of the spark gap and closes the circuit. The large amount of stored energy in the capacitor is released and flows through the primary coil. Due to the specific winding of the the two coils of the resonant transformer (the small diameter secondary coil has many more windings and sits inside the larger diameter primary coil which has only a few windings), the voltage is stepped up to very high voltage with very low current.

Each time the capacitor discharges, an alternating current is generated, because the discharge is not instantaneous, but oscillates back and forth, quickly diminishing until equilibrium is reached. One discharge only takes a fraction of a second. Because the spark gap is tuned to the maximum capacitance of the capacitor, it will extinguish itself when the capacitor has lost its charge. Then the capacitor will charge up again, and the cycle repeats, providing brief pulses of alternating current. This alternating current is of high frequency (oscillation), hence the term *high frequency current*. The advantage of the Tesla's resonant circuit is the very high voltage with very little current in the secondary coil.



*The Tesla coil, or resonant transformer*

The primary coil has only a few windings and is wound around the secondary coil (with insulating space in between). The secondary coil is of a smaller diameter and has many windings. One end of the wire is connected to the ground, while the other end (top, usually has a toroid for people who want to create big sparks) is open to the air. The open end at the top and the ground form a capacitor with the air as the insulator. The current in the secondary will try to bridge the gap between the top end the ground, and the sparks will tend to find path by jumping to the nearest metal object that is grounded.

In electrotherapy, both ends of the secondary coil function as metal electrodes which were placed directly on the body, and thus the device is called "bipolar". Tesla invented many different resonant transformer circuits for electrotherapy.

Tesla found that when metals were placed inside a loop charged with high powered HFCs, the metals would instantly heat up and even be destroyed, but he was surprised that when he stuck his arm inside the loop it was unaffected. "The only plausible explanation I have so far found is that the tissues are condensers." Since then it has been discovered that cells have a capacitance of about 100 – 200 pF.

By his own experience, Tesla proved that HFC can safely be applied to the human body. He wrote:

"One of the early observed and remarkable features of the high frequency currents, and one which was chiefly of interest to the physician, was their apparent harmlessness which made it possible to pass relatively great amounts of electrical energy through the body of a person without causing pain or serious discomfort.

...these currents would lend themselves particularly to electro-therapeutic

uses.”

([\*High frequency oscillators for electro-therapeutic and other purposes\*](#), by Nicola Tesla. The Electrical Engineer, Vol. XXVI, No. 550, Nov. 17, 1898, p.477 )

Furthermore, Tesla claimed that his HFC machine rejuvenated him, allowing him to work longer hours, going without food or sleep, soothing aches and pains and promoting healing.

Later, d’Arsonval and Oudin in France improved on Tesla’s basic circuit. Although Tesla was interested in electro-therapeutic use of HFC, he left the further development of therapeutic applications of high frequency currents to others.

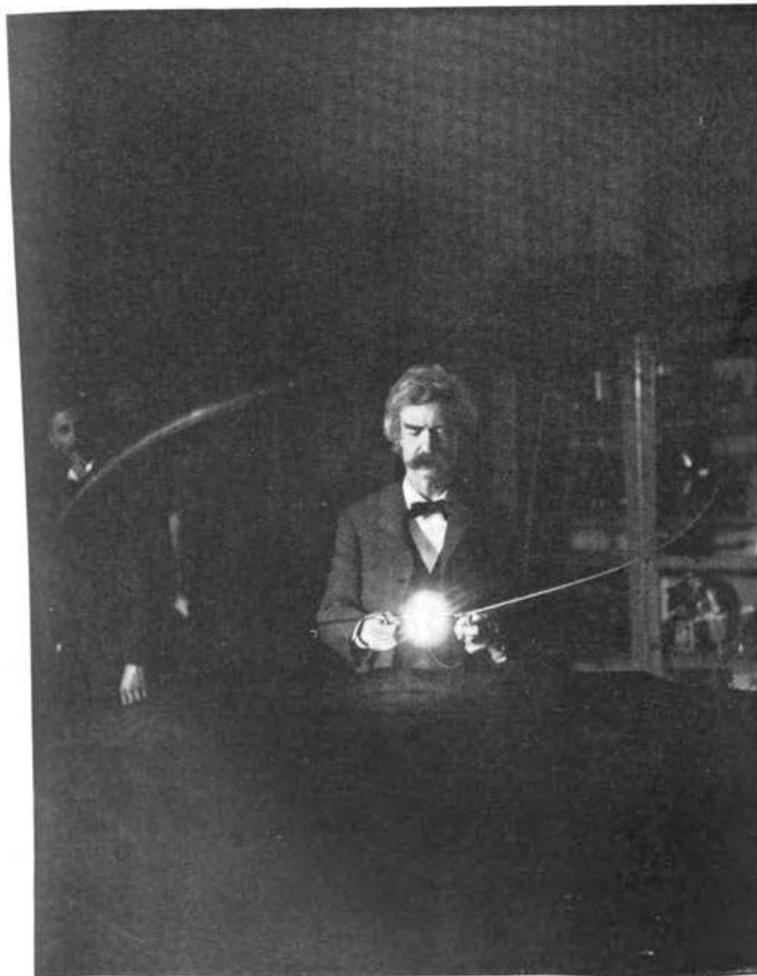


FIG. 13. SIMILAR EXPERIMENT, THE HIGH-TENSION CURRENT BEING PASSED THROUGH THE BODY BEFORE IT BRINGS THE LAMP TO INCANDESCENCE. THE LOOP IS HELD OVER THE RESONATING COIL. BY MR. CLEMENS (MARK TWAIN). (FROM A FLASH-LIGHT PHOTOGRAPH.)

*Twain is holding Tesla’s experimental vacuum lamp, which is powered by a loop of wire which is receiving high frequency current from a Tesla coil (not visible). Tesla’s face is visible in the background.*

The above picture was part of an article by Thomas Commerford Martin, called [\*Tesla's Oscillator and Other Inventions\*](#), that appeared in Century Magazine (April 1895), to prove that HFC can be passed through the body without harm. The text underneath the picture reads: "Fig.13. Similar experiment. The high-tension current being passed, through the body before it brings the lamps to

incandescence. The loop is held over the resonating coil by Mr. Clemens (Mark Twain). (from a flash-light photograph)"

The text in the article that goes with the picture:

"In Fig. 13 a most curious and weird phenomenon is illustrated. A few years ago electricians would have considered it quite remarkable, if indeed they do not now. The observer holds a loop of bare wire in his hands. The currents induced in the loop by means of the "resonating" coil over which it is held, traverse the body of the observer, and at the same time, as they pass between his bare hands, they bring two or three lamps held there to bright incandescence. Strange as it may seem, these currents, of a voltage one or two hundred times as high as that employed in electrocution, do not inconvenience the experimenter in the slightest. The extremely high tension of the currents which Mr. Clemens is seen receiving prevents them from doing any harm to him."

In 1893, Nicola Tesla held a lecture, [\*Light and other High Frequency Phenomena\*](#), before the Franklin Institute, Philadelphia, and before the National Electric Light Association, in St. Louis, Missouri. Part of the lecture is the effect of HFC on the body. In his own words:

"The first class of effects I intend to show you are effects produced by electrostatic force. It is the force which governs the motion of the atoms, which causes them to collide and develop the life- sustaining energy of heat and light, and which causes them to aggregate in an infinite variety of ways, according to Nature's fanciful designs, and to form all these wondrous structures we perceive around us; it is, in fact, if our present views be true, the most important force for us to consider in Nature. As the term electrostatic might imply a steady electric condition, it should be remarked, that in these experiments the force is not constant, but varies at a rate which may be considered moderate, about one million times a second, or thereabouts. This enables me to produce many effects which are not producible with an unvarying force.

When two conducting bodies are insulated and electrified, we say that an electrostatic force is acting between them. This force manifests itself in attractions, repulsions and stresses in the bodies and space or medium without. So great may be the strain exerted in the air, or whatever separates the two conducting bodies, that it may break down, and we observe sparks or bundles of light or streamers, as they are called. These streamers form abundantly when the force through the air is rapidly varying. I will illustrate this action of electrostatic force in a novel experiment in which I will employ the induction coil before referred to. The coil is contained in a trough filled with oil, and placed under the table. The two ends of the secondary wire pass through the two thick columns of hard rubber which protrude to some height above the table. It is necessary to insulate the ends or terminals of the secondary heavily with hard rubber,

because even dry wood is by far too poor an insulator for these currents of enormous potential differences. On one of the terminals of the coil, I have placed a large sphere of sheet brass, which is connected to a larger insulated brass plate, in order to enable me to perform the experiments under conditions, which, as you will see, are more suitable for this experiment. I now set the coil to work and approach the free terminal with a metallic object held in my hand, this simply to avoid burns. As I approach the metallic object to a distance of eight or ten inches, a torrent of furious sparks breaks forth from the end of the secondary wire, which passes through the rubber column. The sparks cease when the metal in my hand touches the wire. My arm is now traversed by a powerful electric current, vibrating at about the rate of one million times a second. All around me the electrostatic force makes itself felt, and the air molecules and particles of dust flying about are acted upon and are hammering violently against my body. So great is this agitation of the particles, that when the lights are turned out you may see streams of feeble light appear on some parts of my body. When such a streamer breaks out on any part of the body, it produces a sensation like the pricking of a needle. Were the potentials sufficiently high and the frequency of the vibration rather low, the skin would probably be ruptured under the tremendous strain, and the blood would rush out with great force in the form of fine spray or jet so thin as to be invisible, just as oil will when placed on the positive terminal of a Holtz machine. The breaking through of the skin though it may seem impossible at first, would perhaps occur, by reason of the tissues under the skin being incomparably better conducting. This, at least, appears plausible, judging from some observations.

I can make these streams of light visible to all, by touching with the metallic object one of the terminals as before, and approaching my free hand to the brass sphere, which is connected to the second terminal of the coil. As the hand is approached, the air between it and the sphere, or in the immediate neighborhood, is more violently agitated, and you see streams of light now break forth from my finger tips and from the whole hand (Fig. 5/169). Were I to approach the hand closer, powerful sparks would jump from the brass sphere to my hand, which might be injurious. The streamers offer no particular inconvenience, except that in the ends of the finger tips a burning sensation is felt. They should not be confounded with those produced by an influence machine, because in many respects they behave differently. I have attached the brass sphere and plate to one of the terminals in order to prevent the formation of visible streamers on that terminal, also in order to prevent sparks from jumping at a considerable distance. Besides, the attachment is favorable for the working of the coil.

The streams of light which you have observed issuing from my hand are due to a potential of about 200,000 volts, alternating in rather irregular intervals, sometimes like a million times a second. A vibration of the same amplitude, but four times as fast, to maintain which over 3,000,000 volts

would be required, would be more than sufficient to envelop my body in a complete sheet of flame. But this flame would not burn me up; quite contrarily, the probability is, that I would not be injured in the least. Yet a hundredth part of that energy, otherwise directed; would be amply sufficient to kill a person.

The amount of energy which may thus be passed into the body of a person depends on the frequency and potential of the currents, and by making both of these very great, a vast amount of energy may be passed into the body without causing any discomfort, except perhaps, in the arm, which is traversed by a true conduction current. The reason why no pain in the body is felt, and no injurious effect noted, is that everywhere, if a current be imagined to flow through the body, the direction of its flow would be at right angles to the surface; hence the body of the experimenter offers an enormous section to the current, and the density is very small, with the exception of the arm, perhaps, where the density may be considerable. But if only a small fraction of that energy would be applied in such a way that a current would traverse the body in the same manner as a low frequency current, a shock would be received which might be fatal. A direct or low frequency alternating current is fatal, I think, principally because its distribution through the body is not uniform, as it must divide itself in minute streamlets of great density, whereby some organs are vitally injured. That such a process occurs I have not the least doubt, though no evidence might apparently exist, or be found upon examination. The surest to injure and destroy life, is a continuous current, but the most painful is an alternating current of very low frequency. The expression of these views, which are the result of long continued experiment and observation, both with steady and varying currents, is elicited by the interest which is at present taken in this subject, and by the manifestly erroneous ideas which are daily propounded in journals on this subject."

### **Jacques-Arsène D'Arsonval**

In 1892, Nicola Tesla met d'Arsonval on a lecture tour of France where Tesla was pleasantly surprised to find that d'Arsonval used his oscillators to investigate the physiological effects of high frequency currents.

d'Arsonval's devices were based on lower voltage resonant circuits from a design by Hertz. After seeing Tesla's 1893 demonstration in Paris, d'Arsonval developed an alternative circuit that extended Tesla's design and he initiated additional studies using this circuit.

At the 1893 World's Fair in Chicago, Elihu Thomson showed his version of high frequency circuit that created a spark nearly 2 meters (6 feet) in length that could pass through a human body with virtually no apparent damage. Thomson's high frequency (500,000 Hz - 1,000,000 Hz) currents were reported to be over 10 amperes. Typical high frequency devices used for therapeutic purposes in the early 1890s were reported to be applied voltages of on the order of 5000V -

500,000V at frequencies of 200,000 Hz to 10,000,000 Hz.

Also in 1893, d'Arsonval collaborated with the French doctor Paul Marie Oudin to improve their HFC apparatus to get higher voltages and to expand the clinical applications.

By experimenting with currents of 1 Ampere traversing living bodies, d'Arsonval was able to point out that while frequencies from 100 to 150 Hz could kill, the same current at frequencies from 400,000 to more than 10 million Hz, giving sparks of up to 10cm (4 inches) length, passed through bodies with almost no perceptible physical sensation.

d'Arsonval laid the foundation for *diathermy*, a method to internally heat tissue by the application of external high frequency current.

[Diathermy is presently used for muscle relaxation, and to induce deep heating in tissue for therapeutic purposes in medicine. It is used in physical therapy to deliver moderate heat directly to pathologic lesions in the deeper tissues of the body, to destroy neoplasms (cancer and tumors), warts, and infected tissues, and in surgery to cauterize blood vessels to prevent excessive bleeding. Electrosurgery was introduced in the 1920s and centered on rapid tissue heating.

Nowadays surgery is unthinkable without the use of HFC. The heat production of tissue can be adjusted to produce a variety of tissue effects such as coagulation, cutting, desiccation and fulguration. Temperatures over 45°C can cause the normal cell function to be inhibited and between 45°C and 60°C coagulation occurs causing the cell protein to solidify. Increasing the temperature further to 100°C produces desiccation and evaporation of the aqueous contents. Beyond 100°C carbonization occurs and the solid contents of the cells are reduced to carbon.

The [\*Electrosurgical Pocket Guide for GI Interventions\*](#) explains electrosurgery as:

"Electrosurgery (or radiofrequency (RF) surgery, high-frequency (HF) surgery) is the use of high-frequency electrical current (at least 200,000Hz) on biological tissue with the goal of creating a thermal effect that is medically useful. The patient is connected to the electrosurgical unit through two electrodes. The device creates electrical voltage between the electrodes. Because biological tissue is electrically conductive, current flows between the electrodes through the patient's body. The electrical circuit is therefore closed. The current generates the required heat in the tissue for the electrosurgical effect. There are two main electrosurgical procedures. One is the cutting of tissues. The tissue is rapidly heated beyond 100 °C. The fluid vaporizes abruptly and cell structures are broken. The required current density is provided by electric sparks between the electrode and tissue. The other one is coagulation, in which the tissue desiccates and shrinks. The aim of the coagulation is either hemostasis by the closure of blood vessels, superficial coagulation or in-depth coagulation, where a volume reduction of excess tissue or large volume destruction of benign or malignant tumors takes place."]

d'Arsonval did not believe that the heating of internal tissues were the only effects, there were other non-thermal physiological effects he observed. He also obtained successes in treatments for arthritic, rheumatic, and gouty conditions which showed very marked amelioration. Excellent results were also obtained for acute diseases and nervous afflictions; and most helpful to patients suffering from debility.

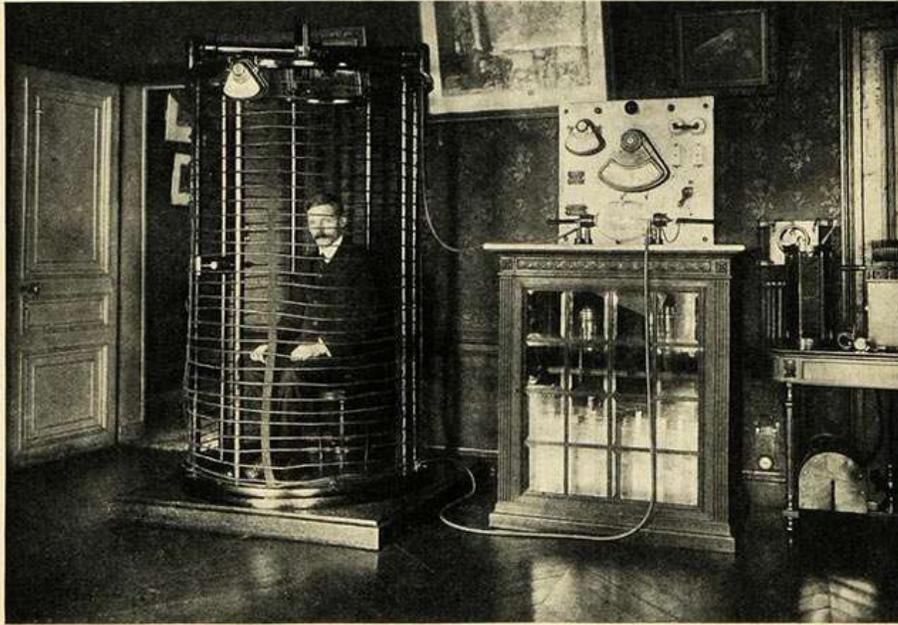
The circuit of d'Arsonval was also "bipolar". This means that two wires from opposite ends of the secondary coil are connected to electrodes, and both wire electrodes are placed on the body at different places.



*d'Arsonval holding one of the electrodes of the HFC apparatus, called the condensation method.*

d'Arsonval introduced the *condensation method*, in which the patient was attached to one end of a solenoid of the secondary circuit, while the other was joined to a plate or a sheet of metal brought near, although not attached to, the patient. In this way, the metal plate and the body formed an arrangement similar to the two coats of a condenser, which was alternately charged and discharged as voltage at the ends of the solenoid rose and fell. The apparatus was arranged in the form of a couch, and the patient lay down on insulating cushions which separated him from the metal sheet underneath.

D'Arsonval also used another method, the *induction*. The person, standing or sitting, was completely enclosed in a large, man-sized solenoid coil such as a cage, with big gaps between the turns, and separated from all contact with it. Smaller cages were used for arms, legs, etc. Owing to the high frequency oscillating magnetic field within the solenoid, strong currents were induced within the subject's body. The person felt neither pain nor any other sensation.



THE D'ARSONVAL CAGE FOR ELECTRIC TREATMENT FOR ARTERIO SCLEROSIS.  
There is no connection between the chair and the apparatus and the patient receives no direct charge of electricity.

*1909 Print: "The D'Arsonval Cage for electrical treatment for Arterio Sclerosis.  
There is connection between the chair and the apparatus and the patient receives  
no direct charge of electricity.*

### **Paul Marie Oudin**

A third pioneer was Paul Marie Oudin (1851–1923), a French physicist-physicist. He worked a lot with d'Arsonval, and in 1893 he modified d'Arsonval's electrotherapy equipment by the addition of a wire coil resonator to produce higher potentials, inventing the Oudin coil.



*Oudin coil from 1913.*

This device, very similar to a Tesla coil, could produce very high voltages from several hundred thousand to a million volts. He focused primarily on applying the currents locally using various forms of air discharges. He discovered that the air discharges, creating air plasma, could be used to treat muscular pain, nerve-associated pain, and even dental pain. Anti-bacterial effects were also noted. Oudin used his improved apparatus extensively in the treatment of skin diseases, as well as gynecology, or for the extraction of teeth through the numbing power of sparks.

He invented various metal electrodes to vary the form of the discharges, from point-like to spark to brush and feather forms.



*Treatment of knee by effluvium (=luminous brush discharge) method using Oudin coil, 1907. The feather-like sparks are drawn onto the picture to illustrate the brush-like discharges when the device is turned on. The patient holds a ground electrode in his hands attached to the coil bottom.*

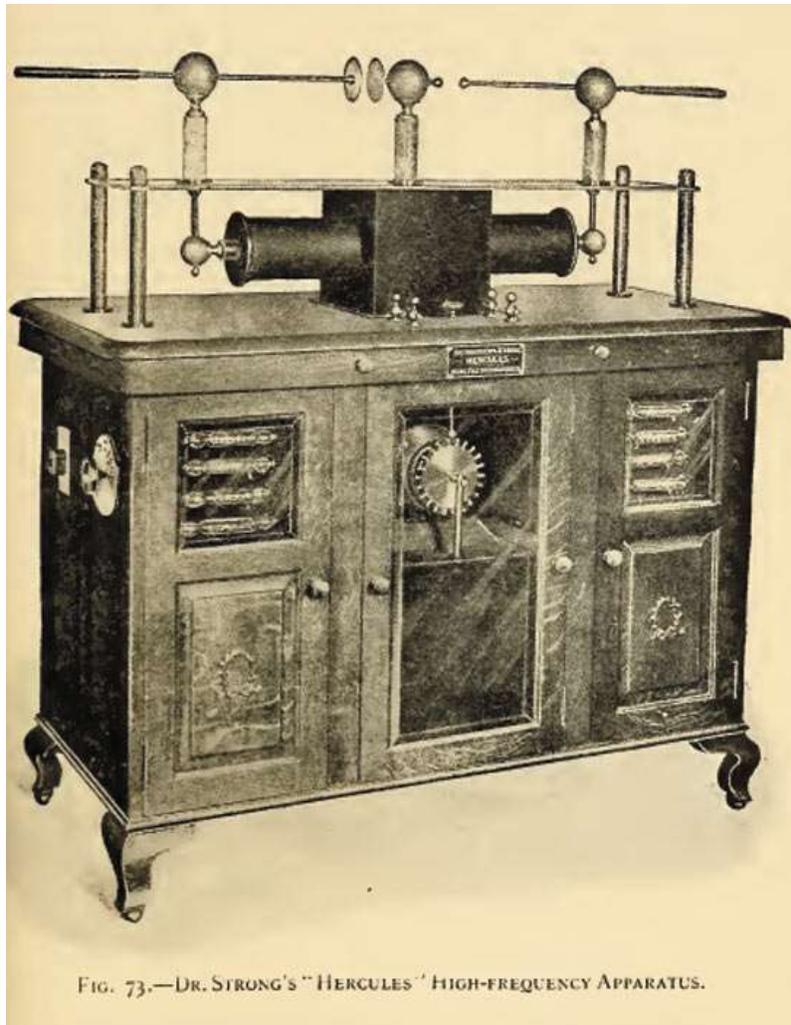
The Oudin coil was different from the d'Arsonval and Tesla circuits, as it was a "unipolar" generator, with the lower end of the coil grounded. Only one electrode was applied to the patient and the return path for the currents was through the ground.

### **Frederick F. Strong**

Frederick F. Strong was a pioneer in high frequency current therapeutics in America. Strong met Nicola Tesla in 1896 while testing an electric motor, so he might have picked up some interesting ideas in regard the use of HFC for healing purposes.

While his European counterparts were using metal electrodes to guide the HFC current into the human body, Strong invented the vacuum glass electrode in 1897, with a rarefied gas inside. The standard for the rarefication eventually became a 'violet vacuum' of about 1/500<sup>th</sup> atmosphere. This became known as the Violet Ray. He used an interrupter in the circuit, as he found that this

produced greater vitality and stimulated the circulation.



*Dr. Strong's "Hercules" High Frequency Apparatus, from his book [Essentials of modern electro-therapeutics](#)*

Originally the HFC machines was large, but Strong made devices with the larger low-frequency coil separated from the high-frequency coil. An electric cord connected the large low-frequency unit to the small high-frequency hand-held coil (the wand). This produced a lightweight, hand-held model. Since 1900, the original Leyden jar capacitors were replaced by the much smaller electronic capacitors. So now the entire HFC device could fit in a small box.

His book [High Frequency Currents](#) published in 1908 contains numerous pictures of high frequency devices and schematics that were used in his time. It is more of a technical manual for all the different apparatus and physical properties of HFC.

In 1917 Frederick Strong published a small article in the magazine [The Electrical Experimenter](#), March edition, in which he gave an interesting experiment conducted by a Swedish scientist, Svante Arrhenius (859-1927), and Strong's own opinion on how the HFCs work on the human body:

"...Some years ago the great Swedish scientist, Arrhenius , was reported to

have subjected one-half of a class of school children to the action of high-frequency currents, one hour daily for several months, at the end of which time there was marked increase in the average growth, weight, general health and mental ability in the electrified pupils as compared with those not so treated. At the present time high-frequency currents are actually being used in truck-gardens to promote the growth and increase the size of vegetables for table use.

The high-frequency currents, in short, act as vitality boosters—no other form of electricity will do this. Galvanism, Faradism, Static electricity are all valuable agents in the hands of the Electro-therapeutic specialist, but they have little direct action in promoting cell vitality and growth, as do the high-frequency currents when properly applied.

Authorities explain the action of high-frequency currents in various ways, the favorite theory being that the healing effect is due solely to the liberation of heat in the tissues. It is perfectly true that in many diseases the heat liberated in the body by the passage of from 400 to 2,500 milliamperes at a frequency of about one million cycles is an important agent in promoting an artificial inflammatory reaction and increasing circulation. The heat is, however, only one of the secondary forces generated by the current; there are many other factors in the vitalizing effect. The thermic theory will, for example, not explain the increased growth of plants produced by the action of high-frequency currents of very high voltage and low amperage. In medical practise often the most marked results are obtained by the use of Tesla currents of low intensity, but of exceedingly high potentiality. The author can account for these effects only on the theory that these currents, when of proper frequency, are synchronous with the normal rate of sympathetic nerve vibration, and in this way increase the flow of the mysterious Pranic force thru which function and tissue growth are maintained.

High-frequency currents are now extensively used by the medical profession to increase cell growth, metabolism and functional activity. They tend to normalize the blood pressure and are the only agents that are of real curative value in certain stages of Arterio-sclerosis (hardening of the arteries). They greatly augment the defensive powers of the organism, enabling it to resist and overcome disease-producing agencies. The prejudice against high-frequency currents on the part of many physicians may be attributed to the fact that they do not employ proper technique or that they use an apparatus which does not admit of proper variation of frequency, amperage and voltage, in order to suit the requirements of the individual case."

In regard to the Arrhenius experiment on school children, Strong probably read an article that appeared in the Australian newspaper [Kilmore Free Press](#) (June 18, 1912):

### **"Growth of Children Perfected by Electricity**

A remarkable experiment has been carried out in one of the public schools of Stockholm, whereby the mental and physical growth of children has been greatly stimulated by electricity.

The experiment was made at the suggestion of the distinguished scientist, Professor Svante Arrhenius, who recently advanced the interesting theory that life was spread through the universe by germs driven by the force of light from one star to another.

The walls and ceilings of the school were lined with a coil of wires, through which a high frequency circuit was passed. The children in the room were then in the position of the iron core in the centre of a coil. Such a core, as everybody knows, becomes highly magnetised.

Fifty children were kept in the room under the electric current, while fifty others of the same average age, size and mental development were kept in an adjoining room without electrical treatment. A careful comparison was made of the growth and mental progress of the two sets of children.

At the end of six months the children under electrical treatment showed an average growth of two inches, while those without electricity grew one inch and a quarter. The electrified children showed an increase in weight and other forms of development in proportion to their height.

The electrified children showed an average proficiency in their studies of 92 per cent, and fifteen of them showed 100 per cent. The unelectrified children, on the other hand, were only 75 per cent proficient in the average, and not one of them showed 100 percent.

The electrified children appeared to be much brighter, quicker and more active. They were prompter in attendance and much less subject to fatigue. The teachers also showed superior working capacity in the electrified room..."

Eventually, the large HFC apparatus were all replaced by the much smaller Violet Ray.



*Vintage Electrotherapy Violet Ray, made by Fitzgerald Manufacturing Co., Torrington, CT, ca. 1926. The low frequency coil is in the box inside the case. It is connected with a wire to the high frequency coil inside the handle with the glass electrode.*

### **Samuel H. Monell**

Samuel H. Monell was an American physician operating in New York City. In his 1902 book [\*The treatment of disease by electric currents\*](#), he lists the early observations physicians made when applying HFC to the body:

"The physiological effects of currents of high potential and high frequency upon protoplasmic metabolism have been pretty thoroughly investigated and determined during, the past five years. They are summarized by Apostoli as follows:

Clinical tests upon more than a hundred patients, show that these currents exert in the majority of cases a most powerful and generally beneficial action upon diseases due to slackening of the nutrition, by accelerating organic changes and combustion. This is proved by analysis of the urine made by Dr. Berlioz, of which the following is a brief résumé:

The quantity becomes more normal; the products of organic waste are better eliminated. The increase of combustion is shown by the diminution of uric acid, while the percentage of urea is generally increased. The relative proportion of these two substances changes under treatment, so as to reach in general the figure of 1/40. The elimination of the mineral products is also changed, but in a manner less marked. When daily séances are

given, each lasting fifteen minutes, we may generally observe in patients submitted to the influence of these currents the following modifications in their general condition. We mention them in the order of their occurrence.

Return of sleep.

Increase of strength and vital energy.

Increase of gayety, of power for work, and ability to walk.

Improvement of appetite, digestion, etc. In short general progressive improvement.

This general improvement often manifests itself after the first stance before any local influence is apparent, and before any change has occurred in the urinary secretions. Local pain and trophic changes are often more slowly affected by these currents, and are at times, entirely refractory for a longer or shorter period, and in such cases, the same currents must be applied locally by contact with the electrodes, for general electrization by any form of current must be localized at the seat of local pain.

The diseases which have appeared to derive most benefit from this therapeutic agent belong to the arthritic class ; rheumatism, gout and diabetes."

In 1910 he published his book [\*High Frequency Electric Currents in Medicine and Dentistry\*](#). The book contains several pictures of patients being treated with glass vacuum wands.

Both his books lists many diseases and ailments for which the HFC was used.



*From Monell's book 'High frequency electric currents in medicine and dentistry'.  
Treatment of muscular rheumatism on the shoulder and neck, with glass  
electrode.*

## Violet Ray Generator

The Violet Ray was based on the early Tesla coil, with variations, and it was made small enough to be portable. This was important because at that time it was primarily used by physicians who could take it to the home of their patients. There were other forms of high frequency current apparatus around but they were large and cumbersome.

A typical Violet Ray device consisted of an electrical control box that contained the spark-gap interrupter or magneto coil, and had an attached bakelite or other wand housing which contained the high voltage coil and an insertion port for attachments. Glass, evacuated tubes of varying shapes and for different therapeutic uses could be inserted into the bakelite handle to apply the resulting current to different parts of the body.



*Bakelite wand with glass electrode, from a 1920 Master Violet Ray*

From around 1910 to the 1950's the Violet Ray was manufactured and sold worldwide. Many models were available. Manufacturers, obviously interested in making profits, were making numerous medical claims for their products.

Since the 1940s, the U.S. government went after the manufacturers and put them all out of business based on their illegitimate claims. It was part of a campaign to outlaw any electric treatments. The FDA outlawed them in 1954 (no medical claims could be made) after a lawsuit against the US last manufacturer. No doubt the pharmaceutical industry was behind all this, as they strived for dominance in the medical market.

The Violet Ray was still manufactured and sold outside the USA.

The Violet Ray was sold not only under this name, but also under many other names, such as The Super Marvel High-Frequency Generator, The Complete Physician's Portable High Frequency and Violet Ray Generator, High Frequency Violet Ray Generator, the Violetta, Medikus, etc.

*Rejuvenate  
Your  
Energies*



Attain the vigor and power you are entitled to. SHELTON VIOLET RAY — this wonderful new scientific discovery—will give you the means of alleviating all your ailments by the simple application of soothing, satisfying electric waves.

Heretofore the SHELTON VIOLET RAY has been available only to the Medical Profession. Now, due to improved manufacturing facilities, the *Shelton Laboratory Model* can be yours at the exceptionally low price of \$17.50.

**SEND NO MONEY**

On delivery, pay the postman *Only \$12.50*, and at the end of thirty days, when you have proven to your own satisfaction that the SHELTON VIOLET RAY has improved your condition, send us the remaining \$5.00, making the total cost to you only \$17.50. Remember, YOU have to be satisfied.

Send today for the genuine Violet Ray—the SHELTON Laboratory Model.



**Shelton**  
Electric Laboratories  
16 East 42nd St., New York

DEALERS: Write for attractive proposition

*Advertisement for Violet Ray in Popular Mechanics of 1922. Now available to anybody for all ailments!*

There are plenty of vintage Violet Ray machines available on Ebay and other sites. Since they are many decades old, even an century old, they usually don't work anymore. They are mainly for collectors. Some can be repaired and made them functional again, but only by someone who is knowledgeable about old and modern electronics and their safety.

## Modern HFC Devices

Modern high frequency current devices are basically all the same, but there are variations in their electronic circuits. There are two types under three names.

### Violet Ray

A HFC device under the name Violet Ray, cannot be sold with medical claims attached in the USA. Therefore you will find the name of Violet Ray rarely used with a modern HFC device, at least in the USA. The name Violet Ray is mostly used for the vintage devices.

The modern devices don't have the magnetic interrupter for creating the oscillating current, but a thyrister. You can see schematics of the electronic circuit on YouTube channel [bigclivedotcom](https://www.youtube.com/channel/UCbigclivedotcom), and [Mark Furneaux](#).

The Violet Rays have a knob at the bottom of the wand to adjust the intensity of the current.

The name of Violet Ray is usually used by sellers with New Age beliefs. Some people are selling the cheap Chinese Violet Rays for a much high price with esoteric language, such quantum energy and scalar waves.

The modern Violet Rays are the same as those sold as *facial high frequency machines*.



*Made in China, sold as Violet Ray, but the same as those sold as facial high frequency machines.*

## **Facial High Frequency Machines**

These are the same as the Violet Rays, but sold under the name Facial High Frequency Machine, or D'Arsonval (also spelled Darsonval). They are primarily made in China, and available on Ebay from cheap to expensive, all for the same product, although the outer design or look varies.

They are used by licensed aestheticians as FDA approved high frequency machines for skin treatments and to promote hair growth by improving blood circulation and oxygenation to the scalp and face. But anybody can buy them.

Also promoted for acne-causing bacteria, lymphatic drainage, exfoliation of dead skin cells to improve the appearance of the skin, cold sores, sagging skin and puffy eyes. The skin of the rest of the body can be treated too.



*Made in China, sold as High Frequency device*

A better quality Violet Ray is sold by Novator in the Ukraine. Novator is an engineering company for the manufacture of on-board radio electronic, radar, radio navigation and other equipment for the aviation and aerospace industry. In recent years they also produced medical therapy equipment. Their Violet Ray is sold under the name of [Apparatus for local darsonvalization CROWN \(05\) \(CROWN\)](#). It has European plug for 230 volt, but can be used in the USA with voltage adapter for 120 volt, such as this one on [Ebay](#). This is a step-up and step-down transformer. To be used in the USA, you need to put the slider to 110 volt on the back of the plug.

They give a list for the diseases it is being used for, as well as technical specifications of the device. Be aware that their electrodes are 12 mm (the Chinese ones are 11 mm) and only fit in these Ukraine wands. There is also a [YouTube](#) showcase video.

The whole set comes in a nice box with detailed information in Ukrainian, Russian and English. A travel case is also included.

You can order directly through the Novator website. I bought mine on Ebay through the seller [Monja07](#), also located in Ukraine.

My personal opinion is that it is indeed of a higher quality. The Chinese ones have a current leakage at the part of the wand where the electrode is inserted. If you touch this part of the wand you can hear a diminishing of the sound that the glass electrode makes. That means that the plastic encasing is not a total insulator. With the Novator wand this does not happen. The sound that the plasma in the glass electrode makes is also smoother, and the color of the neon brighter.



*The Novator darsonvalization device*

Another company that makes and sells Violet rays is [Baar Products](#), but these are very expensive.

### **Violet Wand**

The *Violet Wand* is a relatively new invention in the USA. Donnie Rice of Erotec began manufacturing them in the late 1990s, but they were little known or used. After his death in 2001, they gained a popularity through a woman with the scene name Violetwanda.

Violet Wands are most commonly used in BDSM (erotic practices or roleplaying involving bondage, discipline, dominance and submission, sadomasochism) for erotic sensation play. Violet Wands can produce strong sparks, and deliver a variety of sharp, cutting, or piercing type sensations. Because no curative properties are ascribed to the Violet Wand, they are legal to manufacture, own, use and sell in every state in the USA.

The Violet Wand is of a different design than the Violet Ray. A Violet Wand is based on the older (vintage) designs of the Violet Ray, having the interrupter circuit in a separate box, which is connected by an electrical cord to the wand. It is an electromechanical type which runs on an electro-magneto coil. This produces stronger current and sparks, which is the aim in people who find pleasure in shocks and pain.

## The Glass Electrodes

Glass electrodes from different manufacturers often look the same because many of their shapes are based on antique designs. The diameter of the tubes can differ from one manufacturer to the other, something to be aware of when you need a replacement electrode.

The [Electrotherapy Museum](#) tells us that "... the actual glass vacuum electrodes generally do NOT contain inert or noble gases as many people claim. The color and effects of the discharge are created from normal air at various vacuums. While sparks in normal air are purple, these sparks spread from red, violet, blue, lavender, and white as the vacuum inside of the tube increases. Some manufacturers did use Neon in their electrodes, but this was mainly limited to European devices from the 1930s and later."

Neon glows bright orange, and since it is rarefied inside the electrode, not much is needed. The orange color does not show with rarefied air. Some modern electrodes do shine bright orange, so they do contain neon. Other modern electrodes contain Argon, as they shine bright violet, while rarefied air is pale violet.

The reason why glass vacuum electrodes are used is to remove the harshness associated with a direct electrical spark to the body. A metal electrode would cause a painful spark.

In the 1900s there were numerous shapes of glass electrodes tailored to specific purposes. At present they come in sets of four to eight.



*Vintage glass electrodes from a Violet Ray, Solidor brand from Germany, early 1900s.*

## Medical Claims of HFC Devices

The pioneers of high frequency machines were physicians and had a lot of experience using these devices on their patients. In their books they detail the working of their machines and the therapeutic results they got. They often go into detail about the treatments of specific diseases or ailments. They used different apparatus to produce the HFCs, and it was held that this accounted for the differences in results. The devices were also improved over time, so one needs to also consider the date of publication of their works. It is impossible to give here all the results they had for every single disease or ailment. If you are looking to use the Violet Ray for a specific purpose, follow the links to their books and look up if they talk about it.

### **Microbes and Toxins**

Physician Sinclair Tousey mentioned in his [\*Medical electricity, Röntgen rays and radium, with a practical chapter on phototherapy\*](#) (1921) that "Like many other forms of electricity, high-frequency currents will experimentally kill bacteria or retard their development."

There is not much information about the effect of HFC on microbes and toxins in the human body. Herbert Evelyn Crook, an English physician and surgeon, in [\*High frequency currents, their production, physical properties, physiological effects, and therapeutical uses\*](#) (1909) devotes a chapter on this issue. He explains that several pioneers were trying to establish if the HFCs would destroy microbes and toxins. The results were mixed and there was a lot of discussion among the researchers about what effected the attenuation of the microbes and toxins. Some held that it was solely because of the rise in temperature of the cells, while others showed that the current itself was affecting them. Sometimes microbes and toxins were neutralized, while at other times they were only mildly reduced in strength. One needs to take into account that these were the first experiments, and different apparatus and methods were used.

The effect of HFC for local application is more clear. It was found that the effluve, or brush discharge, was most effective and could totally destroy the microbes, depending on the density of the current, the more gentle and the more diffused the effluve was, the time (30 minutes for total destruction), closeness to the site of the microbes on the skin.

In his book Crook lists numerous cases of patients of patients treated with HFC.

Generally, the early physicians held that toxic or inflammatory products were more quickly eliminated by the use of HFC.

## Quotes from the Pioneers

William Benham Snow, in his [\*Currents of high potential of high and other frequencies\*](#) (1905) was of the opinion that antiseptic or germicidal action of the HFCs was limited to the local action on the tissues the electrodes were directly in contact with. He also gives an interesting view of how the HFC works:

"The general principles governing the administration of the high potential modalities are rational, and their efficacy has been demonstrated in so many conditions that there can be no doubt of their great superiority to the uncertain action of the medical remedies usually prescribed for the relief of such conditions. The high-potential currents act by inducing recurrent contraction and relaxation, forcing the structures of the organ to take on activity, inducing a circulatory drainage and expulsion of the contents of the glands, and at the same time restoring a condition of functional activity and tonic contraction where relaxed and dilated vessels were present, thereby promoting a rapid restoration of the organ to a normal condition. The value of the application of the high-potential modalities to the treatment of inflammatory conditions, except those the seat of necrosis, suppuration, or other germ processes, is established beyond question or controversy."

In 1907 L. Webster Fox published a paper, [\*High-frequency current in ophthalmic practice\*](#), detailing some experiments of the application of HFC with an early Oudin coil for eye diseases and disorders. Fox was a professor of Ophthalmology in the Medico-Chirurgical College, Philadelphia, Pennsylvania. The applications were made directly to the eyelids by a Wappler vacuum spiral tube and directly to the eye-ball (cornea) by specially devised vacuum eye electrodes, single and double. The time of application varied from two to twenty minutes. The majority of cases received the treatment three times per week, some received daily treatment. Some eye ailments were cured completely while others had moderate improvement, and some none at all.

The New York Herald Tribune, September 7th, 1932, page 36 has an interesting article about HFC and cancer, titled *Science Turns To Electricity In Cancer War*. Here is the relevant extract:

"Application of high frequency electrical current has had "highly beneficial results" in cancer treatment, Dr. Gustave Kolischer, of Mount Sinai and Michael Reese Hospital, Chicago, asserted yesterday at the American Congress of Physical Therapy. Dr. Nikola Tesla credited as the first person to introduce electrical oscillation in therapy, corroborated Dr. Kolischer's statement during an intermission in the sectional meetings of the congress, which is holding its eleventh annual session at the New Yorker this week. "In a great many instances," said Dr. Kolischer, "its results surpass anything that could be accomplished by the use of the cold knife, and in cases where technical reasons exclude the use of the scalpel numerous favorable results

follow the administration of high frequency current." Dr. Kolischer pointed out, that the death rate, as an immediate consequence of surgical intervention, is considerably lower in electro-surgery. "There exists in the body a system of specially endowed cells in which reside practically all the defensive potentialities of the body," he asserted. "These cells possess the faculty of digesting cancer cells and of neutralizing the harmful products of these malignant cells. It has been found that it is possible to increase the number of defensive cells by stimulating the organs in which they originally grew. Thus one is in a position to draw an increasing supply of these cells their use in the cancer region."

Dr. Gustave Kolischer was president-elect of the American Congress of Physical Therapy, and was one of the eight recipients of awards in recognition of outstanding contributions to physical therapy.

The following is an example of the observations the pioneer physicians made when applying high frequency current to the body. It was well-known that the heating of the tissues creates better circulation of blood and other fluids, but other effects were noted as well. The quotes here are from [\*Medical electricity, Röntgen rays and radium, with a practical chapter on phototherapy\*](#) by Sinclair Tousey, published in 1921:

"Effects of General d'Arsonvalization.

A current of 600 to 1000 ma. from direct metallic contact or by induction traverses the body, often without any sensation and always without pain.

... There are increased tissue changes, more rapid oxidation, more rapid reduction of the oxyhemoglobin in the blood, increased elimination of waste products in the urine. The effect is due to an action upon the great sympathetic nerves controlling vasomotor, secretory, thermogenetic, and peristaltic functions. The general applications have little or no effect upon the central nervous system controlling sensation and voluntary movement. It has special effects upon the protoplasm of tissue-cells everywhere, increasing the rapidity of their natural chemic changes, and special effects on bacteria and ferments and animal poisons.

There is a soothing effect upon any painful condition, and sometimes this may be accompanied by slight drowsiness.

... The effect on the blood-pressure is of great importance, and like other forms of electricity, high-frequency currents act as regulators of this condition without producing a marked effect upon a healthy person... In cases of rheumatism, gout, asthma, and kidney disease, and in neurasthenia with high arterial tension the application of high frequency currents causes a reduction of the blood-pressure. In gout and rheumatism the urine contains an increased amount of urea, while the uric acid disappears. In other words, the nitrogenous matter becomes more completely oxidized in the system. And this effect is not a temporary, but a permanent one of increased tissue activity. The energy is so great that it

produces a tonic effect upon any person within 10 feet of the apparatus. The present author enjoyed extraordinarily vigorous health during the four or five years following the introduction of these currents, in spite of the fact that the nature of the work confined him to the office practically all day, winter and summer.

The oxygen-carrying capacity of the hemoglobin of the blood is increased as well as the amount of hemoglobin. The human output of carbon dioxide is sometimes increased ...

The amount of phosphoric acid in the urine is increased. The toxicity of the urine is increased. There is an increased elimination of CO<sub>2</sub>."

## **Summaries of HFC Effects on the Human Body**

What follows here are summaries given by the pioneers in their books.

Noble M. Eberhart in his [\*A Working Manual of High Frequency Currents\*](#) (1919), gives a:

Summary of Vacuum Tube Effects, from Oudin resonator or Tesla secondary:

1. Increase blood-supply to a given area. (Hyperemia).
2. Increase oxidation and local nutrition.
3. Increase oxygenation of blood.
4. Increase intake of oxygen.
5. Increase output of carbon dioxide.
6. Increase secretions.
7. Increase elimination of waste products.
8. Liberate ozone, with the resultant benefit of more or less of this ozone being inhaled by the patient, and also probably carried directly into the tissues.
9. Increase bodily heat, without a corresponding rise in temperature.
10. Locally germicidal.
11. Mild and medium sparks stimulate or soothe according to length and character of application.
12. Strong sparks are caustic.
13. Sparks to spine increase arterial tension
14. Promote absorption of plastic exudates or adhesions.

He adds:

These effects of vacuum tube applications, while essentially local, are not

absolutely so. The current traverses the body in all directions from the point of entry, but is, of course, most intense and pronounced at the latter point.

On page 64, he gives a:

Synopsis of Constitutional Effects:

1. Increase general metabolism.
2. Increase glandular activity.
3. Increase temperature and bodily heat.
4. Increase oxidation and hemoglobin.
5. Increase secretions.
6. Increase elimination.
7. Lower blood-pressure when hypertension exists.
8. Soothing to the nervous system

In all these early years of using the high frequency devices and the Violet Ray wands, there were no reports of injuries. Although some skin burns did happen when the intensity of the current was too high or held too long on the skin. That was quickly avoided by lowering the current of time of application. Treatments usually consisted of 10 minutes with a 20 minute pause. One to three treatment a day was enough.

Frederick F. Strong, in his [\*High Frequency Currents\*](#) (1908), summarizes his conclusions about the physiological and medical effects of high frequency currents as follows:

1. Promotes circulation, increases metabolism and more or less completely restores the general harmony between different functions of the body.
2. Increases cellular chemical processes, increases the vital combustion both in quantity and intensity.
3. Facilitates the elimination of waste products.
4. Increases vasomotor activity with a slight rise in arterial tension.
5. Increases oxidizing power of the blood.
6. Induces germicidal action via ozone.

Samuel Howard Monell summarizes as follows in his [\*High Frequency Electric Currents in Medicine and Dentistry\*](#) (1910):

1. Diseases of the digestive system.
2. Diseases of the blood and heart.
3. Diseases of the respiratory tract.

4. Diseases associated with metabolism.
5. Diseases involving the excretory apparatus.
6. Diseases of the nervous system.
7. Infectious and malignant disease.
8. Dermatological conditions.

Follow the links to read their books into more detail.



*From High frequency electric currents in medicine and dentistry, by Samuel H. Monell, 1910*

## Healing Results with the Violet Ray

I wouldn't trust the long list of diseases and ailments the sellers of Violet Rays were given in the past and even in the present that their device was supposed to cure. The cures obtained by the pioneers are much more reliable, as they were physicians. Follow the links above to know what results they obtained.

Here are some results I found on the internet by present day people, just to give you an idea of what is possible.

One [YouTuber](#) explains in one of his videos a reversal of permanent nerve damage in his big toe (because of frost damage), a healing of a crushed finger, and even recovery of poisoning. He starts talking about this at 12:33.

On [Curezone](#), the user Annunaki writes that the Violet Ray helps with fungal nail and feet problems.

"I've had experience in this department and this is a sure thing. My mother suffered with bad fungal feet and hard skin since her cancer.... There's obviously a lack of blood flow in that area because after using the Violet Ray the differences was startling and SUPER QUICK!" ([Curezone post](#))

Another post by Annunaki:

"I've been using my Violet Ray for about 3-4 weeks now with some most excellent results as mentioned in previous threads/testimonies... My fingers are still much better and my leg/calf is fantastic... There has been a dramatic difference quite early on. I've noticed I can sit in awkward positions which would have totally made my leg pain like hell usually. My leg holds out most times now and is fairly free if not free from pain. I've only worked on this leg and not the other which was far less painful. Now the better leg sometimes feels a lot worse than the old evil one :-). I do use the Violet Ray on the other leg but only on its foot (sole) as I also do on the old bad one too. I noticed a dramatic improvement when I made sure all the lower leg had coverage including the front and back, bones & sides.

I seriously stubbed my poor little toe the other day so bad I thought it was broke and it was bleeding. Before I knew it was bleeding and quickly hit the Violet Ray and did 2 minutes. The pain dramatically dropped but came back a little within 5 minutes. I proceeded with another 2 min treatment with again great pain relief for a while. I did a long walk on it home from my mothers and made sure I did it for another 2 minutes. I swore it was broke it was initially that bad. The next day I forgot all about it till I told my neighbour. I then wiggled my foot/toes and to my amazement there is NOT a SINGLE ounce of pain or trace of anything in that toe ;-) A M A Z I N G thanks Violet Ray.

I had gathered 2 small blisters on my big and smaller toe from long walks. As soon as I felt these I used the Violet Ray and the one disappeared completed after 24 hours whilst the other disappeared after 3 days but didn't burst or anything. AMAZING YET AGAIN.

My mothers heels after 4 days without the Violet Ray, started to get dry again and crack bad. She came to mine and I used my Violet Ray on a highest setting for a few minutes. I noticed in some parts an immediate change as did she. I did think a few more like 2 would be needed over the next 2 days. The next day her feet were a beautiful PINK color and the cracks had gone completely. After a couple of days still excellent and she has had another high pelt from the Ray for good measure. No fungi had come back at all only the hard skin that time. I think the fungi would take a lot longer to come back. Obviously there is a problem getting blood and oxygen to the feet area and over time it will get so bad that fungi sets in. Well it would be interesting to see this time scale but I cant let it get to that stage so regular heel work will take place.

No wart has come back on my mothers arm and its a awesome natural color and cleansed area now. My neighbour's arthritis pain has great diminished using this Ray for only 4 minutes in each area.

We've all been sleeping well and with crazy deep dreams which I usually get but not as much as now since getting the Violet Ray. I think by running it along the soles of the feet your stimulating many of the organs like Liver, Spleen, Thyroid etc like acupuncture. If you can get things running correctly

and balanced you will see some serious effects and sleep would be different especially if you can get the pineal gland working better and less calcified.

I will say that I don't normally get colds yet me and my mom both got a deep cold but was pretty well throughout although I got rid of mine like grease lightening. I also have had some eczema some on my eyelid again like a few years back... Anyhow the Violet Ray easily removes the itching etc. with even just a 1 minute application. It can sometimes last a day or 8 hours from 1 minute application..."

User Steve888 writes:

"Recently I had the opportunity to purchase an energy healing tool called The Violet Ray. I brought it out at a barbeque with some friends. We tried it on knee pain, finger pain, and ankle pain. All who tried The Violet Ray noticed an improvement within 5-10min. One thing that is very noticeable is an improvement in my overall energy level. My wife and I have also had vivid dreams for the first time in many years. My dreams looked liked Kodachrome movies of mountains and lakes. Really beautiful..." ([Curezone post](#))

Gary J. Lockhart writes in his book *Electrical Healing and the Violet Ray* (2000), page 130-131:

"There are many stories of using the violet ray in first aid. One man sprained his ankle and wrote, "After I sprained my ankle, I limped around for about a week with a cane, and it seemed to get no better. Finally I went over and got my Renulife violet ray machine from some friends to whom I had loaned it, and to my surprise, I obtained immediate relief upon using it. I used it steadily until my ankle was completely cured."

A young woman sprained her ankle and could barely hobble. The first treatment enabled her to walk with little stiffness or pain. After the third treatment, she was completely normal. A young man fell while playing soccer, resulting in extremely severe pain in the sciatic nerve. After ten treatments with the violet ray, the pain ceased and he could walk without pain. It returned to a lesser degree but more treatments eliminated it.

A woman sprained her hand and right arm. She went to several doctors and took different treatments. She couldn't do needlework or play cards without real pain. Steam baths and massage didn't help. Then she took violet ray treatments and was able to play cards and sew without pain.

Another person wrote, "For eight years, I was afflicted with a stiff sore neck. After taking three Renulife treatments, to my great surprise, I felt some relief, and after eight treatments, I was entirely cured and could turn my head and twist my neck without the least pain."

A flooring installer had his right knee swelled to the size of an orange. It kept recurring, and no treatments worked. After he took 28 five-minute violet ray treatments, the problem didn't come back. Many other cases of bursitis responded just as well."

## Treatments with the Violet Ray

The following is general information available on the internet on how the Violet Ray was and still is used.

As Nicola Tesla stated (see above): "The direction of its flow would be at right angles to the surface; hence the body of the experimenter offers an enormous section to the current, and the density is very small". This is in contrast with current at low frequencies, in which the current is concentrated in the narrow path the current takes when it flows through the body. In this narrow path the current density is very high and thus destructive to the body. With high frequency currents, the current density is high only at the point of contact with the skin; from there it spreads over the entire body while flowing towards the ground. So anywhere inside the body the current density is low.

It is generally accepted that high frequency treatment stimulates the blood circulation by the local application of the low amperage and high frequency electric current. The cells open up, releasing toxins and taking up oxygen. Blood circulation improves. There is an increased elimination of waste products in the urine.

The most obvious result of HFC through the body, is that it heats up the cells where the current flows. This is most concentrated on the point of contact with the skin. That is why treatment is usually limited to ten minutes, and seven minutes for mucous membranes, to avoid overheating of the cells and causing burns. One treatment a day is enough. The unit also has to cool off for about 20-30 minutes. if a second treatment is planned. Noble Eberhart advised an interval of 3 to 6 hours between treatments.

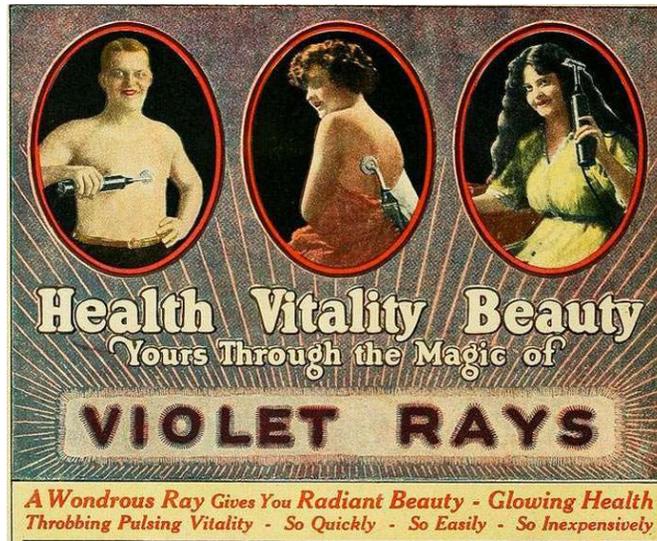
If the intensity knob is turned up all the way, a reddening of the skin afterwards can occur. Modern day devices are pretty safe in this regard. A very high HFC can burn the skin or cell tissues, and this effect is used to cauterize tissues in surgery.

Modern Violet rays have an output of 45 to 480 mA ([Stefan's Tesla-Pages](#)). That is lower than the HFC the pioneers were using. They were working with 300 to 600 mA, and 1000 to 2000 mA for cauterization. If the current is above 200 mA a reddening of the skin will soon happen.

Using a Violet ray for the first time can result in a Herxheimer reaction which is a natural response to the destruction of harmful bacteria and other threatening microorganisms. Having a lot of microbes or toxins in the body, the reaction can be strong. So start easy with the Violet Ray.

Noble M. Eberhart wrote his [A Working Manual of High Frequency Currents](#) (1919) for the average physician of his time, avoiding unnecessary technical information.

It is a very understandable book about the different HFC apparatus at that time, the different vacuum electrodes and their uses, how to apply them and the care to take for delicate tissues such as mucous membranes, and a long list of diseases and how to treat them. An interesting manual.



One manual of the Violet Ray states that it should not be used in:

- acute inflammatory processes such as acute non-draining cellulitis (inflammation)
- acute arthritis characterized by infection
- acute pelvic infection
- any condition in which there is a tendency to hemorrhage, such as gastric ulcer

I haven't found any other information of cases in which the Violet Ray should not be used.

## Safety

The following is a summary of information found on the internet and in old books and manuals in how to use the Violet Wand safely. It might not be all the safety precautions that need to be taken into account.

Some people worry that the violet plasma inside the glass electrodes emit ultraviolet light. Yes, they do, but the UV they cannot penetrate the glass housing, as glass does not allow UV to pass through. The sparks created between the glass and your skin is the only source of emitted UV outside of the wand, but this is minuscule.

The sparks also create a small amount of ozone and is of no concern. Actually ozone is a disinfectant.

Never put your finger into the electrode socket of the wand to avoid a nasty shock.

The glass tubes can break if too much pressure is used. Never force them into the socket of the wand.

Grease, sweat and dead skin cells tend to stick to the glass after a while. Clean the electrode with a soft rag after each use, or clean with soap and water after a couple of weeks of usage.

The wand has to be turned off when inserting an electrode. If the wand is turned on with no electrode, the current is converted into heat and the coil will burn out if left that way for a certain time.

Violet Wands should not be used on persons with pace-makers or known heart problems, not on pregnant women, or on anyone with an insulin pump or other electrically operated medical implants.

Don't use it near a body area that has a metal implant, and take off any metal jewelry. If the glass electrode is held close to metal a stronger current will jump over.

As with any electric device, stay away from water to avoid electrocution! No, using the Violet Wand in the bathtub is not an option!

Remember, the electrode creates sparks, how small they may be. Sparks can ignite flammable products such as alcohol (in products that are used for skin and hair).

In an original Tesla circuit the electricity from the mains is in the primary circuit and can't get into the secondary circuit which connects to the glass electrode. But modern electronic wands have differences in their designs and in some the two circuits are connected to each other, what allows the house current to enter the secondary circuit if there is a short somewhere in the circuit. Although I haven't found any information that this has actually happened to somebody.

On the positive side, the glass electrode provides a buffer that will keep household current from the end user in case of a fault, because household mains current can't pass through the glass. Glass is an insulator for low frequency currents.

If you are really concerned, you could plug the wand into a ground-fault circuit interrupter, or GFCI, which is a fast-acting circuit breaker designed to shut off electric power in the event of a ground-fault within as little as 1/40 of a second.

It is also good to hold the wand at the bottom. The top of the wand contains the Tesla coil, where the high voltage is produced.

# Violet Rays



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