Fingertip Regeneration Integrating Next Generation Stem Cell Therapy into Fingertip Regenerative Medicine

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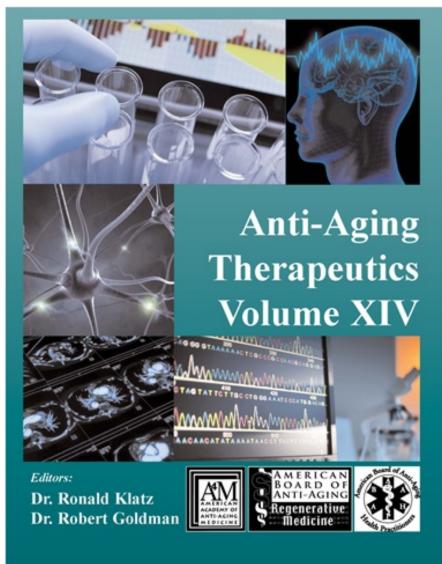
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Innovators in Regenerative Medicine !

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Fingertip Regeneration Stem Cell Activation Therapy

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Integrating Next Generation Stem Cell Therapy into Fingertip Regenerative Medicine

Abstract

One of the most common childhood accidents is injury to a fingertip. The standard surgical procedure is to either suture a skin flap or if the fingertip has been retrieved, to try to attach it and hope for the best. Many times microsurgery is resorted to, to ensure the success and full functionality of the finger. However, in many cases this fails and the digit eventually just falls off. Those that do succeed, however, end up with either a shorter finger, a deformed / missing nail or with a sensory loss of touch.

Fingertip regeneration is a true composite tissue regeneration involving regeneration of bone, cartilage, tendon, blood vessels, skin, nail, cuticle, fingerprint, and half a dozen of specialized sensory nerve endings.

Of great interest are case studies of children and adults whose fingertips have been regenerated after amputation. In these cases, the entire fingernail and fingerprint have been recreated **in as little as 21 days** against the previous reported cases between 1966 and 1995, using silver which required a period of 90 days. These regenerations are accomplished entirely by a non-surgical procedure with a much higher success rate than mainstream surgical procedures.

Such efficient and rapid regeneration is unprecedented. The closest attempt is a previous world record of 90 days for full regeneration using nano silver stem cell activation therapy.^{2–} Pages 155 - 156 This was documented in 1995 by the late Dr. Robert O. Becker at the State University of New York, and recorded in his US Patent 5,814,094.³

A fingernail in the human body normally grows at a steady pace which requires five to six months to replace its entire length.⁴ Regenerating a fingernail in just 30 days or less, demonstrates the accelerated healing and regenerative capabilities of nano silver induced stem cell activation therapy. It also demonstrates improvements in stem cell activation techniques and fingertip regeneration techniques during the past few years which have made such incredible results a reality.

The ability of nano silver stem cell activators to dedifferentiate mature cells gives us the ability to produce more stem cells and consequently more progenitor cells than the body does under normal circumstances.⁵ In addition, this ability of nano silver to stimulate all pre-existing stem cells to enhance the rate of production of progenitor cells results in an eventual regeneration of the fingertip in an unbelievably short span of time of 30 days or less.⁶ This is roughly five times faster than the unaided body really can achieve.

This clearly demonstrates an approximately five-fold accelerated healing and regenerative capabilities of nano silver stem cell activation.

The fingertip regeneration process occurs only if the wound is left uncovered by a flap of skin.^{2 – Pages 156} This concept is quite contradictory to the standard surgical procedure in mainstream medicine. This is a major deviation in the thinking process for present day surgeons who would prefer to react to such situations by resorting to simple stitches or microsurgical techniques.

Summary

1. *In vivo* stem cell activation using nano silver not only helps to dedifferentiate mature cells but also helps to provide larger number of progenitor cells from existing stem cells, including those obtained through dedifferentiation, ensuring highly accelerated healing and regeneration.

2. *In vivo* stem cell activation has vastly reduced the dependence on use of very expensive harvested stem cells.

3. Regeneration of fingertips of children and adults appears feasible even if attempted long after the initial injury.

REFERENCES

- 1. Illingworth CM. Trapped fingers and amputated finger tips in children. J Pediatr Surg. 1974;9:853-858.
- 2. Becker RO. *The Body Electric: Electromagentism and the Foundation of Life*. New York, NY: William Morrow & Company; 1985.
- 3. Becker RO, Flick AB, Becker AJ. Iontopheretic system for stimulation of tissue healing and regeneration. United States patent 5814094. 1996, March 28.
- 4. Babcock MJ. Methods for measuring fingernail growth rates in nutritional studies. J *Nutr.* 1955;55:323-336.
- 5. Becker RO. Induced dedifferentiation: a possible alternative to embryonic stem cell transplants. *NeuroRehabilitation*. 2002;17:23-31.
- 6. Becker RO. Effects of electrically generated silver ions on human cells and wound healing. *Electro and Magnetobiology*. 2000;19:1-19.

KEYWORDS: stem cells, regenerative medicine, fingertip regeneration, fingertip regrowth, finger regeneration, limb regeneration, stem cell activation, stem cell therapy, nano silver, stem cell gel, fingertip gel, finger / limb gel.

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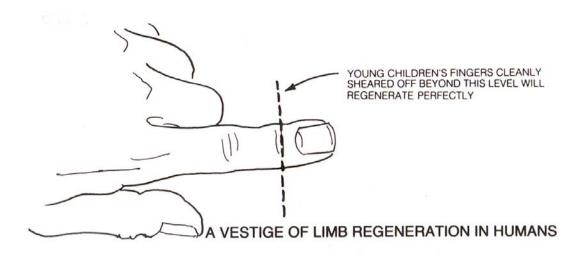
Fingertip Regeneration Next Generation Stem Cell Therapy Pramod Vora, Holistic Educator & Anti-Aging Health Counselor to Doctors International Faculty Member Anti-Aging Medicine E-mail: consult2008@space-age.com published in A4M Textbook of Anti-Aging Medicine, Spring 2011, Volume XIV

Integrating Next Generation Stem Cell Therapy Into Fingertip Regenerative Medicine

Prior Art

The amputation of a fingertip is one of the most common childhood injuries. *The standard treatment is to smooth the exposed bone and stitch the skin closed*, or, if the digit has been retrieved and was cleanly cut, to try to reattach it by microsurgery. *The sad fact is that even the most painstaking surgery gives less than optimal results*. The nail is usually deformed or missing, and the finger is short and often painful, with a diminished or absent sense of touch.

In the early 1970s, at the emergency room of Sheffield Children's Hospital in England, a child with such an injury benefited from a clerical mix-up. The attending physician dressed the wound, but the customary referral to a surgeon for closure was never made. When the error was caught a few days later, surgeon Cynthia Illingworth noticed that the fingertip was regenerating itself.



Spurred on by her discovery, Illingworth decided to treat other children the same way. Instead of suturing up badly damaged or amputated fingertips, Dr. Illingworth and her colleagues would simply clean the damaged finger, hold it in position with a sterile splint strip, cover it with a dressing and let nature take its course. By 1974, Illingworth had documented several hundred similar cases.¹

Several other studies have confirmed Illingworth's findings that children *under the age of 11 are able to regrow their fingertips* providing that the finger is cleanly sheared off (the wound must not be covered by a flap of skin) beyond the outermost crease of the outermost joint. If the finger is damaged below this point regeneration does not take place.

In his book *The Body Electric*, Dr. Robert Becker writes of the confidence that some pediatric surgeons hold in fingertip regeneration in children: "Some pediatric surgeons, like Michael Bleicher of New York's Mount Sinai Hospital, have become so confident in the infallibility of the process that they'll finish amputating a fingertip that's just hanging by a bit of flesh. A lost one will regenerate as good as new, whereas one that has merely been mutilated will heal as a stump or with heavy scarring."²

Recent Research

Post-Amputation Fingertip Regeneration

"Fingertip regrowth is a true composite tissue regeneration involving regeneration of bone, cartilage, tendon, blood vessels, skin, nail, cuticle, fingerprint, and half a dozen of specialized sensory nerve endings."

"Of great interest is the present case study of "*Fingertip Regrowth After Amputation.*" In this case, the entire fingernail and fingerprint have been recreated **in only 30 days** compared to the previous documented case in 1995, using silver which required a period of 90 days. This is accomplished entirely by a non-surgical procedure with a much higher success rate than mainstream surgical procedures."

"Such an efficient and rapid regeneration is unprecedented. The closest attempt is a previous world record of 90 days for full regrowth using silver.^{2 – Pages 155 - 156} This is set in 1995 by the late Dr. Robert O. Becker at the State University of New York, and recorded in US Patent 5,814,094."³

"A fingernail in the human body normally grows at a steady pace which requires five to six months to replace its entire length.⁴ If the same length can be regenerated in only a 30 day period, it demonstrates the accelerated healing and regenerative capabilities of nano silver induced stem cell activation therapy. It also demonstrates improvements in activation techniques during the past few years which have made such incredible results a reality."

"The ability of nano silver stem cell activators to dedifferentiate mature cells gives us the ability to produce more stem cells and consequently more progenitor cells than the body does under normal circumstances.⁵ In addition, this ability of nano silver to stimulate all preexisting stem cells to enhance the rate of production of progenitor cells results in an eventual regeneration of the fingertip in an unbelievably short span of time of 30 days.⁶ This is roughly 5-times faster than the unaided body really can achieve. *This clearly demonstrates*

that nano silver stem cell activation can accelerate the healing and regenerative capabilities of the body by approximately 5-fold."

"It is important to stress that the fingertip regeneration process occurs only if the wound is left uncovered by a flap of skin.^{2 - Page 156} This is quite contradictory to the standard surgical procedure in mainstream medicine. This is a major deviation in the thinking process for present day surgeons who would prefer to react to such situations by resorting to simple stitches or microsurgical techniques."

"Such cases of fingertip regrowth strongly suggests that the human body does have the ability to regenerate body parts given the right stimulus."

"Future developments in the application of stem cell activation could conceivably extend to making limb regeneration a reality."

Case Study 1 – Fingertip Regeneration with Nano Silver Induced Stem Cell Activation

"A seven year old boy suffered fingertip injury to the right hand middle finger. The amputated piece was sutured back as a free composite graft by the general surgeon. Inspection on the fifth day showed that the fingertip was totally nonviable, but the patient was not cooperative and did not allow the graft to be removed.

The patient was treated from the third day onwards with topical nano silver stem cell activators over the mentioned site of injury without removal of the graft."

"Within 2 weeks of topical application of nano silver stem cell activators, the free composite graft finally fell off on its own."

Figure 1 illustrates that *complete regeneration of the entire fingertip occurred in 4 weeks without any permanent deformity.* Figure 2 shows the boys finger 6 months later.

Extract reproduced from: Nano Silver Induced Stem Cell Activation published in *The Anti-Aging Therapeutics*, Volume 13, Textbook Series, Spring 2010, by A4M - The American Academy of Anti-Aging Medicine.



Fingertip Regeneration With Nano Silver Induced Stem Cell Activation – Case Study - 1

Courtesy: Dr. Neeta Patel, M.S., M.Ch. (Plastic) Plastic & Reconstructive Surgeon, Member, ISAPS

Revisiting This Fingertip six Months Later



11/11/2010



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Fingertip Regeneration – Case Study 1 Revisited No scar or deformity seen six months later

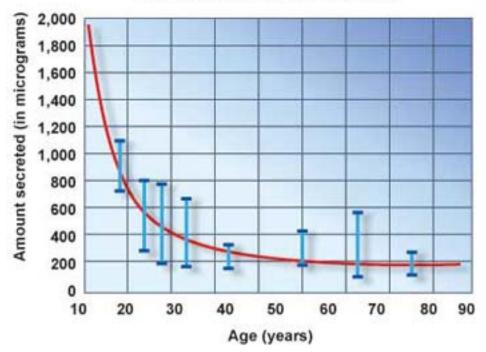
Courtesy: Dr. Neeta Patel, M.S., M.Ch. (Plastic) Plastic & Reconstructive Surgeon, Member, ISAPS

Will this child remember when he becomes an adult, which fingertip on which hand was accidentally amputated? Six months later, there is no trace of a scar or deformity left to indicate his fingertip was accidentally amputated. The nightmare is really over!

New Insight

Methods of improving the results achieved so far and the scope of the application of stem cell activation therapy to fingertip regeneration

One of the most important differences between an eleven year old child and a fully grown adult, as far as regenerative medicine is concerned, is the levels of growth hormones in their bodies. Growth hormone (GH) levels rapidly decline after the age of 11 years.



Growth Hormone Decline

In order to improve the scope of application for the fingertip regenerative techniques discussed above, and to take them past the earlier age barrier of 11 years (proposed by the late Dr. Robert O. Becker, M.D. in his book The Body Electric, 1985), one must find the means to naturally increase and maintain growth hormone levels in the human body during the first few critical weeks or months when the regeneration of the fingertip is to occur. Amino acids such as arginine are known to cause the pituitary gland to naturally secrete growth hormones at an enhanced rate.

Human growth hormones (HGH) regulate more than just growth. Tissue repair, healing, cell replacement, organ health, bone strength, brain function, enzyme production, as well as the health of nails, hair, and skin all require adequate amounts of HGH.

Incorporating the use of growth hormone precursors with stem cell activation therapy, thereby stimulating the pituitary gland to increase growth hormone production, will ensure two important things. Firstly, it will result in a much higher efficiency in fingertip

regeneration. Secondly, it will also expand the scope of this regenerative science to healthy adults of any age and perhaps lay the foundation to regenerating other body parts as well.

Administration of multivitamin / mineral supplements to increase the availability of nutrition in the body will also help to improve the overall success rate of adult and child regenerated fingertips.

What should you do in case of an old injured fingertip covered with a skin flap?

Prior Research - 1923 to 1946 Prior to the research of Dr. Robert O. Becker, M.D., Orthopedic Surgeon

Early research on salamanders revealed that **sewing full-thickness skin grafts** over the stumps of amputated salamander legs **prevented regeneration** of the limbs. However, the researchers also found that **regeneration would occur if there was a tiny gap left in the skin graft.**

This discovery led S Meryl Rose, an anatomy instructor at Smith College, to predict that the **rapid formation of full-thickness skin** over the stumps of adult frogs' legs might be what **prevented them from regenerating.** Rose decided to investigate her theory by dipping the frogs' wounds in saturated salt solution several times a day to prevent the dermis from growing over the stump. Results showed that preventing the dermis from growing over the stump did indeed cause the frogs to begin regenerating their lost limbs. Indeed, the majority of the frogs whose forelimbs had been amputated between the elbow and wrist replaced some of what they had lost. Furthermore, **several regrew well-formed wrist joints, and a few even began to produce one new finger.**

In 1946, Lev Vladimirovich Polezhaev a young Russian biologist working in London began a series of experiments investigating limb regeneration in adult frogs. Polezhaev first showed that **pricking the limb stumps with a needle each day prevented dermal regrowth and stimulated limb regeneration.** He then went on to discover that a wide variety of irritants produced the same effect in frogs, although none of them worked in mammals, and that Rose's technique of dipping the amputated limb in salt worked by irritation, not by preventing dermal regrowth. His experiments also suggested that **making the injury worse may improve regeneration.**

New Insight

Methods of improving the results achieved so far and the scope of the application of stem cell activation therapy to fingertip regeneration

By combining stem cell activation therapy with the strategy to enhance the release of growth hormones in the body; creating a gap in the dermis; and by daily pricking the fingertip, one will help to improve the chances of success in adult fingertip regeneration in mammals even if the amputation has occurred years earlier.

Each prick creates a fresh point of injury which signals the body to send extra stem cells to the site and commence the regeneration process. Multiple pricks can expand the area of regeneration and cause a higher concentration of the body's own stem cells at that location. Topical application of nano silver stem cell activation gel can not only cause dedifferentiation of mature cells into fresh stem cells but can also cause enhanced production of progenitor cells.^{5, 6} This will regularly drive the concentration of highly activated stem cells even higher with each daily application of the stem cell activation gel to the freshly pricked area.

The earlier barriers proposed by the late Dr. Robert O. Becker, M.D., in his book <u>The</u> <u>Body Electric</u>, 1985, that it will not work in mammals and adults, are now being gradually challenged as more adult cases have begun showing encouraging results.

Case Study 2 – Adult Fingertip Regeneration with Stem Cell Activation Therapy

A 23 year old female worker in a factory suffered an injury to the index finger of her right hand on January 28, 2011. Our first approach was to treat the wound with nano silver activated stem cell gel and to verify if the limitations experienced by the late Dr. Robert O. Becker, M.D., in the treatment of adults were applicable to this particular case. Treatment was started on February 02, 2011. After seeing very little progress at the end of six weeks, it was decided that the limitations experienced by Dr. Becker were equally applicable with our techniques of *in vivo* activating stem cells.

At that stage, and on March 16, 2011, six week later, we began implementing the technique of daily pricking of the finger to see if this strategy when combined with stem cell activation therapy would yield any better results. We were at this stage working on a skin covered fingertip roughly seven weeks from the date of the initial injury. A review of the situation after only twelve days, showed tremendous progress which had not been seen in the previous six weeks.

We then added growth hormone precursors and multivitamin / mineral supplements into the treatment to ensure quicker results. Another nine days later, we again saw a quantum jump in the regeneration of the fingertip.

Two weeks later, we decided to stop the daily "pricking" procedure but to continue with topical stem cell activation therapy and with growth hormone enhancing therapy, and let nature takes it own course to bring the finger tip to its final perfection.



Adult Fingertip Regeneration – Case Study 2 Treated With Stem Cell Activation Therapy & Growth Hormone Precursors

Courtesy: Dr. Neeta Patel, M.S., M.Ch. (Plastic) Plastic & Reconstructive Surgeon, Member, ISAPS What we can safely conclude, is that it would be advisable to add nutritional growth hormone enhancing therapy and nutritional supplements on day one of the stem cell activation therapy to enhance regeneration. It would also be advisable to add "pricking" at an appropriate time much earlier on in the treatment to ensure that the body continues to rely on its inherent regeneration capabilities. It seems possible that the total of ten weeks of treatment time seen in this case could easily be reduced to four weeks in future adult fingertip regeneration cases. *The active period of treatment in this adult case has actually been from March 16th to April 05th, 2011, thereby totaling 21 days.* This case can also be considered as a regeneration of an old injury fingertip as the active form of treatment was started only after six week. This would again be a considerable improvement over the 90 day period taken in 1995 by the late Dr. Robert O. Becker, M.D. for regenerating the fingertip of a 21 year old male, as reported in his US Patent No. 5,814,094.³

Case Study 3 – Regeneration of Adult Fingertip With Full Skin Coverage

A 21 year old college student suffered an accident while riding her motorcycle. Her right hand and palm suffered maximum damage which required extensive suturing.

The middle finger suffered extensive damage with total loss of nail. The ring finger showed full thickness loss of skin and soft tissue with exposed extensor tendon with fractured and crushed distal phalanx, also with total loss of nail and nail bed. An area of composite tissue deficit was created in the ring fingertip as a result of the accidental fall from her bike.

Stem cell activation therapy in the form of a topical gel was immediately started on October 23, 2010. *At the end of 23 days the middle finger showed excellent regeneration and was almost completed covered by a full length nail.* The results achieved in this adult case are consistent with the results achieved in the case of a seven year old child and a 23 year old girl as discussed earlier. This strongly suggests that regeneration is entirely possible in 30 days with the current state of art achieved so far.

However, the ring finger which had more damage did not show much progress even in terms of regeneration of tissue loss. Regeneration of the ring finger seemed an uphill battle.

At this stage, further treatment was stopped by the patient.

Four months later, on March 15, 2011, the patient returned with more determination. There was hardly any progress to show in the case of the ring finger, which was now completely covered with skin. It was then decided to adopt the "pricking" procedure outlined above to recommence the body's inherent regeneration process. At the same time, we restarted the topical application of the stem cell activation gel.

In about 10 days the area of deficit began to fill up with fresh tissue, but no nail could be seen emerging as the nail bed was still not completely formed. At this stage, it was decided to also introduce the growth hormone enhancing therapy into the equation. Four weeks later the finger took on a healthy look but no nail was in sight.



03/28/2011+ GH

03/30/2011

04/11/2011

05/24/2011

Fingertip Regeneration – Case Study 3 Regeneration of Adult Fingertip With Full Skin Coverage

Courtesy: Dr. Neeta Patel, M.S., M.Ch. (Plastic) Plastic & Reconstructive Surgeon, Member, ISAPS

What was remarkable was that both the middle finger and the ring finger, now looked years younger than the other fingers. They had literally lost all the wrinkle lines normally seen in other fingers and the skin began looking like that of a child.

What we perhaps see at this stage, four weeks after recommencing the regeneration process, are two small vertical lines emerging from either side of the nail bed. The nail bed still does not appear to be completely developed due to the severe mutilation of the finger.

An examination of the finger ten weeks after recommencing the regeneration process shows the emergence of a nail plate from the nail root. The nail bed is still not perfectly developed and it is anticipated that the next 4 weeks should show some exciting results.

Updates to this case will be released from time to time when available.

Summary

1. *In vivo* stem cell activation using nano silver not only helps to dedifferentiate mature cells but also helps to provide larger number of progenitor cells from existing stem cells, including those obtained through dedifferentiation, ensuring highly accelerated healing and regeneration.

2. *In vivo* stem cell activation has vastly reduced the dependence on use of very expensive harvested stem cells.

3. Regeneration of fingertips of children and adults appears feasible even if attempted long after the initial injury.

4. Such cases of regeneration of fingertips of children and adults strongly suggest that the human body does have the ability to regenerate body parts given the right stimulus.

5. Future developments in the application of stem cell activation and fingertip regeneration techniques could conceivably extend to making limb regeneration a reality.

Conclusions

The techniques described above could also be possibly used to regenerate fingertips previously damaged and surgically treated in the past. The treatment being so very simple and risk free, it does not require complex medical skills or equipment to implement. It may be possible to have a registered nurse administer the daily treatment under the supervision and guidance of a family physician.

It would be worth pursuing the procedure outlined in these cases to begin collection of more clinical data to further develop the science of regenerating fingertips. This might lead to furthering our understanding and development of protocols for the regeneration of whole fingers, limbs and other body parts as well.

We request readers to come forward and refer more such challenging cases to us for furthering our knowledge in this groundbreaking research. This will enable rapid progress in the field of regenerative medicine for the benefit of mankind.

ABOUT THE AUTHOR

Pramod Vora is a holistic educator, a health counselor, and an international faculty member for anti-aging medicine.

His research in the use of nano silver, useful in the dedifferentiation of mature cells into activated stem cells, has been integrated into many fields of regenerative medicine, making it affordable for all. His landmark research in stem cell activation therapy has enabled fingertip regeneration after amputation in a record period of only 21 days.

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REFERENCES

- 1. Illingworth CM. Trapped fingers and amputated finger tips in children. J Pediatr Surg. 1974;9:853-858.
- 2. Becker RO. *The Body Electric: Electromagentism and the Foundation of Life*. New York, NY: William Morrow & Company; 1985.
- 3. Becker RO, Flick AB, Becker AJ. Iontopheretic system for stimulation of tissue healing and regeneration. United States patent 5814094. 1996, March 28.
- 4. Babcock MJ. Methods for measuring fingernail growth rates in nutritional studies. J *Nutr.* 1955;55:323-336.
- 5. Becker RO. Induced dedifferentiation: a possible alternative to embryonic stem cell transplants. *NeuroRehabilitation*. 2002;17:23-31.
- 6. Becker RO. Effects of electrically generated silver ions on human cells and wound healing. *Electro and Magnetobiology*. 2000;19:1-19.

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Innovators in Regenerative Medicine!

Appendix I

(Not a part of the published paper)

Expert Comments & Encouragement:

The finger (tip regrowth) is most impressive you should submit this for publication in next issue of Textbook of Anti-aging Medicine. Dr. Ron Klatz, President, A4M – The American Academy of Anti-Aging Medicine

First of all I should tell you that my old doctor patient made excellent strides on her 18 month ulcer while I was in India by using the Environ lowest grade vitamin A cream. However, within a day of my return I started her on the stem cell gel and the progress has been amazing. Dr. Des Fernandes, Plastic Surgeon

Cape Town, South Africa

First of all thank you very much for sending me this information. The results are excellent. I'll look at the feasibility of using Stem Cell Activation in my practice/set up. Can you send me protocol on the same. With regards, Dr. Balvant Arora, M.D. Plastic Surgeon

The stem cell gel is also working well in a sternal dehiscence case. The stem cell gel showed good result in the tummy tuck wound dehiscence. Congratulations on regrowth of finger tip using stem cell activation. Best wishes and warm regards Dr. Ashish Davalbhakta MBBS.,MS., MCh(Plastic) FRCS (UK) Consultant Aesthetic Plastic Surgeon

It is truly a remarkable achievement. Thanks for sharing this information with me and congratulation to you. Dr. Resmi Jimmy Nair, M.B.B.S.

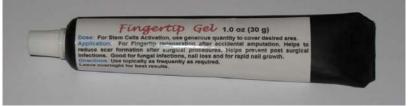
It is a great achievement Dr. Avinash Karode

I'm so inspired by reading Dr. Vora's website: <u>http://www.space-age.com/aging-index.html</u> that I curiously ponder the use of cayenne pepper as an alternative debridement, rather than pin pricking, for awakening old wounds -- this reawakening being a substitute for all of the tests performed by Dr. Becker who usually had a precondition of a fresh wound on his test subjects to act as its own debridement. The thoroughness of Dr. Vora's photo documentation is overwhelmingly convincing that both he and Dr. Becker are onto something nothing short of a miracle by our presumptively mediocre standards!

Vinyasi Qx (Pronounced: veen-YAH-see)

July 15, 2015

FINGERTIP GEL



(With Stem Cell Activators)

For fingertip regeneration after accidental amputation. Activated stem cells help to rapidly regenerate amputated fingertips. Good for fungal infections, nail loss and rapid nail growth. Made from Aloe Vera, the Gel is totally natural, and does not contain any harsh or toxic chemicals. Prevents infections and reduces scaring. For progressive pictures of Finger Tip Regrowth after amputation. [Photo Gallery pdf file]. For more info on use and application of Fingertip Gel click here.

Main Ingredients: Aloe Vera Gel and Nano Silver. Dosage: Apply liberally to cover he desired area. Apply as frequently as required and leave on overnight for best results . Packing: 1.0 oz. (30 gram) tube Fingertip Gel ------ <u>To Order / Consult Click Here</u> 1.0 oz. (30 gram) tube In case of accidental amputation, please do not cover the wound with a skin graft or try to stuture the fingertip shut. In case of children eleven years and older and adults it is highly recommended to use this gel in conjunction with: HGH Pro (Forte) to enhance the production of Growth Hormones in the body, StemXL (to increase production of stem cells in the body) and other supporting nutrients to enhance the pace of repair work and regeneration in the body. For more info and progressive pictures of child and adult fingertip regeneration [pdf file]

Fingertip Regeneration Gel

Contains: (Totally Natural – Chemical Free, does not contain Propylene Glycol)Aloe Vera GelNano Silver32 ppm / 100 ppmGlycerine15% w/w

Indications:

Fingertip Gel us used for the regeneration of fingertips after accidental amputation / accidents and for accelerated finger and toe nail growth. Very Important: Fingertips regenerate only if the wound is not covered with a flap of skin.

Directions for Use:

- 1) Remove all dressing / ointment / previous bandages if any;
- 2) Bathe / rinse the wound with soap and water;
- Apply a local anesthetic gel such as Toplap, Emla or Tetralid, over the area to be treated, at least 40 minutes prior to commencing the procedure for regeneration;

(TOPICAINE 4% - Lidocaine Gel 4 Oz (113 g) Topical **Anesthetic Gel** with Lidocaine 4%), EMLA - 2.5% each of lidocaine/prilocaine,

- 4) Next, using a hypodermic needle and placing a drop of Fingertip Regeneration Gel over the tip of the finger make several pricks through the coat of the gel into the skin pulp;
- 5) Allow the area concerned to bleed / start bleeding;
- 6) Now cover the treated area with a sterile gauze and tape it / bandage the finger;
- 7) Shake the Nano Silver Spray bottle and spray over the gauge until it is soaked / moist;
- 8) Keep the gauze / dressing moist by spraying nano silver two more times a day at 6 to 8 hour intervals;
- 9) Repeat above procedure daily for 90 days or till satisfactory results are achieved. Pricking should be restricted to once or twice a week after the first week of daily pricking. This will enable the regeneration to occur more effectively; and
- 10) Do not use saline, cetavlon, betadine, hydrogen peroxide or any other agent normally used in conventional wound toilet. Strictly adhere to the instructions for best results.

Contraindications:

There are no absolute contraindications but its utility is limited when used heavily exudating wounds or wound covered with thick eschar.

Storage:

Store under Refrigeration (4° C. to 8.0° C. / 38° F. to 48° F.) to maintain full potency and extend shelf life.

Note:

Fingertip regeneration cannot overcome the deficits of unrelieved malnutrition, pressure compromised blood flow. Interventions must be instituted to reduce / relieve these factors that impair regeneration in order to achieve optimum results.

References: (Case Studies)

http://www.space-age.com/FingertipRegeneration.pdf http://www.space-age.com/NanoSilverStemCellActivation/pdf

TOENAIL GEL



(With Stem Cell Activators)

For toenail regeneration after accidental amputation. Activated stem cells help to rapidly regenerate amputated fingertips. Good for fungal infections, nail loss and rapid nail growth. Made from Aloe Vera, the Gel is totally natural, and does not contain any harsh or toxic chemicals. Prevents infections and reduces scaring. For progressive pictures of Finger Tip Regrowth after amputation. [Photo Gallery pdf file]. For more info on use and application of Fingertip / Toenail Gel click here.

Main Ingredients: Aloe Vera Gel and Nano Silver.

Dosage: Apply liberally to cover he desired area. Apply as frequently as required and leave on overnight for best results .

Packing: 1.0 oz. (30 gram) tube

Toenail Gel ------ To Order / Consult Click Here

1.0 oz. (30 gram) tube

In case of accidental amputation, please do not cover the wound with a skin graft or try to stuture the toenail shut. In case of children eleven years and older and adults it is highly recommended to use this gel in conjunction with: HGH Pro (Forte) to enhance the production of Growth Hormones in the body, StemXL (to increase production of stem cells in the body) and other supporting nutrients to enhance the pace of repair work and regeneration in the body. For more info and progressive pictures of child and adult fingertip regeneration [pdf file]

STEM CELL GEL



(With Stem Cell Activators)

Gel with nano silver induced stem cell activators help to dedifferentiate mature cells and also increase production of Progenitor Cells to cause rapid healing of non healing wounds, ulcers, burns, gangrene. Helps treat diabetic foot reducing greatly the risk of amputation. Made from Aloe Vera, the Gel is totally natural, and does not contain any harsh or toxic chemicals. Prevents post surgical infections and reduces scaring and wound dehiscence. [Check Photo Gallery pdf file]. Used for Finger Tip Regrowth after amputation. [Photo Gallery pdf file] and Sternal Dehiscence.

Note:

It is highly recommended to use this gel in conjunction with other supporting nutrients to enhance the pace of repair work and regeneration in the body. For more info on use and application of Stem Cell Gel click here.

Main Ingredients: Aloe Vera Gel and Nano Silver. Dosage: Apply liberally to cover he desired area. Apply as frequently as required and leave on overnight for best results . Packing: 1.0 oz. (30 gram) tube and 2.0 oz. (60 gram) tube Stem Cell Gel ------- <u>To Order / Consult Click Here</u> 1.0 oz. (30 gram) tube 2.0 oz. (60 gram) tube Highly recommend for non healing wounds, ulcers, gangrene and diabetic foot. Reduces risk of amputation.

Stem Cell Gel

Contains: (Totally Natural – Chemical Free, does not contain Propylene Glycol)

Aloe Vera Gel Nano Silver Glycerine

32 ppm / 100 ppm 15% w/w

Indications:

Stem Cell Gel us used for the management of wounds including Pressure Ulcers, Venous Ulcers, Dermal lesions, Second degree burns, Donor sites.

Directions for Use:

- 11) Remove all dressing / ointment / previous bandages if any;
- 12) Bathe / rinse the wound with soap and water;
- 13) Apply a thin coat of gel on the surface of the wound / area of concern;
- 14) Cover it with a gauze / dressing and gently soak the gauze with nano silver spray until moist.
- 15) Now apply a dry piece of gauze to cover the wound with bandage or adhesive tape (plaster).
- 16) Repeat only spraying the wound with nano silver two more times a day at 6 to 8 hour intervals;
- 17) Repeat above procedure daily till satisfactory results are achieved.
- 18) Do not use saline , cetavlon, betadine, hydrogen peroxide or any other agent normally used in conventional wound toilet. Strictly adhere to the instructions for best results

Contraindications:

There are no absolute contraindications but its utility is limited when used heavily exudating wounds or wound covered with thick eschar.

Storage:

Store under Refrigeration (4° C. to 8.0° C. / 38° F. to 48° F.) to maintain full potency and extend shelf life.

Note:

Local wound care cannot overcome the deficits of unrelieved malnutrition, pressure compromised blood flow. Interventions must be instituted to reduce / relieve these factors that impair wound healing in order to achieve optimum results.

References: (Case Studies)

http://www.space-age.com/NanoSilverStemCellActivation.pdf http://www.space-age.com/FingertipRegeneration.pdf

DIABETIC FOOT GEL



(With Stem Cell Activators for Non-healing Wounds, Ulcers and prevention of Gangrene)

Gel has nano silver stem cell activators to help heal wound / ulcer healing on diabetic foot. Nano Silver Stem Cell activators are delivered through topical applications. Made from Aloe Vera, the Gel is totally natural, and does not contain any harsh or toxic chemicals.

Main Ingredients: Aloe Vera Gel and Nano Silver.

Dosage: Apply liberally to cover he desired area morning and at bedtime after bath. Leave on overnight for best results .

Form: 2.0 oz. (60 gram) tube - typically good for two months supply.

Diabetic Gel ------ To Order / Consult Click Here

2.0 oz. (60 gram) tube

Highly recommend for those with wounds and ulcer due to Diabetes.

WOUNDS & ULCERS GEL



(With Stem Cell Activators for difficult to heal Wounds and Ulcers including Snake / Scorpion and Spider Bites)

Gel has nano silver stem cell activators to help difficult to heal wound / ulcer and snake, scorpion and spider bites. Nano Silver Stem Cell activators are delivered through topical applications. Made from Aloe Vera, the Gel is totally natural, and does not contain any harsh or toxic chemicals.

Main Ingredients: Aloe Vera Gel and Nano Silver.

Dosage: Apply liberally to cover he desired area morning and at bedtime after bath. Leave on overnight for best results .

Form: 2.0 oz. (60 gram) tube - typically good for two months supply.

Pigmentation Gel ------ <u>To Order / Consult Click Here</u> 2.0 oz. (60 gram) tube

Highly recommend for those with chronic non healing wounds, ulcers and snake / scropion and spider bites.

Other Related Products for Stem Cell Regeneration

HGH PRO (Forte)			
Precursor To Human Growth Hormone (HGH)			
Capsules To Be Taken Orally			
Precursor to Human Growth Hormone (HGH). Helps raise IGF-1 (Somatomedin – C) / Serum HGH values when taken over a prolonged period (typically 12 weeks). HGH is known to aid in the repair and regeneration processes in the body. [For more info on HGH Click here].			
Ingredients per Serving: L-Arginine - 200mg + L-Glutamine - 150mg + L- Lysine - 150mg + L-Ornithine - 150mg + Niacin - 10mg + Hydrocotyl Asiatica - 250mg + Macuna Pruriens (L-Dopa) - 350mg + Tribulus Terrestris - 150mg + Withania Somnifera - 75mg + Zingiber Officinale - 85mg Serving Size: 2 Capsules of 1770mg			
IGH Pro (Forte) To Order / Consult Click Here 60 capsules) To Order / Consult Click Here			
30 days supply			
HGH Pro (Forte) (120 capsules) 60 days supply	To Order / Consult Click Here		
HGH Pro (Forte)			
(240 capsules)	To Order / Consult Click Here		
120 days supply			
Helps to Rebuild & Regenerate Fingertips when used in conjunction with Stem Cell Activation Therapy!			

Optimized for Intracellular	al Supplement. Synergistically formulated. r effect. Helps enhance nail and skin nd speed of growth of finger and toe nails. ness and growth.
Organic Ingredients: Man	general Silicon and Peren
	be taken morning and evening or bedtime for
Dosage: One capsule to b	

Enhance growth of finger / toe nails, skin and hair.

HGH GEL

(Human Growth Hormone Gel)

Essential Amino Acids help the Pituitary Gland release Growth Hormones. Helps raise IGF-1 (Somatomedin – C) / Serum HGH values when taken over a prolonged period (typically 12 weeks). HGH is known to aid in the repair and regeneration processes in the body. To enhance the effect of this Amino Acid, it is fortied with Powerful Antioxidant like Organic Fat soluble Vitamin C. [For more info on HGH Gel Click here].

Ingredients: Aloe Vera Gel, Arginine, Glutamine, Lysine, Ornithine, Tyrosine, Vitamin Serum C and Organic Chromium. Dosage: Apply 12 drops (0.50g) 2 peas sized amount containing an average of 200mg/g of Arginine; 25mg/g each of Glutamine, Lysine, Ornithine, Tyrosine; 50mg/g of Serum C; and 100mcg/g of Organic Chromium in the morning after bath and at bedtime.

HGH Gel 15g (15 days supply)	To Order / Consult Click Here
HGH Gel 30g (1 month supply)	To Order / Consult Click Here

Helps to Rebuild & Regenerate Fingertips when used in conjunction with Stem Cell Activation Therapy

Helps increase Stem Cell Concentration levels in the body to aid in the process of repair and regeneration.

Herbal Ingredients: (Aphanizomenon flos-aquae 680mg + Zingiber Zerumbet 70mg) Dosage: 750mg Capsule	
StemXL 750mg To Order / Consult Click Here (60 capsules)	
StemXL 750mg (120 capsules)	To Order / Consult Click Here
Naturally enhances Stem Cell Production.	

ARGININE (Forte)

Essential Amino Acid. This Dietary Supplement helps the Pituitary Gland release Growth Hormones to start the process of Repair and Regeneration. To enhance the effect of this Amino Acid, it is fortified with Powerful Antioxidant like Organic Fat soluble Vitamin C and other Growth Hormone producing and Energizing Herbs.

Herbal Ingredients: L- Arginine 300mg + Organic Ester C 50mg + Organic Zinc 35mg + Hydrocotyl Asiatica 165mg + Withania Somnifera 75mg + Zingiber Officinale 25mg Dosage: 650mg Capsule

Arginine (Forte) 650mg (60 capsules)	To Order / Consult Click Here
Arginine (Forte) 650mg (120 capsules)	To Order / Consult Click Here

The Secret to Regeneration.

SUGARX		
Helps lower Blood Sugar / Insulin levels. Helps increase Insulin sensitivity and Growth Hormone Levels. Highly recommend for obese persons with border line blood sugar control and diabetic persons		
Herbal Ingredients: (Eugenia Jambolana - 170 mg + Gymnema Sylvester - 170 mg + Pterocarpus Marsupium - 170 mg + Organic Chromium – 2.5mg + Manganese - 5.25mg + Vanadium - 250mcg + Zingiber Officinale 82mg) Dosage: 600mg Capsule		
SugarX 600mg (60 capsules) To Order / Consult Click Here		
SugarX 600mg To Order / Consult Click Here 120 capsules) To Order / Consult Click Here		
Helps Naturally Increases Growth Hormone Levels.		

Stem Cell Regeneration of Digestive Tract

Gastric Regenerator (With Stem Cell Activators to Repair and Regenerate the entire Digestive Tract) Helps regenerate the entire digestive tract. Found helpful in heartburn, acidity, chronic acid reflux, gastric and peptic ulcers, esophagitis, Barretts esophagus. Stem Cell Activation helps rebuild the mucus membrane lining and the gastric mucosa in particular. Helpful in case of Helicobacter pylori infection causing ulcers. Use in conjunction with herbal dietary supplement GastriX which enhances the formation of mucus membrane lining. This helps reduce Hyperacidity, Heart Burn, Acid Reflux and Leaky Gut Syndrome. [pdf file] Main Ingredients: Aloe Vera, Crocus Sativus, Nano Silver, Nano Gold and Stem Cell. Dosage: 1 to 2 tablespoons in the early morning and bedtime on an empty stomach. Gastric Regenerator To Order / Consult Click Here 500 mL Helps to Rebuild & Regenerate the entire digestive tract with Stem Cell Therapy.

GastriX			
Herbal Dietary Supplement. Anti inflammatory. Produces a viscus mucus which covers and protects the stomach and intestinal walls This helps reduce Hyperacidity, Heart Burn, Acid Reflux and <u>Leaky</u> Gut Syndrome. [pdf file]			
Ingredients: Asparagus Racemosus 250mg, Foeniculum Officinale 100mg, Glycyrrhiza Glabra 250mg, Mentha Piperita 200mg, Zingiber Officinale 50mg. Micronized, high potency, whole herbal supplement. Dosage: 850mg Capsule			
GastriX (60 capsules)	To Order / Consult Click Here		
GastriX (120 capsules)	To Order / Consult Click Here		
Helps recreate a healthy mucus lining on the walls of the stomach and the intestines; and simultaneously reduce inflammation.			

Testimonials: Case Study No. 4

History of the Injury:

I've been doing some research on fingertip amputation. My son who is 5 years old had his right middle fingertip snipped in the bathroom door by the hinges. It was a small piece, about half is fingernail (1/2 inch of fingertip) so his nail isn't damaged. We rushed him to the ER and they weren't going to reattach it but then because he was 5 years old they decided to give it a try. We were on vacation during this time and it happened on our first day. :(We were told to wait it out and keep an eye on it along with changing dressing. He took antibiotics for 7 days. We just visited the hand doctor yesterday to follow up and he looked at the tip and poked it and thinks the tip tissue isn't viable. We were left we two options: either we monitor it and let it heal on its own which may take several months and we are unsure if it will look deformed of its tip shape?? Or we could do surgery where they would use tissue from his side palm to pad his fingertip and make a rounded tip and the recovery process is much faster.

We want to make the best decision for our 5 year little boy and had hope for it to heal naturally but unsure how the outcome would be. After seeing your website, I was wondering if you could give us your input on the stem cell activation gel and the cost of it? Because our son still has his tip that was stitch on, would it be too late to use the gel?

Thanks for your time, I appreciate your advice.

Our Recommendations:

The tip of the finger has already necrosed (turned black due to lack of oxygen and died). It will eventually fall off. To allow regeneration to occur naturally, aided by the use of stem cell activation gel, no further surgical intervention must be done at this stage.

Surgical intervention can be attempted, if at all required, at a later stage even after one or two months of stem cell therapy.

Progress:

Thanks for following up! Yes, we received the shipment. It seems to be working! :) It was two weeks after the incident that we began the fingertip gel treatment. Attached are some pics of what its looking like now: (he still needs more skin to the tip, but its forming nicely!) Melanie

Further Progress:

We received the gel July 23rd and began the treatment that night.

The scab fell off August 3rd.

We followed up with the hand specialist August 7th and he advised us to cut the nail down a bit since it has grown and let the finger air out. I do put the gel on at night with a gauze wrap around his finger to let it sink in his finger while he sleeps and we've been doing it everyday.

Below are very recent pics. Let me know what you think? I am pleased with the healing process and hope he'll continue to develop more tissue to the very tip. Thank you! ~Melanie

Update after 6 weeks of treatment:

Hello,

My son's fingertip continues to heal well. I am very pleased with the results!! We are still applying cream on at night. I do leave the nail a bit longer than the others as you mentioned it helps as some scaffold. Attached you will see some pictures. Thanks! ~Melanie

Case History No. 5

My left index finger was crushed off just above the top joint. It is growing. We are using ACell website <u>http://www.acell.com/</u>. My doctor is not treating it anymore with acell. So, I would like to order your Fingertip Gel. I will need to regrow it. The wound is still open and it is still growing.

Thank you, Dale

Hi thank you for taking the time to look at my finger. My current treatment using acell is finished. My finger grew about .25 inches. My finger was crushed off cleanly just about .25 inches above my joint. Hear are the pictures of my finger. This happened April 30th.

Our Observations:

It appears that the regeneration using the acell powder has for some reason failed to occur.

You can now go in for our Stem Cell Activation Gel regenerative treatment.

Progress:

Hi

The finger is growing. Hear are the pictures. Please let me know if this is how it should look when it grows. I did the finger pricking with the hypodermic needle. Will I have to do this again. Also how do you recommend wrapping and applying the gel. I am applying twice a day once in the morning and once at night. The finger growth seems a little more on once side than the other, will this even out over time or should I do the finger pricking again? Attached are some pictures.

Thank you so much for such a great Fingertip Regeneration Gel. It seems to be working much better than the acell.

Thank again for such amazing treatment. Dale

Our Recommendations:

I would do one to two pricking per week. This will speed up the regeneration of the fingertip and its uniform growth.

Please do not cut the nail too short. This is required to help guide the growth of the fingertip.

Otherwise, the progress seems to be good, based on the fact that the original injury occurred over 3 months back on April 30, 2013, and you have now perhaps just finished 3 weeks of treatment with our gel.
