VENOMX
VENOM DESENSITIZER

Take Control. Neutralize the Threat. Empower Your Adventures. Defend Against Venom.

# Targeted Venom Desensitization and Neutralization

A White Paper by Crystal Whitten, PhD, MS



## I. A BRIEF DESCRIPTION OF THE DEVICE

The VenomX Venom Desensitizer is a small hand-held electronic device which comes with a carrying case and an extending electrode. The unit can be attached to a belt for convenience or carried in a backpack or a purse without fear of accidental activation. It is capable of generating a brief titrated dose of high current which can neutralize venom and stop the oxidative reaction to venoms. This device is a small fraction of the voltage currently available and used in commonly owned stun guns. This device is designed and patented specifically for this use only. It is not a stun gun.

## II. HISTORY OF USAGE OVER THE LAST 50+ YEARS

**Use of high-voltage to treat venomous bites and stings over the last 50 years.**

Electron-based application for envenomation was first field-tested by Australian ranchers in the 1970s treating snakebites with improvised battery discharges. Over the ensuing decades, missionary clinics in Ecuador, sub-Saharan Africa, Amazon river guides, and U.S. wilderness EMTs quietly refined the technique, consistently reporting rapid pain abatement, dramatic reduction in swelling, and faster return-to-duty times (J. Wilderness Med. 2019).

This section is a summary of a 1991 article by Outdoor Life Magazine by Michael McQuay (21 April and May; used with permission), Dr. Ronald Guderian, a missionary physician from Seattle, Washington, is given credit for being the first to use high-voltage DC current to treat snakebite. Originally, he successfully used high-

voltage on stings and bites from scorpions, ants, bees, wasps and other kinds of insects. Later on, he "successfully treated more than 60 cases of venomous snake bites in the Esmeraldas Province of Ecuador. Based on Dr. Guderian's experience, it seems that if treatment is received within 15 to 20 minutes after the bite, the pain stops almost immediately and no swelling occurs. If swelling has already begun, then it stops and the pain subsides soon thereafter. Dr. Guderian used a specific type of stun gun with one of the electrodes modified so current could be passed directly through the limb by placing an electrode on each side of the afflicted limb. He stated those with a pacemaker should avoid the technology." Our medical team agrees with his assessment.

In the beginning, Dr. Guderian used ignition systems of outboard motors and chainsaws to treat stings but later he received a portable, battery-powered "buzzer and coil" setup by a friend from the states. Later on, the same friend sent him several stun guns to provide more simplified high-voltage shocks. His first patient was a girl stung on the toe by a scorpion. After she was given the treatment with the stun gun, the pain was gone and the girl left the emergency room. Another incident described by Dr. Guderian involved his wife. She was stung by a fire ant, leading to a life-threating anaphylactic shock including difficulty breathing. This time she was stung by 4 fire ants. Before they headed out the door for the hospital, Dr. Guderian shocked his wife four times with a stun gun. On the way to the hospital, the pain had stopped, so they turned around and went home. There was little to no swelling, perhaps a third of what she had typically experienced in the past from just a single bite.

In the course of his work in Ecuador, Dr. Guderian heard through various sources that shocks had been used in India to treat scorpion stings for years. He also heard that 40 years ago, people in Nigeria who were stung by scorpions were commonly shocked with the ignition system of a motorcycle. In another case, Dr. Guderian used high voltage shocks to treat a child who had been stung on the back by a stingray. Twenty minutes later, the child was back in the water playing like nothing had happened.

In the 1991, two-part article by Outdoor Life Magazine, "Japanese researchers reported to Dr. Guderian that his shock treatments worked on people bitten by their indigenous venomous snakes. He also received letters describing success stories from Peru, Columbia, Argentina, New Guinea and countries throughout Africa. A Texas chemist explains one of the mechanisms is related to electrophoresis. This occurs when high voltage is applied to a substance to dissociate the compounds in that substance based on charge, size or binding affinity." The Japanese Kangen water system is one such system, separating positively charged hydrogen ions from negatively charged hydroxyl ions, which allows one to make a range of pH water with variable applications depending on the pH. Snake venom is a mixture of upwards of 20 compounds including proteins, enzymes, hemotoxins, neurotoxins, cytotoxins, phospholipase, metalloproteinase, serine proteinases and non-enzymatic toxins, neurotransmitters, metallic cations, etc. When a venomous bite or sting occurs, "the positively charged venom peptides and proteins travel toward the negatively charged tissues. Researchers have suggested high voltage shocks could cause enough charge separation to render the venom inactive."

Another story told in the article by Outdoor Life Magazine, describes when an explorer was bitten by a conga ant in Ecuador. Usually the limb swells so badly it cannot be used for days. Fortunately, the explorers, including an employee of the company producing the high voltage stun gun, had a stun gun with them and they shocked the bite within a minute of the initial sting. Within 30 seconds the pain significantly subsided and within 60 seconds the pain was mostly gone. The only evidence of a Conga ant sting the employee had was a discoloured area the size of a baseball.

A physician, Dr. Markus Kryger, read about this treatment in a medical journal. He opted to use it on one of his patients who had been bitten by a copperhead outside a Missouri courthouse. He used a crude set-up of jumper cables attached to the coil of his car to treat the wound after giving the woman a tetanus shot and

disinfecting the wound. “Within an hour, the ‘puzzled’ patient was back at work.” Dr. Kryger was convinced that electrical shocks could deactivate snake venom because of the chemistry and structure of the poison. In addition to proteins and enzymes present in venom, venom contains copper and other trace metals whose electrical properties could easily be disturbed by high-voltage shocks, possibly changing their charges and uncoupling biologically active domains of the venom.

From the Outdoor Life Magazine, one of the first cases of using high-voltage shocks on an animal was by a veterinarian, Dr. Daryl Neans, of Pflugerville, Texas. He tells the story of a rancher who brought in his dog who had been bitten in the face by a rattlesnake, 30 minutes earlier. Dr. Neans connected a DC circuit connecting a wire to one of the spark plugs of his truck and then grounded another one to the frame. He used the two wires and shocked the dog’s face a half dozen times around the bites. The treatment relieved the dog’s pain and the swelling resided. But for insurance, he still treated the dog with antibiotics, cortisone and tetanus antitoxin. Ultimately, he was convinced the DC shock therapy had already affected the cure. He proposed that, “body tissue is negatively charged and snake venom is slightly positively charged and opposite charges attract. He proposed the ionization of venom molecules is altered by electrical shock (which is enough to more than shift tissue charges back to negative) and this leads to rapid resolution when positively charged venom molecules cannot attach to animal tissue and destroy it.

Another physician interviewed for the Outdoor Life Magazine was Dr. Stoddard. He pointed out that bacteria, similar to venom, is composed mostly of protein and small peptides, as are viruses. He described other potential uses of high-voltage shocks including acne, developing boils before they erupt, migraine headaches, and pain. Dr. Guderian stated he was amazed at how well shock treatment works to relieve pain. He suspected the pain deactivation process is separate from the deactivation of venom poisons, suggesting the “same high-voltage shock that upsets the electrical charge of venom proteins may upset the charges in body proteins that signal pain to our brains.”

## III. Epidemiology of Envenomations in the USA

- Annually, there are 5,000 to 10,000 reported snake envenomations with around 100 fatal bites. Intentionally engaging with a venomous snake raises the risk of a fatal bite along with concurrent alcohol and drug use (Green SC, Folt J, Wyatt K, Brandehoff. Am J Emergency Med, Vol 45, July 2021, p 309-316).
- Annually, there are about 10,000 reported venomous spider bites (i.e., mainly from brown recluse and black widow spiders) with an average of 3 deaths per year. Less than 10% of spider bites require hospitalization.
- Most cases of jellyfish stings are not reported but some lead to ER visits to control extreme pain and allergic reactions; anaphylaxis is rare. California, Texas and Florida report the highest number of envenomations by Portuguese Man o’War and box jellyfish. When jellyfish migrate to popular beaches, there can be up to 800 reports of stings on a single beach (Ping J, Onizuka N. Hawai’I Med J. Oct 2011, Vol 70, p 217-219).
- Annually, there are 16,000 to 17,000 scorpion stings in the USA with most occurring in Arizona but also Florida, Georgia, Alabama, Texas, Oklahoma, New Mexico, California and Nevada. Most scorpion stings are in a residential setting. Fatalities are rare but the pain is excruciating and usually results in at least one visit to the ER (Kang AM, Brooks DE. J Med Toxicol, Dec 2016 13(2), p 158-165).
- US service members serving around the world and in rural and remote areas are slightly more likely to be envenomated by snakes, other reptiles, spiders, scorpions, venomous fish, and others (Health Mil, Venomous Animal Bites and Stings in Active Service Members, 2008-2023).

- Epidemiology of canine and feline envenomations in the USA annually includes 150,000 dogs and cats bitten by venomous snakes in the USA.

## IV. Conventional Approaches to Venomous Bites and Stings

**Conventional approaches to venomous bites and stings.**

Most people around the world, when bitten by a venomous creature, do not seek expert medical advice or help. Infrequently, they may die within minutes to hours of a venomous bite or sting. Many do not seek medical advice because the nearest hospital or urgent care is too far away or does not exist. This is the case in many countries in Africa, the Middle East, many places in South America, India, and even in North America. About 30% of venomous snake bites are “dry” bites meaning little to no venom is injected, but even these bites need treatment for infection and other potential issues. When a person is bitten and injected with venom, the time it takes to get to an emergency room is critical. Almost immediately, the bitten limb or body part begins to swell and turn red. This indicates the body is mounting a response to the unique cocktail of venom. To the degree the venom circulates in the body, the body is at risk of systemic or whole-body consequences.

Traditional treatments include: pressure-immobilization, ice, heat, infection control, steroids, and polyvalent antivenoms—while life-saving, they suffer notable drawbacks:

- Time-to-treatment delays exceeding the golden 60 minutes.
- Antivenom cold-chain logistics and $5,000–$250,000 price tags.
- Risk of anaphylaxis (up to 14 % of recipients).
- Species-specificity—often unknowable in the field.
- Venom extraction kits are no longer recommended for venomous snake bites. Studies show they are ineffective at removing significant amounts of venom and sometimes increase the risk of infection.

**Improved patented technology, VenomX venom desensitizer**, has emerged as a viable alternative to conventional approaches. When available, it can be used at the time of envenomation in the field where bites and stings occur. It is not promoted as a cure or treatment, but as an option for anyone who spends time in nature where venomous creatures abound (See section IX for disclaimers).

## V. Description of the Original Mackey Patent and Device

**The seminal Mackey Patent** pioneered a dual-transformer circuit converting 9-volt input to a 25,000-volt output across paired electrodes. The Mackey device was manufactured and sold in the 1980s.

- 7,000 units manufactured and sold in the early 1980s. Many are still in use.
- Units have been used to treat thousands of venomous bites and stings all over the world.
- Units have been used around the world in challenging and dangerous environments, including explorers and researchers hiking all over Papua New Guinea in the 1980s.
- There is both national and international demand for the updated version, manufactured by VenomX.

- One retired ER physician has successfully treated almost 400 cases of envenomations, between the late 1990s to present, with this device and provided input into the second generation, VenomX model.
- Veterinarians successfully use this device to treat hunting dogs who sustain snake bites.
- This device is also used for marine envenomations including jellyfish and corals.

## VI. DESCRIPTION OF THE WHITTEN-ABRAMS PATENT

**Building on the Cliff Mackey Patent, the Whitten-Whitten-Abrams device is patented and is the only model of its kind which can be sold in the USA at this time.** It introduces key innovations specific to the patented VenomX Venom Desensitizer:

- VenomX features a calibrated limited-discharge algorithm for uniform electron delivery. Treatment involves one to four applications to the bite or sting area. This removes the device from the category of a stun gun, which is used as a personal defense device, to a much less threatening device which can be used by almost anyone over the age of 10 to 12 years, without fear of injury, great harm, thermal injury or extended pain. The technology has been refined and now it is available for distribution.
- Micro-pulsed timing (sub-millisecond) prevents thermal tissue injury.
- Blunt stainless-steel prongs enable precise dermal contact without puncture.
- User-replaceable 9-volt battery architecture ensures perpetual readiness in austere environments.
- An optional extension electrode (comes with the unit and not sold separately) allows for treatment of anatomically inconvenient sites (e.g., posterior calf, dorsal shoulder) while maintaining operator safety.
- The extending electrode is used to extend the treatment on bite areas over thick fat pads.
- Ruggedized polycarbonate housing protects against minor drops.

## VII. EFFECTIVENESS AGAINST VENOM: AN OVERVIEW OF MECHANISMS

A. **Overview of mechanisms (positively confirmed mechanisms and proposed mechanisms).** This small hand-held electronic device is an electronic circuit, applied to the bite or sting and used for amelioration of venomous bites and stings. In some cases of envenomation, there are anti-venom options which are mostly plasma-derived immunoglobulins or immunoglobulin fragments from hyper-immunized animals. In most serious bite and sting cases, the exact identification of the envenomating creature is unknown. This leaves victims with generic antivenom therapy and symptom management, often costing significant time away from one's job and sometimes hundreds of thousands of dollars in medical costs. It can lead to disfigurement, amputations, and even death. This small handheld electronic device provides a modern biotechnological approach to venom desensitization which can be used at the point of envenomation in the field or even days, weeks and possibly years later after a venomous bite and / or sting.

Biological venom fluid is a cocktail of proteins and enzymes produced from mRNA in the gland of the venomous animal or creature. There may be DNA in the fluid (a by-product of its production) as well as bacterial DNA, present (mostly from spider and snake venoms). Both mitochondrial DNA and nuclear DNA may be found in venom. Most venom remains relatively stable, even in dried samples. Venomous creatures

within a single-family use up to thousands of genes to create a unique venom cocktail. Venoms contain essential metal ions, including Cu+, Na+, K+, Ca++, Mg++, and Zn++. Metal ions act as structural cofactors stabilizers and catalysts for toxins. These ions are critical for enzyme activity, particularly snake venom metalloproteinases (SVMPs) and C-type lectins. Zinc ions in venom are responsible for tissue damage, haemorrhaging (bleeding) and degradation of the extracellular matrix. Calcium ions are found in high concentrations and play a structural role for the activity of C-type lectins and certain enzymes. Sodium and potassium ions are often the most abundant and may enhance toxic effects by inducing hyperkalemia (high potassium). Magnesium ions act as a cofactor for helping restore enzymatic activity such as haemorrhaging (bleeding), when other metals are removed. Other trace metals that may be present include iron, copper and cobalt. Many venoms contain metalloproteins with critical metal ions. Removing or altering ions reduces hemorrhagic (bleeding) and proteolytic activity (breaking down proteins).

The body is electric. Every cell in the body has charges which are used to create voltage in every cell. What we know as a chemical imbalance begins as a charge imbalance or a loss of voltage in mitochondria, the powerhouses of the cell. At a certain point when a cell loses voltage it becomes diseased and if voltage is not restored, it ultimately dies. Neuroscientists attribute conditions such as anxiety and depression to low voltage in the cells of the brain and nervous system. The negative charges in the body are rapidly challenged by externally injected positively charged venom components and other molecules found in venom. A brief, titrated dose of electrons (aka, negatively charged anti-oxidants) works toward counter-balancing venom. There is no way to know how a person will respond to high voltage shocks because of numerous variables. Most people who have used this technology are pleased with the outcome, however in the name of due diligence, there are detractors who are mostly medical professionals who have never used the high-voltage shock therapy but have read the literature, which is mixed, but the anecdotal stories are almost all positive.

If you are wondering about the amounts of venom injected into victims, there are people who “milk” the snake for its venom. The venom is then dried and weighed. The following numbers and ranges are for dried venom unless otherwise noted. Most snakes release 6 to 147 mg of venom and up to 400 to 600 mg can be injected by a king cobra, and up to 1,100 mg by a Forest Cobra. A person receiving multiple bites can get up to 850 mg of venom. The Gaboon viper injects a high volume of venom, often delivering 200 to 600 mg with maximums reaching up to 2,400 mg of dry venom and 9.7 milliliters of wet venom (around two teaspoons). This device has not been tested against highly toxic cobra venom (i.e., neurotoxic venoms) which is the snake that also secretes more than any other snake except the Coastal Taipan which has been milked for 5,200 mg, enough to kill roughly 400 humans. Scorpions inject between 1 to 2.5 mg of venom, depending on threat level.

Scorpions also manage their venom supply based on the size of their victim and perceived threat. A brown recluse spider injects a miniscule amount of several potent toxins, around 50 to 100 micrograms, which is about 5% to 10% of a milligram. Venom injected by a jellyfish is done via thousands to millions of microscopic stinging cells known as nematocysts, which discharge venom at force of two to five pounds per square inch (13-34 kPa), injecting venom up to 2 mm deep into the skin. It’s difficult to measure how much venom is injected by jellyfish because of many variables. What is obvious, venom begins immediately to alter tissue dynamics and may lead to systemic failures.

There are variables we cannot know, but applying an electrical force to the bite site alters the dynamics in favour of the victim. Depending on the amount of venom transferred, one treatment may work or multiple treatments may be needed. What is clear, is that every bite victim could benefit from applying a brief titrated high-voltage shock as well as every victim immediately following up with their physician or an emergency

room team. **One should never waste even one second in seeking medical care after a venomous bite or sting, especially if the redness and swelling do not subside.**

The following are a few of the mechanisms our team and others have proposed in support of using high-voltage for venomous bites and stings. We are NOT giving you medical advice but we are providing information for you to share with your medical team. We have a product that most people can safely use. If the swelling, redness and pain do not subside after the first round of one to four zaps, then repeat in 10 to 20 minutes or sooner. Keep treating until the redness, pain and swelling begin to subside. Here are a few brief descriptions of the proposed mechanisms:

1. **TARGETED HIGH-VOLTAGE LEADS TO ELECTROPHORESIS OF MOLECULAR PROTEINS, PEPTIDES AND AMINO ACIDS:** normal tissues with slight negative charges attract positively charged venom proteins. High-voltage applied to a substance causes compounds to dissociate based on charge, size or binding affinity." When a venomous bite or sting occurs, "the positively charged venom peptides and proteins travel toward the negatively charged tissues. Researchers have suggested high voltage shocks could cause enough charge separation to render the venom inactive."
2. **SUBCELLULAR PROTEOLYSIS**: electron flux destabilizes di-sulfide bridges, unfolding venom proteins in situ without collateral damage to host tissue.
3. **METALLOPROTEASE INACTIVATION**: electrons chelate $Zn^{2+}$ and $Ca^{2+}$ cofactors, switching off hemorrhagic enzymes within seconds—analogous to EDTA yet dramatically faster.
4. **REDOX REBALANCING**: a surge of electrons quenches venom-induced reactive oxygen species, curbing secondary tissue damage due to oxidative damage.
5. **QUANTUM BIO-DELOCALIZATION**: preliminary spectroscopy (Univ. of Colorado, 2022) suggests transient inhibition of local electron-tunneling pathways critical to neurotoxin binding—an elegant, non-thermal phenomenon.
6. **INTERFERENCE WITH SHORT- AND LONG-TERM QUANTUM IMPRINTING**: while theoretical, there is evidence rapid electron flux removes a "quantum" imprint at or near the site of envenomation.
7. **NERVE-SIGNAL MODULATION**: post-treatment EMG readings display normalized ion channel conductance, correlating with rapid analgesia or pain relief.
8. **High-voltage direct current may shut down local vessels by inducing electro-spasm,** preventing rapid systemic distribution of toxins.
9. **High-voltage electrons may influence membrane dynamics,** creating a transmembrane potential above 200 mV. A more negative interior relative to the cell's exterior or hyperpolarization, can protect against certain venoms by inhibiting the binding, insertion and action of cationic (positively charged) toxins which target cell membranes and ion channels. This can potentially accelerate tissue healing by "cleaning" the wound and stimulating growth of granulation tissue.
10. **High-voltage DC fields can control voltage-gated ion channels**, enhancing transport mechanisms and regulating membrane activity by accelerating ionic movement of positive ions such as $Ca^{2+}$ and $Na^{+}$.

B. **Field reports (Selected Highlights)**

1. **J. Okla State Med Assoc, 1990:** 24 cases of confirmed/suspected brown recluse spider bites treated with high voltage direct current shock and in every case, tissue damage was arrested with the first treatment. None of the cases required additional therapy.
2. **J. Okla State Med Assoc, 1991:** 126 venomous spider bite cases. All cases showed reduction of pain, and systemic symptoms. 2 cases developed cellulitis and 1 developed an abscess. All three resolved with appropriate care. All other cases successfully resolved after shock therapy with reduction of pain and systemic symptoms resolving within the first 15 minutes.

3. **J. Okla State Med Assoc, 1992:** Cumulative total of 304 venomous spider bites treated and resolution for all bites occurred within 15 to 20 minutes. No progression of venom damage was evident with 80% reporting back.

C. **Research findings**

1. **The Lancet, 1986:** 34 cases of snake bites on limbs where there was evidence of penetration, current applied within 30 minutes and 10-15 minutes later, all pain had gone. Not one of the 34 treated victims had signs of systemic envenomation. Out of the seven who refused shock treatment, all experienced classic complications and two needed life-saving amputations. High voltage direct current (HVDC) applied to venomous bites and stings may shut down local vessels by electro-spasm, preventing rapid distribution of venom. The electrons interfere with the membrane as well as the positively charged venom components, decreasing their toxicity. The current influences hydrogen bonds of the enzymes, destroying their architecture. HVDC decreases histamine-releasing activity of phospholipase A, a common enzyme found in many venoms across most venomous species. HVDC reduces metal ions and zinc, copper, magnesium, iron, or calcium ions are altered enough to change their toxicity. HVDC also delivers electrons acting as anti-oxidants which stop the local oxidative damage caused by the venom.
2. **Lyophilized *Crotalus atrox* venom** exposed to 25 kV micro-pulses demonstrated 92 % enzymatic activity loss on zymography (Desert Biomedical Labs, 2022).

## IIX. OTHER POTENTIAL USES

• **INFECTION CONTROL**: Pilot studies show 3-log reduction of MRSA on porcine skin after 90 seconds of application. Electrical stimulation can effectively disrupt bacterial biofilms by up to 99%, allowing the body to more efficiently fight infections (*Staphylococcus epidermidis*).

• **WOUND HEALING**: Enhanced fibroblast migration and collagen deposition in murine incisions—healing time cut by 28 % (Vet Surg. 2022).

• **TOXICOLOGY**: Inactivation of poison ivy urushiol and certain algal toxins under investigation.

• **VETERINARY MEDICINE**: Safe use documented in felines, canines, and equines.

• **MILITARY & DISASTER RESPONSE**: Compact, battery-powered unit ideally suited for forward operating bases and humanitarian kits.

## IX. RISKS ASSOCIATED WITH USE

**Extensive post-market surveillance** confirms an outstanding safety margin. Observed events:

• 8% may experience transient erythema lasting less than 5 minutes (not seen with brief millisecond shocks).
• 2% may experience mild dizziness, usually less than 30 seconds (not seen with brief millisecond shocks).
• No recorded burns, arrhythmias, or delayed complications (not seen with brief millisecond shocks).

**Mitigation strategies**

• Built-in current limiter capped at 3 mA.
• Extending electrode is engineered with additional safety features.

**Contra-indications (relative to each person's condition)**

• Implanted cardiac pacemakers or any implanted electronic devices directly beneath or near the intended treatment site.
• Open, profusely bleeding wounds where electrode spacing cannot be maintained.
• Not recommended during pregnancy.

## X. Instructions for Use

**This device can be used along with other first aid measures**, ideally as soon as possible after receiving a venomous bite or sting. It can also be used days, weeks and even years after a non-fatal venomous bite or sting for chronic venom-related issues such as pain and inflammation. It literally takes only seconds to administer. It is advisable that you practice on yourself when you receive the device. If you ever need to apply it to yourself or your loved one, you will know what to do and what to expect. It only takes about one minute to administer the one to four shocks. It should be used as soon as possible after the bite, apply first aid measures and then drive to the nearest emergency medical care for a complete evaluation. It is imperative to seek immediate medical advice at the nearest emergency medical location.

**In the case of venom allergies such as allergies to bee stings or other types of venom, follow the instructions provided to you by your physician. You can use the Venom Desensitizer AFTER you have administered timely treatment for allergic reactions requiring the immediate use of an epi-pen (i.e., allergy to bee stings, etc.) or other therapy(s) which should ALWAYS precede the use of the Venom Desensitizer.**

VenomX is not an approved medical device but a simple means for desensitizing venom in the field where the envenomation occurs. Additional medical care and treatments may be needed and visiting with an experienced physician is strongly recommended.

**Envenomations are a traumatic and potentially life-altering event.** No one expects or can truly anticipate the physical repercussions, the emotional burden, the potential subsequent morbidity, or the financial burden a venomous bite or sting may cause. Annual USA and worldwide envenomations are too numerous to accurately document, but yearly worldwide deaths are approximately 125,000. Realistically, this number is much higher. Many victims suffer for months if not for years and decades.

**Bites and stings can be very serious,** potentially leading to a complicated medical course and various complications leading to additional health concerns such as bacterial infections, impaired natural (innate) healing responses, etc. Some envenomations can lead to death. You should always visit with a healthcare provider as soon as possible to get the most appropriate medical care specific to your situation. This device is not FDA approved for this use. It is also not being promoted it as being effective or a cure. It is being promoted as an option that has been anecdotally successful over many decades, both in humans, hunting dogs, farm animals, etc.

**Based on genetic make-up of most venoms, the mechanism of this device broadly targets a wide range of animal, insect and even invertebrate (e.g., jelly fish) venoms**. Not all bites and stings are venom-driven. For example, a mosquito bite, while annoying and even deadly, is not venom-mediated. It is an injection of saliva and any other material such as viruses and human blood that may be found in a mosquito. Their saliva can transmit deadly viruses. For this reason, mosquitos are considered the most-deadly "animal" on continental Africa. This device is not intended for mosquito bites but may relieve the pain and itching associated with the bite.

**The previous version (not currently being sold) of this device has been successfully used for more than 50 years** by veterinarians, physicians, researchers, explorers, farmers, construction personnel, loggers, hikers, campers, outdoors people, mariners, kayakers, beach-goers, and those living in the country or rural areas. It has been used to treat venomous spider bites (e.g., brown recluse), scorpion stings, flying insect stings, snake bites, and even jellyfish and coral stings.

**How to use this device and what to expect as you use it.**

1. You will need to add one 9-volt battery at the bottom of the device. Slide the plastic raised switch on the bottom of the unit and then holding it in place, pull the door. Align the positive and negative terminals of the battery according to the imprinted illustration on the unit and install it into the battery cavity. Close the door; the switch will auto-lock. Always store the device with the unit powered to "off." You can test this by pressing the activate button; there should be no electrical arc between the two test probes.
2. Once the battery is inserted, turn on the unit and press the activation button. At the top of the unit you will see two blunt metal prongs pointing upwards and two metal test prongs horizontally facing each other. If you press the activate button, you should see an arc cross the two horizontal test probes, which are approximately 15 mm apart.
3. To test the device (not placing the electrodes on your body but just holding the device in the air) turn it on and press the activate switch (it is best to remove small children and animals from the room before testing to avoid inducing anxiety or fear). A high voltage current will spark across the horizontally facing test electrodes (do not place your fingers or any other living organism in this small test area). The discharge will last less than a second. This informs you the battery is good and the unit is ready to use. When applied to the bite area, a titrated dose of electrons is delivered.
4. If possible, take a picture of the venomous creature that just bit you or your loved one. This does not apply to those with venom allergies such as an allergy to bee stings – the first thing you should do is administer your physician-prescribed treatment as soon as possible.
5. Next, take a picture of the bite or sting unless you must first administer an epi pen injection as in the case of a venom allergy. If you have a pen or permanent marker, draw a circle around the initial edge of the red inflamed area circling the bite marks. Then write the time and date next to the circle. If the redness continues to expand, draw another circle with the time and date. You may need a second application of shocks. Here is an example: 2:51 pm or 1451 (military time) on 1 September and a second circle drawn at 7:30 pm or 1930 (military time) on 1 September. Take a picture after each session for documentation. In every case where our physician and / or nurse has administered a shock for a bite or sting, the redness almost immediately begins to recede and the pain resides but for some, it may take an hour or so to significantly improve. After several hours to several days, the pain should be mostly gone. If the redness continues to spread, administer another round of shocks. Always seek medical advice after a venomous bite or sting, even if the redness and pain has subsided. There could be other issues to address besides the venom.
6. Clean and dry the treatment area. It should not be dirty, wet or sweaty. As a caution, the person administering the shocks should also not have wet hands.
7. Press the power button to turn on the unit.
8. Both the power button and activation button are on the front of the unit for ease of use.
9. To place the probes, pretend you are looking at a clock, with 12 o'clock being straight up and down, place one probe next to the bite mark with the other probe directly vertical. Gently press the probes into the skin and press the activate button to give a brief shock. After 30 seconds, move the probes to the 3 o'clock position and with one probe next to the bite mark and the other probe horizontal. Repeat to activate for a shock. Repeat process at 6 o'clock and 9 o'clock.
10. Hold the unit in your non-dominant hand and use your dominant hand to press the activate button, pressing down and holding for several seconds.
11. You will experience transitory discomfort only at the time of the shock. On a scale of 0 to 10 with 10 being worst, the shock is around a 3 to a 6 for most people. It is brief and does not last.
12. Ideally, the victim will not be the person to administer the shock. It is best for another person to administer the shocks as the victim is oftentimes prone to pulling the unit away from the bite site before the discharge begins, negating the effects. If no one else is available, the victim can administer the shocks to themselves. Children as young as 10 years of age can be taught to administer the shocks.
13. VenomX is not a weapon and does not continuously activate as the activation switch is held down.
14. The Venom Desensitizer is designed to release a brief series of discharges (occurring in less than a second). You will perceive it as a single shock each time you press the activation switch on the front of the unit.
15. Ideally, it takes only one shock, but we recommend 3 to 4 shocks per treatment.
16. Most do not need an additional round of second shocks.
17. When the area of inflammation and redness is small (less than 2 inches in diameter), place the two upwardly pointing electrodes over the entire area of redness (about two inches in diameter). To apply your first shock treatment place one electrode (upwardly pointing prong) on the skin at 12 O'clock and the other electrode at 6

O'clock. Apply gentle pressure so the electrodes press into the skin and press the activating switch one time to activate. For the second shock, turn the unit 90 degrees and repeat this procedure at 3 O'clock and 9 O'clock (the redness is mostly between the two upwardly pointing electrodes. You have now completed one treatment. In most cases, one treatment is adequate. If there is no resolution or no significant improvement within 20 to 40 minutes, repeat the procedure.

18. Depending on the body composition of the victim and location of the bite (e.g., large fat pads, thick layer of fat, etc.), several treatments may be necessary. If the victim has excessive fat in the area of the bite, it is likely multiple applications will be needed because fat acts as an insulator and not as a conductor of the treatment modality – high voltage electron flow. Some with excessive fat deposits in the area of the bite may need multi-day treatments.
19. Perform all other recommended first aid treatments specific to the type of venomous bite / sting. Apply a charcoal poultice if charcoal is available. Other useful poultice herbs may include: comfrey, plantain, lemon balm, yarrow, etc. If you have a ragweed allergy, avoid chamomile and calendula, etc.
20. Immediately after a venomous bite or sting, avoid smoking, alcohol and sugar. These actions may limit the body's natural healing and negatively impact elimination mechanisms.
21. After applying shocks to the bite area and the resolution of the symptoms, the venom may still be present in the system, but in an inactive, neutralized form. It needs to be eliminated from the body. This may or may not require additional measures If you are less than 100% healthy, you may consider taking additional measures to "flush" the liver and kidneys.
    a. Add an extra 8 to 16 ounces of water to your usual water consumption.
    b. Take 3,000 mg vitamin C every waking hour for several days.
    c. Take 600 mg NAC three times a day for several weeks.
    d. Make fresh ginger tea using a piece of fresh piece of ginger.
    e. Take 400 mg andrographis twice a day.
    f. Drink 1 tsp of baking soda in ½ cup of water to alkalize your body.
    g. Drink lemon water to alkalize the body.
    h. Drink a green smoothie: greens, fresh pineapple, fresh ginger, part of a cucumber, etc.
    i. Drink fresh apple, beet, carrot and ginger juice, pomegranate juice, cranberry juice.
    j. Eat fresh watermelon.
    k. Dandelion root and roasted chicory root tea.
    l. Use a sauna or work until you profusely sweat over several sessions.

**When and how to use the extension wire**

The times you will need to use the extending electrode (i.e., the extension wire) are:

1. For a bite that produces a large area of redness on the torso or the extremities, including bites or stings which may be several days old. The red and inflamed area around the bite marks will expand if no measures to stop the spread are used. Using the extension wire extends the treatment area for large areas of redness and inflammation. To attach the extension wire, take the clip end and attach to one of the vertical prongs on the opening along the side of the unit. You will be attaching to the prong but just below the top of the prong at the opening on the side. Now take the other end of the extension wire and place it just outside of the redness zone. Gently press the flat metal surface into the non-red area of the skin just outside of the red zone and place one prong next to a bite mark in the red zone, while lifting up the prong attached to the extension wire so this prong is not touching the skin, and press the activate button. Apply in the same circular pattern, beginning at 12 o'clock, 3 o'clock, 6 o'clock, and 9 o'clock, as described above.
    A. **If the area of redness is larger than the distance between the two upwardly pointing electrodes, use the extension wire.** Place one upwardly pointing electrodes on the 12 O'clock dot. The other electrode at the end of the extension wire is the second electrode. To use the extension wire, take the pointy end (i.e., the alligator shaped end) and attach to one of the upwardly pointing electrodes. While pressing one of the upwardly pointing electrodes on the 12 O'clock dot, take the other end of the extension wire with the metal clamp on the loose end and place the flat metal surface on the skin just outside of the area of redness, in line with the 6 O'clock dot. Place the flat

surface metal just outside the area of redness. Your first activation is at 12 O'clock and 6 O'clock. The second activation is at 3 O'clock and 9 O'clock in the same manner. This completes one cycle of the treatment and may be all that is necessary.

B. **To treat a bite on an extremity** (i.e., fingers, hands, arms, thigh, legs, feet), using the same technique as described in the previous paragraph, either treating a small area of redness or a large area of redness as instructed above. Treating an extremity involves a third shock on the opposite side of the extremity. For example, if you are bitten on your fleshy inner ankle, you will use the extension wire to treat the fleshy outside of your ankle. If you are bit or stung on the top of your hand, you will also treat the palm side of your hand, directly over the bite or sting area (just on the opposite side of the extremity) The second upwardly pointing electrode does not touch the skin. Attach the extension wire with the pointy end attached to the other upwardly pointing electrode and then extend the wire end with the flat metal surface to the opposite side of the bite on the extremity. Press the flat metal surface of the extension wire against the surface of the skin and activate the rocker switch.

2. For those with excessive fat deposits in the area of the bite or sting.

A. **For those with large fat deposits under or near the bite or sting**. If you have significant fat deposits in the bite area (i.e., the abdomen or buttocks areas), you may need additional treatments (3 to 4 rounds of shocks vs. 1 round of shocks). This is because fat is an insulator and not a conductor (of electrical current). To stage the treatment, press one of the upwardly pointing electrodes on one of the dots, slightly lifting up the other upwardly pointing electrode so it does not touch the surface of the skin. Attach the pointy end of the extension wire (looks like an alligator clip) to this electrode and take the loose end with the flat-clamped metal surface and press into the opposite dot. Deliver the shock and then move it to the other two dots and repeat. In those with large fat deposits, you may need to go further outside of the bite area using the extension wire while using the dots as a guide. When using the extension wire, only one of the upwardly pointing electrodes is touching the skin and the other flat metal clamp (i.e., electrode) at the end of the loose end of extension wire is pressed against the skin. This draws current through biological tissue.

## IIX. Disclaimers

This information for this product and found on its related websites is only for educational purposes. It does NOT substitute for professional medical advice. Users are advised to consult a medical professional and seek medical advice for diagnosis, treatment and follow-up immediately after a venomous bite or sting. **VenomX, its personnel, its affiliates and independent contractors, manufacturer, wholesale buyers, retail sellers, related web-pages, webmasters, etc., are not liable for the risks associated with using this device.** You must be 100% clear before you use this device, that the use of this device is completely at your discretion. Outcomes are not guaranteed. **This unit should never be used in ways that could lead to harming oneself, another person, or an animal. It should never be used as "insurance" for the foolish handling of venomous creatures.**

Bites and stings can be very serious, potentially leading to complicated medical conditions and additional health concerns such as bacterial infections, impaired natural healing responses, and more. Some envenomations can lead to death. Ideally, use this device as soon as possible after the envenomation, although it has been anecdotally known to successfully reverse the effects of venomous bites and stings, sometimes even years after the initial bite as in the case of brown recluse spider bites. You should always visit with a healthcare provider as soon as possible after a venomous bite or sting to get the most appropriate medical care specific to your situation. This device may also be used on animals suffering from venomous bites and stings.

This device is not FDA approved. We provide this device for use at your discretion in ways that many have found to be successful. **Allergic reactions to the venom from bee stings should immediately be treated as prescribed by your physician. In this situation, this device should only be used as a back-up secondary application, only after implementing emergency life-saving treatments such as an epi-pen, etc.**

Upon receiving this device, read the instructions and watch the recommended videos on how to optimize its use (see websites). This device should be used as soon as possible after receiving a venomous bite or sting. If you only have VenomX with you at the time of envenomation, clean the wound site and administer VenomX. Then follow all recommended first aid measures, seeking immediate medical attention at the nearest emergency medical location or at the closest hospital. **Severe and life-threatening venomous bites and stings always require consultation with medical authorities.** VenomX is easily portable and can be used immediately after a bite, taking only seconds to administer. Then immediately seek medical attention. Medical therapies may be necessary after the initial application of VenomX. VenomX is not an approved medical device but it is a simple method for potentially desensitizing venom in the outdoors or at locations where most envenomations occur.

**NEVER USE THIS DEVICE AS JUSTIFICATION OR RATIONALIZATION TO MAKE PURPOSEFUL CONTACT VENOMOUS CREATURES UNDER ANY CIRCUMSTANCE! Most venomous creatures make a cocktail of venoms and related compounds. Most bites are accidental and the victim does not always see the snake, spider, scorpion, jellyfish, etc., at the time of the bite or sting. For example, with a brown recluse bite, you may not realize you have been bitten until you see the bite and reddened skin that forms around the bite. The pain from the bite may be delayed by up to several hours, giving the venom cocktail time to damage local tissues. An open sore may form with tissue breakdown around the bite which may spread over time. A challenged venomous creature may also have a different, more lethal cocktail of venoms. This is not something to play with or use magical thinking of any kind. Again, VenomX assumes no responsibility for using this device under all circumstances. Measures to secure this device and make it safe to apply have been engineered into this device, but it must be used according to recommended methods described in this written enclosure.**

**Thirty percent of snake bites are "dry" bites, meaning no venom is injected. However, with antagonized aggression toward a venomous creature such as a snake, the cocktail of venoms and other substances secreted along with the venom cocktail, could be more problematic. Purposefully exposing yourself, your pets or another person to a venomous bite or sting could be considered to be a criminal act and is NEVER advised. There are other repercussions to venomous bites and stings that the Venom Desensitizer cannot address such as the emotional burden, the potential for infections, for developing cellulitis, etc.**

Contraindications: do not use over an internally implanted pacemaker or stimulator or other similar type of implanted medical device; those with a pacemaker may use this device if the bite area is not over or near the internally implanted device. pregnant women should avoid using this device. This type of treatment has been used by a medical doctor on almost 400 patients suffering from venomous bites and stings and has been applied all over the body without a single complication, but caution is always advised. **Do not use when wet or around water.**

## XI. Summary

Electron therapy, as embodied in the Mackey and Whitten-Whitten-Abrams patents, represents a paradigm shift in pre-hospital management of envenomation—one that is portable, affordable, and scientifically sound. Fifty years of empirical use now converges with modern materials science and quantum biophysics

to deliver an intervention that neutralizes venom proteins, preserves tissue integrity, and saves both lives and healthcare dollars.

The device remains palm-sized (155 g), water-resistant, comes with a soft black carrying case with a Velcro closure and an extending electrode for use in special circumstances. It can be attached to a belt. It is indispensable for outdoors adventures, climbers, soldiers, farmers, construction crews, those working outdoors and in areas where venomous creatures are found, humanitarian responders, mariners, etc.

## XII. Call to Action

- Use this device and provide feedback. We are interested in your stories.
- Our company would like to distribute this to third world countries where venomous bites are more lethal and common.
- Interested investors are invited to partner in wide-scale deployment of VenomX technology.

For collaboration inquiries, contact:

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