

ASK THE INSTRUCTOR

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by

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Note from Mike Bono: On preparing and updating John's book, I realized how timely and important this work is for our profession. Students, seasoned electrologists and instructors will find this an invaluable book. Although written some years ago, all this material is vital and up-to-date for today's electrologists.

On a personal note, let me say that having known John for more than 45-years, he is a true gem. He's a quite unassuming gentleman with a kind and loving heart. He's sort of a big happy Santa Claus. Now retired, John is still interested in, and involved with, his former students and the electrology profession.

This book is a compilation of articles he wrote for the electrology magazine "*International Hair Route*" (Toronto, Canada), no longer in publication. John always said he wrote for people who are relaxing comfortably, and perhaps enjoying a peanut butter and jelly sandwich with a glass of milk. Yes, that's "our John Fantz!" **ENJOY!**



John Fantz has been a cosmetologist, electrologist and skincare specialist in Los Angeles, California, since 1958. John was an instructor at Arthur Hinkel's School. John had many articles published in electrolysis and skin care journals and was appointed the California Electrolysis Examiner.

John [now retired] practiced electrolysis in his Los Angeles Larchmont Village office, where he also gave private lessons in the Blend method and preparation for the State Board Examination. This is John's third book. His first book, *The Fantz Guide to Electrolysis*, was published in 1983. His second book, *Electrolysis Exam Review*, was published in 1987. These books are suggested reference material for the AEA National Certification Examination (CPE).

A handwritten signature of John Fantz in black ink. The signature is written in a cursive, flowing style with a large loop at the end of the last name.

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1 - EGG WHITES SHOW THE TREATMENT PATTERNS

Patients are justified in expecting us to be experts in our field and to have first-hand knowledge of what takes place in the tissues around the needle when the current is turned on. The only way to get this knowledge across is with the egg white and raw beef experiments, which allow us to observe the patterns of coagulation or destruction taking place at the needle.¹

A fresh cut of beef is used to observe the chemical decomposition caused by galvanic direct current electrolysis. The protein of the egg white allows us to see the coagulation by shortwave thermolysis. For directions on setting up these demonstrations and experiments, see *Electrolysis, Thermolysis and the Blend*, by Hinkel and Lind, page 180.

1. It is seldom possible to view this action in living human tissue, although we can get rare glimpses of the effect when treating translucent skin if follicles slant almost horizontally close to the surface. These situations do occasionally occur in follicles of the neck and scrotum. Aside from these rare situations, the best way to visualize current action is in egg white or raw beef demonstrations.

A wealth of knowledge can be gained by doing these experiments, and yet sadly, I've talked with numerous students who have completed their required training but have never seen these effects demonstrated by their instructor. A teacher at a prominent college told me she didn't bother showing the egg white to her students because it's all in the textbooks anyway with photos for them to see.

Instructors, students and electrologists, don't shortchange yourself. Do these experiments because, in doing them, you will have a greater understanding and respect for what the currents can do in the follicle and around the inserted needle.

2. No description of the egg white effect or photograph of the action can substitute for personal experience. The experiment is simple. Have the egg at room temperature. Pour it into a cup-shaped depression made in a piece of aluminum foil (which will conduct electricity), and rest the bottom of the cup area on a damp sponge or hold it in the moistened palm of your hand. Plunge the needle fairly deeply into the egg white. Slant the needle so that you can observe the action at the tip. Do not touch the shank to the surface of the egg white. Apply manually timed shortwave current and observe the coagulation pattern.

The Shortwave, High Frequency Action: When we insert the needle into the egg white and allow a low intensity shortwave current to flow, a pattern of coagulation takes place starting at the point of the needle. As manual timing is used and the current continues to flow, this area expands around the point and moves up the needle toward the shank, producing a coagulated pear-shaped pattern.

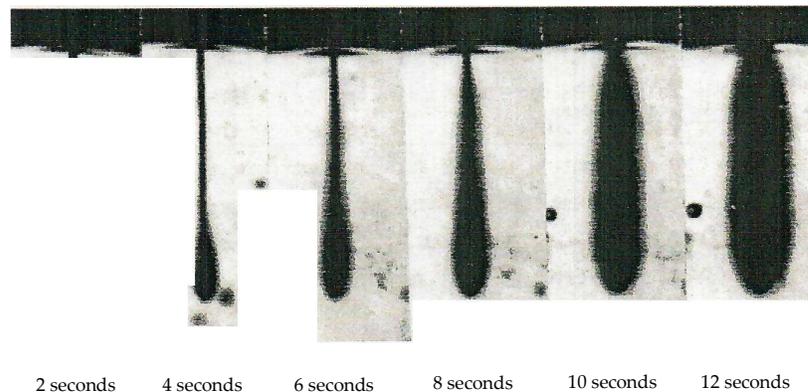
When a much higher intensity and automatic timer are used to produce a flash of current, a very small area is coagulated around the needle compared to the larger pattern you see with lower intensity and longer timing.

Practical Application: What we see in the egg white can help us to develop a good working technique. When you insert the needle and turn up the current intensity, the coagulating action takes place at a much faster rate. It is like turning up the gas on a stove. The higher the heat, the faster the water will boil. Now, this is very important: the intensity control setting of your epilator or stove (if you are cooking eggs in a skillet) must have some relationship to the size of the follicle, or number of eggs, you are cooking. Suppose you've set the flame very moderately and proceed to cook one small egg; in the proper time, the egg is cooked to your taste. You set the flame low because a high flame wasn't necessary for one small egg. The pan used was small, because our best results are achieved when we choose the correct pan for the number of eggs to be cooked. You are *not* going to choose a great big skillet for one tiny egg: it would be a waste of time and energy. Likewise, if you over-insert beyond the depth of the dermal papilla, or use a very heavy needle, you are wasting time and energy. Remember, excessive regrowth is frequently caused by putting the correct amount of current in the wrong place, or insufficient current in the right place.

Let us put the action of the high frequency current exactly where we want it. How?

Well, first of all, be aware of the proper depth. At skin level take hold of the hair shaft with your tweezers and withdraw the hair after it has been adequately treated to allow easy release. The distance between the tweezers tip and the bulb of the hair is your guide for depth if the hair is in a fully mature anagen phase. The presence of a moist sheath and bulb will help us to recognize a late anagen hair. By inserting to the correct depth for an actively growing hair, we know that the dermal papilla and germinative tissue of the follicles we are treating will be exposed to the effects of the current, no matter what stage of the growth cycle they may be in: anagen, catagen or telogen. Remember: We are not destroying hair; we are trying to destroy the tissue that feeds and causes hair to grow ... a good portion of the follicle.

NEEDLE IN EGG WHITE: Low intensity shortwave causes little effect after one second (photo on left). An opaque pattern shows coagulation around the tip after five seconds (center), leading to the desirable pear-shape (right) after eight seconds of low setting shortwave exposure. Older epilation theory called for action to reach only the papilla, but coarse hairs regrow too often with that procedure. Modern thinking, supported by practical results, indicates that regrowth is far less if more of the follicle is acted upon. An eight second exposure is very long for most epilator brands, but test your own epilator in the egg white at various intensity levels and timings to observe the patterns of coagulation.



Arthur Hinkel's egg white experiment shows the effect of timing on the heating pattern. In the above experiment, the current is constant; more egg white is coagulated as the current flows. (Photo is courtesy of A.R. Hinkel.)

The action of the high frequency field of the shortwave current energizes the atoms of the hair follicle, bulb and papilla. Their electron orbits are disturbed, and the atoms are made to vibrate rapidly, producing friction and heat. This is how a microwave oven works. In our profession, the action induced in the follicle is called thermolysis (*thermos*: heat, and *lysis*: breaking-down).

To return to the egg cooking analogy, treating very large hairs on a hirsute patient is like having a house full of guests over for breakfast. You will put a large skillet on top of the stove because you are going to prepare a large omelet consisting of several eggs, milk, cheese, etc. You wouldn't use the small skillet and the low flame you used for a single egg. You now have more eggs (tissue) to coagulate and a larger pan (needle) so a higher flame (more current intensity) will be required. Not that you couldn't work with a "pilot light," but it would take forever.

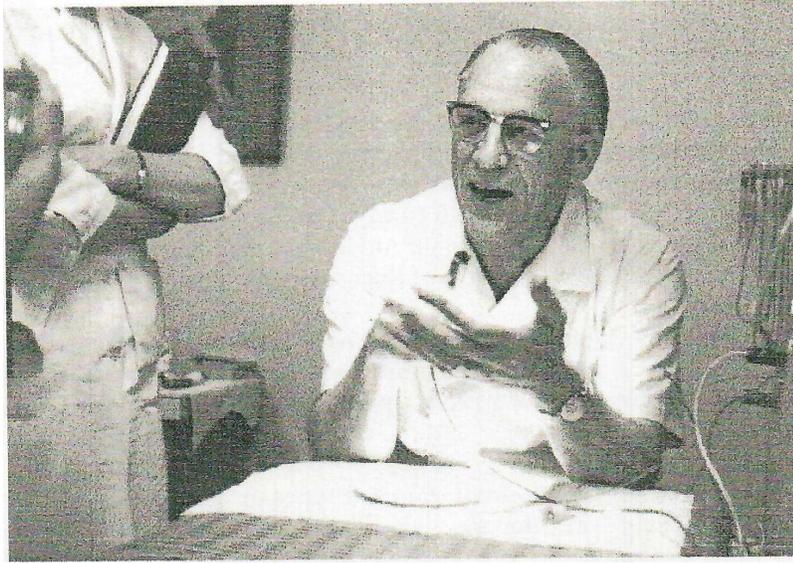
Remember that your intensity setting must have some relationship to the depth of the insertion and the time of exposure to current. The deeper the insertion, the higher the intensity (governed of course by the patient's pain threshold). The shallower insertions will require less intensity. For very shallow vellus type hair, we could work with the "pilot light."

We are expected to be able to treat different types of hair, leaving the skin in the same condition when the patient departs our office as when that person came in (but hopefully with much less hair). If we use poor judgment and over-work the skin to the breaking point, beyond its ability to heal, or if the patient leaves our office with her skin looking like a spanked baby's bottom, the problem is ours. We must learn to know how much is too much.

Don't allow the patient to cajole you into overworking an eyebrow or upper lip. Don't work an area any longer than you believe to be prudent. A good rule of thumb is always leaving a little margin. Naturally, the lady wants her eyebrows to be flawless for the dance Saturday night. However, if her eyes are swollen shut, she won't be able to go to the dance at all on Saturday night. Protect yourself and leave a little margin for safety.

It is obvious to me from observing the egg white experiments that a slower manual technique at lower intensity is most effective. Excellent results are obtained even with the most difficult cases. For example, in my Wilshire office I treat many black males. As anyone who does this work knows, many of their beard hairs are ingrown, with curved follicles made worse by years of tweezing. When treating large, deep-seated hairs, I use as much current as the patient can tolerate. Even if the hair practically "falls out," I linger a bit longer with both shortwave and galvanic currents (using the blend), and I work without automatic timing by pressing down on both foot pedals. Both currents remain on until I remove my feet, and the extra moments of current insure proper removal of the hairs.

Note: Contrary to misconceptions expressed in print elsewhere, even in electrolysis association publications, the shortwave or high frequency action should not be confused with cauterization. The electrolysis needle is never hot. Unlike cauterization, which implies a heated instrument capable of searing the tissues it touches, electrolysis induces molecular activity within the tissue. The needle itself remains relatively cool.



Arthur Hinkel demonstrates the "Egg White Experiment" to his students

Dr. Michel's Conclusion: Remember the wisdom of Dr. Charles E. Michel, the father of galvanic electrolysis who over a century ago wrote: "I now complete the circuit by means of my foot interrupter and allow the electrolytic action to go on until I plainly perceive a slight frothing up around the stem of the needle, then I at once interrupt the current. The quantity of this whitish froth is a comparative measure of the effect produced. ("St. Louis Clinical Record," October 1875, p. 148).

The great doctor confirmed that he lifted the treated hair gently with a pair of forceps, or even with his fingers, because it fell out so readily. Then he emphasized that "no force is to be used in this step, for if the cilium does not come away by merely taking hold of it, it is a certain indication that the operator either has not obtained sufficient electro-chemical decomposition, or that the follicles and papillae have not been reached."

Do not be in a hurry, and make sure you get enough current to the hair root. You will be judged not by how many hairs you tweeze in an hour's time, but by how little regrowth appears later in that area.



2 - REDUCING THE PAIN FACTOR

It never ceases to amaze me how patients can enter our offices and subject themselves to the discomfort of electrolysis. Yes, I said discomfort. Let us go a step further and replace it with a word electrologists hate to use: pain. I do not underestimate the great courage it takes for a man or woman to set foot inside our offices. As professionals, we must try to make electrolysis as easy as possible for the new arrival and at the same time be honest in our presentation of what we can and what we cannot do.

It is most important for us to win the patient's trust and confidence. Explain that when treatment can reach the hair papilla, electrolysis is permanent, but that some regrowth must be expected during the treatment series. Be honest in regard to the discomfort factor. Do not lead the patient to think there will be no sensation whatsoever. That can only lead to mutual disappointment.

Here is our problem. How can we put the discomfort factor across to the patient without causing undue alarm? Actually, there are two extremes that we usually face: one; the person who commences treatment very fearful of pain because she has been told terrible things about electrolysis. Once treatments start, she is relieved and settles down because "it doesn't hurt as much as I thought." The second extreme is the patient who was told that treatments were "painless." She will be quite distressed and may terminate treatment because, as she says, she "can't take it."

The electrologist can learn to put every new patient at ease and, as we shall see, this will have an important bearing on the discomfort factor.

First of all, make sure your new patient is comfortably seated. You yourself must be relaxed and confident. The first consultation is a two-way street. You need information for your case history record in order to judge what work must be done, and your patient is making a number of judgments about your professional approach. She is actually, perhaps unconsciously, interviewing you.

I have seen electrologists who alarm new patients by going into vivid details about insertions and current. Have compassion for the uninitiated and talk to them the way you would want to be talked to. Answer the question, "How much will it hurt?" By pointing to your wall chart or diagram and telling the patient, "I'm going to insert a little probe into this follicle where the hair grows, and I will apply a tiny amount of current. The insertion is easy, like putting your finger into a glove. You will hardly feel it. What you will feel is a little heat from the current, and that is what stops the hair from growing. The hotter you can take it, the faster I can go and the more hair I can remove. However, I will put you in charge. If it's too hot, let me know and I'll adjust it, but you must feel some heat for it to be effective."

Relaxation by Suggestion: When the patient is reclined on the table and ready for treatment, tell her to take a deep breath and relax her whole body." That deliberate preliminary effort to relax is most important. You may also find it helpful to tune your radio to a fine music station. Or ask "Alexa" to play soft restful music!

Choose the proper needle, but out of her line of sight. As the patient is settling down comfortably, use your antiseptic swab to clean the area to be treated. Suggest to her:

"Imagine yourself lying on a light, fluffy cloud. Let yourself sink deep into the cloud. As you sink down, relax. You are feeling wonderful."

If this begins to sound like hypnosis, my answer is that any suggestion you can make to assist in getting the patient's mind off the treatment is in order. This brings me to a very important point.

All through history, humankind has shown a willingness to believe. Faith and deep convictions are all founded on belief. We use belief to further our aims and to stimulate ourselves for achievement. The mechanism of belief is powerful and little understood, but we can utilize it by means of the phenomenon of suggestion to produce some interesting and useful results.

The Placebo Effect: I submit that a lessening of pain can be achieved in the localized treatment area without hypnosis and without medically prescribed anesthetics. This can be accomplished by the use of suggestion. It is simply the presentation of an idea with such emphasis that the patient accepts it with conviction. What it requires on your part is enthusiasm and some skill in choosing the proper things to say.

For example, when the treatment area has been cleaned, I say: "I'm going to apply a new topical anesthetic developed by a leading pharmaceutical house. It really helps to make the treatment much more comfortable." Most topicals do in fact serve to affect the surface, depending on how vigorously they can be rubbed into the skin. The interesting thing is that even an inert solution like rubbing alcohol or water with wintergreen can produce a change in the pain threshold of the patient. This is the placebo effect, well documented in medical literature, which illustrates the ability of the mind to influence many functions of the body.

As you massage the topical into the treatment zone, you will want to remind the patient that she will soon feel the area begin to desensitize. The response to the massaging can be quite remarkable. I have had impressive success with the technique, but much of this depends on the rapport built between you and the patient.

If you are using a lidocaine cream, such as EMLA or LMX, apply the product properly and allow sufficient time for the anesthetic to work. Indeed, the patient may initially apply the cream at home ... or, perhaps in your waiting room. However, be sure to allow enough time for the product to work; and for the client to relax. Time to relax works well to lessen the discomfort.

If during treatment the patient starts to complain of pain, do not panic. Continue to reinforce your suggestions and encourage her to pay no attention to the sensation. You may be able to raise the patient's pain threshold to the point where she can tolerate a much longer treatment than before. I have been able to give an hour of treatment time for a patient who formerly could take only 15 minutes. At the conclusion of the treatment, be sure to tell the patient that normal sensation is returning.

There is no end to the possibilities for suggestive lessening of pain that an inventive electrologist could devise. Success with suggestion depends mainly upon your enthusiastic conviction that it can be done. Your skillfully chosen words can convince the mind of the patient. Try it and see how well it works.

3 - GUIDELINES FOR INSTRUCTORS

AS INSTRUCTORS, WE ARE also "graded" by our students on how well we present ourselves in two areas: 1) lecture skills, and 2) clinic work. These two important areas of teaching give the students the information they need and the practice of applying it.

Lecture Skills

Let's discuss number one, lecture time: that most important part of the day when students are exposed to the theory that is necessary for them to pass their provincial or state board exam. It is also the time to discuss various problems that may have been encountered in the clinic ... thus helping them to grow from a slow learning technique to a faster, practical professional technique.

Warmup Period

The class should be seated promptly. As the instructor, you'll find you get better results from your students if you are respectful and sensitive to their needs. At the same time, you should insist that the students show you proper courtesy by arriving on time and being attentive as you lecture.

Avoid going directly into your lecture; give the class a little time to settle down by turning the first few minutes into a warm-up period. I've found that this makes for a much more comfortable session. Just like the "pain threshold," there is also an attention threshold, and once your listeners go beyond it, you've lost them and it is useless to continue.

If you sense your class's attention is waning, you might try saying, "Now, is everybody with me?" Or even have them get up and stretch for a few minutes. This will regain their attention. If you present solid information for an hour without a break you are pushing your students too hard.

A little nervousness before going in front of a class is natural for an instructor. Public speaking is frightening to many of us, so don't be embarrassed to join the club. Even that great actress, Helen Hayes, never overcame stage fright. And Norman Vincent Peale fought hard to overcome "butterflies" in the stomach on these occasions. The important thing was that despite any nervousness these individuals may have had, they went ahead and did their job. So, if you do experience a little nervous tension, take a deep breath, remember you're in good company, and think about how the nervousness might improve the quality of your lecture.

A.I.D.A. THE KEY TO SUCCESSFUL LECTURES

Lecture period can be approached in several ways. One is to see it as selling a product to the students. What we are selling will outlast any tangible object; we are selling knowledge, ideas and technique. In order to sell the students, we must first have their attention. Second, we must create interest, and thirdly, desire. Finally, we must motivate them to take action.

'A' is for Attention

Have you ever attended a formal social event and found yourself in a situation in which you felt compelled to initiate conversation with a stranger? Perhaps it was difficult to get started, but once you got going you probably forgot about yourself and got totally involved in the conversation with the new acquaintance. Many of us forget our self-consciousness when we get caught up in the pleasure of communicating with another person. What you must attempt to do in the lecture is to make each student feel you are talking directly to him or her. Eye contact is essential.

It is not possible to converse with anyone if they are not paying attention to you and you're paying no heed to them. Only when you have a listener's complete attention can you get across what you are trying to say.

Observe the students as you lecture by letting your eyes wander to each one. If you notice a head or two nodding, you're losing them! What can you do to perk them up? The bottom line is: You must keep their attention.

'I' is for Interest

Obviously, the students have some interest in what you have to say, or they wouldn't have enrolled in your class. The challenge the instructor faces is to keep the theory exciting and interesting for the students; thus nurturing in them the desire to take action.

The famous Anglican preacher Canon Bryan Green can hold the interest of an audience for more than an hour, but he has a technique: Every quarter hour he raises his arms and thunders, "Thanks Be to God." And his congregation is prompted to rise in unison, with arms outstretched, and respond with a fervent "Amen."

Now, I am not advocating that class lectures be turned into evangelical rallies, but I am suggesting that you listen to your students' nonverbal signs of disinterest, such as whispering, moving restlessly, or looking about. If they start to snore, you know you really have to take drastic action. These signs are a sure indication that you have lost the interest of the class. Like Canon Green, you've got to change your pace, or inject something exciting into your speech to regain their interest.

'D' is for Desire

How can you create in the student the desire to practice what you preach? First of all, you must sound as though you know what you are talking about. Let the students know that any problems they encounter in the clinic or theory classes are important to you, and that they are going to be given attention and concern; problems are not going to be handled lightly.

The most powerful speakers are often not those who are perfectly organized, but those who sense the rhythm and flow of interest from the students and capitalize on it. True, you have outlined and practiced your lecture thoroughly, but perhaps some of the obscure points you are expounding are putting the class into slumberland, despite the fact that they are interesting to you personally.

If the material is not essential, skip it. If a theory or certain technique is important, go ahead and "sock it to them!" But occasionally you may find that no matter what you do, it's impossible to hold the interest of the class. It might be an off day for you, or there could be some hopelessly tempting distraction drawing the student's attention away from you: an impending vacation or something like that. This once happened to me, and remembering my own mentor's advice, "Never feed the students more than they can digest," I dismissed them. Although I wouldn't recommend this as a regular habit, but it does pay at times to be flexible.

'A' is also for Action

A good lecture is one that motivates the listener to take action. For me, the main source of inspiration for action has always been the students. I want so much to give them the knowledge, and really want them to be the best. When this desire is translated into a powerful lecture, it seems to do the job. When I'm groping for inspiration, I choose the one student who is most in need of my help, and (unknown to everyone) I address my lecture to that student. Thus, the whole class benefits from my secret source of inspiration.

We should never give the impression that we are preaching to our students, but although the stern, knuckle-rapping schoolmaster of yesteryear is long gone, students still expect us to speak with authority. How can we expect them to take action if we don't? So, speak with authority, without turning into an authoritarian. When dealing with our students, kindness and firmness on our part will lead to loyalty and action on theirs.

THINK before you speak

It's easier to arrange your thoughts in an orderly manner when you're writing than when you're thinking on your feet. When speaking before a group, you really have to think before you speak because you cannot erase any errors. That's one of the things that makes a lecture interesting for students: the instructor's vulnerability. The interplay of various personalities and the problems encountered in dealing with them are what make instructing so challenging and exciting.

You might find it helpful to have a written outline of your lecture subject handy to guide you back on track if you begin to digress. But whatever you do, don't read to the students. A lecture that has the quality of spontaneity will be well received, but one that is not thought out in advance will not be understood.

It's HOW You Say It

Suppose the agenda calls for you to lecture on your least favorite subject; it might be a vital matter such as microbiology or sterilization ... and let's face it, these are not two of the most exciting topics to talk about. What can we do to make it more exciting? Consider for a moment the last political speech or sermon you listened to. It wasn't so much what the speaker said that kept you attentive, it was how he or she said it. A certain amount of showmanship does help. This is not to suggest that you do a song and dance routine, but adding a little excitement will make a difference.

Make the Subject Matter Meaningful

Mindful of our Attention-Interest Desire-Action (AIDA) formula, let us turn to a practical application, and give an example of how we can make a potentially dull talk more exciting. The lecture begins: "Students, may I have your attention. Please open your text to the chapter on Sterilization. This morning we are going to cover one of the more important and interesting chapters in the text." Now you have their attention!

"You might wonder how a chapter on such a humdrum subject ... one that most of you slept through in high school ... could possibly be interesting. It is because you are now adults, studying a profession where knowledge of this subject is essential to your success. Now, this chapter is crammed full of factual information that's going to keep you out of trouble. For example, a number of years ago an electrologist was put out of business due to a bad case of contagious conjunctivitis (pink eye). How it was contracted is hard *to* say; perhaps by rubbing blurry eyes with unwashed hands after handling money, or through an infected patron. Regardless, this electrologist learned the hard way to have the greatest respect for tiny microorganisms."

By sharing a real-life experience, you create interest, and the desire to take action in following through with proper disinfection and sterilization. With this short introduction, you are off to a good start. Move right into the core of the material after this; and the remainder of the allotted time should pass quickly because you have the students' interest.

Sensing the Rhythm

Sometimes I ask my students to hold their questions until after my lecture, and other times I encourage them to ask their questions during the lecture. Once again, it comes down to sensing the rhythm and flow of interest in the students. Perhaps a question will be asked about a patron who breaks out in a rash after treatment; this can lead into a discussion on the importance of briefing the patron on post-treatment care.

Another question or two, and before you know it the lecture hour is up, and you still haven't covered all the required material. Often you can leave the students hanging with a "teaser" ... stopping at a point where you really have their interest ... and letting them know that you'll pick up on the "morrow," and conclude with a test at the end of the week.

Timing is also important. There is only a certain length of time you can maintain a topic; then you must either bring the lecture to an end or introduce a new subject. The question of time-sensing the capacity of the student to concentrate on one particular subject, must be correctly balanced. Use your instincts to tell you what to do.

Perspective and Balance

We must never forget that the true purpose of our schools is to turn out competent technicians. Let's not waste valuable time teaching our students nonessentials. What is important is that they graduate knowledgeable in the skill of making good insertions and obtaining a smooth release in a reasonable time, with minimum of regrowth. Remember, every graduate is going to be a reflection of your skill as an instructor. Let's make sure we have proper perspective and use our valuable lecture time to ensure that we graduate skilled, professional electrologists.

Clinic Work

Just as lecture time is the time to discuss various problems that may be encountered in the clinic, so the clinic is the place to apply what has been discussed in the lecture. The clinic floor is the proving ground where the students really get their money's worth from their training.

Clinic is where good work habits are implanted and poor work habits are stopped.

It's imperative that you nip poor technique in the bud, to eliminate anything that could be detrimental to the student, or the patron, in later practice.

The instructor's job is to inspire, motivate and encourage the students to catch-up with the teacher. In the clinic, you must establish your presence at all times, making frequent rounds, offering praise and suggestions, helping students to grow, and reassuring any patrons that might be present that you are on top of the situation. Students often do not demonstrate proper judgment. In an attempt to please the patron, they can easily be talked into overworking an area.

Show How it's Done

If a student is having a difficult time, perhaps with insertions, sit on the stool and remove a few hairs yourself. Give the student an opportunity to observe your technique; the novice cannot always judge the difference between proper and improper technique, so you've got to show them how it's done. Once you have them properly set-up and working, check on them occasionally by getting down at skin level and carefully observing their insertions and epilations.

Whenever something of general interest comes up, for example if a patron asks you to treat a nasty ingrown hair, call the students over for a brief demonstration. It creates an air of excitement. Remember how much you learned in your own school days from watching your instructor demonstrate the treatment of an interesting anomaly.

It is up to the instructor to keep the clinic interesting, no matter how easy it is to turn into a floorwalker or supervisor. Anticipate the students' needs and be at their side when they need you. If the students continually find you difficult to seek out, something is wrong. You must be approachable and available to the students at all times.

You Are the School

You cover the same material, class after class, so it is easy to get "burn out." But just remember that while it may be "old hat" for you, it's all new to the students. Do your best to keep your lecture material fresh and meaningful for each class. The students are paying for your expertise, so in the classroom *you are the school*. Carefully observe all clinic work; get down to skin level.

As the students advance, they will need your guidance even more. Some of them might not think so, but you know what can happen and you must guide them away from pitfalls. Classroom instruction, along with clinic work, comprises the total education package that our schools have to offer, and the value of both is dependent on the skill of the instructor. As a closing thought, I'd like to remind instructors that we are training the future leaders of our field. Let's keep up the good education, since that's where it all begins.



4 - HIV/AIDS, HIGH FREQUENCY AND DISPOSABLE NEEDLES

I RECENTLY RECEIVED a letter from an electrologist in Brazil, that I would like to share with my readers. This lady told me that for 16-years she has run a very successful electrolysis clinic in Salvador, Bahia, employing eight full-time nurses who work on about 60 clients every day. Lately, however, the clinic has been experiencing a problem that is becoming more frequent for electrologists almost everywhere.

"We have been losing some of our clients who are concerned with the idea of getting themselves contaminated with HIV," says the writer, and adds: "We have always felt pretty secure with this problem because of the high temperature of the electrolysis needle but we would like to get more information about it. As HIV is a world problem right now, you are probably dealing with this type of worry and may have some written report on the subject. We would really appreciate anything you could send us." (Add here COVID and all future pandemics.)

This request for information requires a special answer because it revolves around the old belief ... once held by a minority ... that an activated electrolysis needle is a safe needle.

The idea is no longer accepted, but in the past some practitioners were misled into believing that by merely passing a high-intensity, high frequency current through a needle for a few seconds prior to insertion, the needle would be sterilized. In truth, the needle never gets hot: it is the moisture in human tissue that gets hot, but even then, not enough heat is generated to destroy microorganisms (virus, bacteria, etc.).

It is also now known that immersing needles and tweezers in any approved chemical solution does nothing more than disinfect or sanitize them. While we do sanitize or disinfect the treatment area, the instruments must be sterilized.

It had been a common practice to keep a client's needle in a separate closed container, labeled with the client's full name and phone number. While this practice might reassure your and the patron, this practice is not approved and must not be employed. The only approved practice is to use pre-sterilized, disposable needles for each treatment. Use one needle for one patron for one treatment, and properly dispose of the used needle in accordance with medical authorities. Please check all the new FDA approved standards offered by the American Electrology Association on their public website: www.electrology.com.

Be aware of rules that health authorities in your particular region may impose on your practice; such regulations may usually be obtained by contacting the proper agency in your area. Rules governing disinfecting, sanitizing and sterilizing instruments must be followed in the strictest manner, and are to be universally applied throughout the electrolysis world.

5 - WILL HIV/AIDS AFFECT OUR FIELD?

"**HOW DO YOU THINK AIDS** will affect our field? I'm seeing a gradual decline in patient load," writes one of my readers. She says that there seem to be more ads appearing for waxing and other methods of temporary hair removal these days, "giving prospective patients an alternative to electrolysis." The lady goes on to say that the epilator she now uses was bought in 1985, and she wonders if she should be buying new equipment to stay abreast of the times. Her big dilemma is, she plans to retire from the business soon, and is reluctant to invest in a lot of new equipment at this late date.

Since the lady is soon about to close her doors, I doubt if a new epilator would be necessary. There are many operators successfully removing a lot of hair permanently with equipment older than hers (her 1985 epilator is newer than mine!), and I believe that as long as epilators are calibrated and serviced, when necessary, they will give many years of service.

The value of an epilator is dependent on the skill and judgment of the operator.

Why would a practitioner direct the blame for a declining list of clients on the HIV problem or waxing? Ask yourself: How many clients did I lose last year for the wrong reasons? How many dropouts can be attributed to the fact that they were not properly guided and encouraged to follow a program that would foster the right results?

The new client is running on faith until the area first treated remains clear, or has little regrowth. To carry the client through this period of faith, we must have a positive attitude that will inspire and motivate the client to give the treatments a chance.

During the first phone contact with a prospective client, the practitioner must not mention HIV or other infectious diseases. If the client mentions such concerns, she can be told that all clients are treated with a properly sterilized needle that is disposable. Indeed, going to an electrologist is safer than going to a dentist, who has to use the same instruments on all patients.

Another one of my readers has written to ask if there is any topical cleanser, other than alcohol, to replace Zephiran now that it has "been found to be unsatisfactory." Zephiran is a trade name for one of the quaternary ammonium compounds (quats) popularly used in the past as a (nonirritating) solution for disinfecting needles and forceps.

For this purpose, quats have lost favor in recent years because they have been found to be easily inhibited by extraneous organic matter, and also neutralized by soap and anionic detergents. Immersing needles and forceps in quats does *not* render the instruments entirely germ free, and we must ensure that our instruments are properly sterilized or sanitized; again, refer to the AEA website for approved standards and methods of infection control.

Electrologists differ on what is best for sanitizing the skin in a treatment area. Some still use Zephiran for this purpose, others use 70% alcohol. David Zimmerman, in his book *The Essential Guide to Nonprescription Drugs* has a section on antiseptics based on studies by the U.S. Food and Drug Administration. According to Zimmerman, alcohol is the lone antiseptic considered safe and effective for frequent use on the skin's surface.

Sanitizing the skin prior to treatment must be conscientiously carried out. The skin should be wiped clean with a cotton or gauze pad saturated with antiseptic. And treatment may be started when the pad no longer shows signs of residue.

6 – ELECTROLOGY IN SOUTH AFRICA

A READER FROM RAEDENE, South Africa writes, "I have read your book, *The Fantz Guide to Electrolysis*, and found it to be well set out and concise. I was trained in beauty therapy at the Witwatersrand Technikon in Johannesburg. This course included electrolysis, and I also did a further course in shortwave diathermy epilation, as it is called here."

"There is no governing body for electrologists in South Africa, and no qualifications are necessary for anyone wanting to start a practice. I have even heard of a place which teaches beauty therapy (electrolysis included) with no equipment! They use equipment catalogue photographs to explain 'on' and 'off' etc. Rarely do clients here sue for malpractice, our lawyers usually advise against it because legal expenses are high and even a favorable settlement is usually not enough to cover the costs. So, instead of incompetent practitioners being sued and put out of business, they just give electrolysis a bad name. 'Needless to say,' there is a dire need for schools which maintain high standards, train their students properly, and give a diploma which the public can trust."

The lady then asks if I can advise her as to whether or not a group of electrologists in South Africa could start such a school, become affiliated with an American association of electrologists, invite expert guest lecturers and have examinations on a par with U.S. state boards.

The only way I know of to eliminate poor work by "qualified" electrologists is through education, so I totally agree that any improvement must come through raising school standards. Good instructors are absolutely essential.

Affiliation with an association and guest lectures by professional medical and business people are okay as long as they don't detract from the main purpose of the school's daily lecture period, which is to discuss the various problems encountered by students in the periods of clinic. Daily lecture is the most important hour.

What is the key to a school's success? It isn't a parchment-stating one's membership in various associations or one's participation in lectures by eminent MDs, it's the quality of teaching that counts the most. Students are paying for the opportunity to work on clients under a competent eye, and learning a good working technique.

We must never forget the true purpose of our schools, which is to turn out competent electrologists. What's important is that our students graduate knowledgeable in the skill of making good insertions and getting a smooth release in a reasonable time with no overtreatment and a minimum of regrowth. Let's not waste valuable time teaching nonessentials.

*Every graduate is going to be a reflection on the skills and abilities of the instructor. It is their job to inspire and motivate the student. I hasten to add that my book, *Electrolysis Exam Review* is being used by some unregulated areas in the U.S.A. as a guide for teachers and schools of electrology in setting up school curriculums and preparing students for their final exam. The *Review* gives a complete outline for the California State Board Examination.*

7 - AVOIDING POST-TREATMENT SCABS

A RECENT GRADUATE WRITES: "How can I avoid post-treatment scabs?" My patron is a 29- year-old female, with deep chin hair. A smooth, two-tap release results in ugly scabs ... flash-timer: 1/10 second, intensity: 5, treatment time: 30 minutes."

With automatic shortwave epilation, we must determine the correct intensity and preset the timer in such a way as to ensure the current will achieve a good percentage of permanent hair removal, before the rapidly climbing current can damage the skin surface. It's a race against the clock, with the speed of automatic shortwave being the challenge. What steps can we take to ensure the proper results?

Most epilators vary in intensity and lack uniformity of settings. I don't know what epilator you are using. However, I think your intensity is probably too high, and I wonder if you are inserting to the proper depth. Your client is young and probably has moist skin, the action of thermolysis being more intense in moist skin. We need a basic guide to help us achieve optimum results. The following can be used (as a guide only) to establish a practical workings technique for automatic shortwave epilation:

1. Make an initial insertion with your TIMER DIAL set between 1 / 10 to 3 / 10 of a second (depending on the size of needle chosen, follicle depth, and skin type) and establish an anagen hair depth gauge.

2. With the depth of insertion established, set the INTENSITY DIAL to 0 (most models), and activate the current. Caution: Some epilators, even at lower settings, produce intensities too high even for a 1/10 second exposure. Review your manufacturer's instruction manual.

3. Adjusting the intensity in proportion to the follicle depth, test for the release of the hair gently with your forceps. If it fails to release smoothly, and both the client and her skin are receptive to a higher intensity, keep advancing the exposure time, prudently, until you get a smooth, one-tap release ... with the current deactivating prior to surface over-treatment.

The setting of the intensity and time exposures should have some relationship to the follicle's full anagen depth (the target area). While working, keep your full attention to the treatment area. If the skin has a blanched, cauliflower-like appearance, it's overtreated.

Overtreatment is usually caused by either working with the intensity too high or too long, too shallow, or too close. With higher desiccating intensities, the follicle tissue tightens around the needle, and a sticky traction is felt upon needle removal. This undesirable effect is not felt with a lower, more moderate coagulating intensity. A moderate intensity, proportioned to the exposure time and the anagen depth, should result in a high rate of permanent hair removal and no scabbing.

With the intensity moderate, and the time extended, a larger coagulating pattern can reach out to the target area that might be missed with a smaller pattern. It's easy to overwork the chin. *Treat the area in an orderly pattern, so as not to return to the area first treated.* We must avoid pushing the skin beyond its limits. Start at the side of the chin, where the threshold is higher, and perhaps limit the treatment to 15 minutes ... 7.5 minutes each side. While a tiny crust or scab indicates that normal healing is in progress, there is a fine line between an unavoidable minor crust and overtreatment. It should be your goal to leave the post-treatment appearance of the skin free of scabbing.

8 - COMBINING ELECTROLYSIS AND FACIAL TREATMENTS?

A YOUNG LADY from Washington, D.C., writes: "When I do electrolysis, is it okay to give a facial to the same person? And if I do, how careful should I be about using the different electrical currents for things such as desincrustation, electric brush, etc.? Also, can I really promise my clients that electrolysis is a permanent hair removal method under certain conditions?"

A facial should not be given after an electrolysis treatment ... and I can't imagine a client wanting one ... unless, of course, the electrolysis treatment was not on the face.

When treating a follicle, remember that tissue is being destroyed on a microscopic level, and that the treated area could be vulnerable to minor infection if proper post-treatment care is not followed. If a facial was given following electrolysis on the face, and bacteria were to invade the treated area, small pustules could result; and this would surely be poor PR for your Facial Department.

The only exception might be the removal, for example, of a few scattered chin hairs; and even then, I would avoid something like a vigorous, almond-scrub with an electric brush on that area. After an electrolysis treatment, it's best to allow a few days for the skin to heal before giving a facial. As to the second question: Well, if we can't tell our clients that effective electrolysis treatments are permanent, then we should turn-in our needles. If electrolysis is not permanent, then it's as fraudulent as the "painless" electronic tweezer method!

My correspondent sounds like she may be the recent graduate of a brief training course, for her letter indicates a lack of experience and confidence. Was the training so short, I wonder, that she didn't have the opportunity to see any clients through a complete hair growth cycle, and witness for herself the eventual permanent removal of hair in the treated area?

Unfortunately, many students graduate without seeing their school client cases through the proof-positive period. They may be doing an excellent job, or they may be getting more regrowth than they know. And if instructors don't alert students to this fact, the budding practitioners are in for a rude awakening and will be demoralized when they are first confronted with regrowth or new growth.

Students don't really know if electrolysis is permanent until they have at least one completed case completed. My advice to them is: "You're running on faith, but don't despair, just keep running." We all started with faith. Find a corner on your arm or leg to work on ... if you lack hair, recruit your boyfriend ... and watch the area. If at the end of a couple of months it takes you only one-fourth of the treatment time you originally spent going over the area, then you'll know you've permanently removed about 75% of the hair. You've proven to yourself that you can get permanent results with electrolysis. Every client treated brings the beginner closer to a good professional technique. Education is a continual process. You've got to start from scratch and keep on scratching.

9 - CAN YOU "FEEL" THE BOTTOM OF THE FOLLICLE?

A CALIFORNIA STUDENT writes: "Our instructor thinks you overemphasize establishing an anagen depth gauge and treating every hair accordingly. The instructor says we should learn to feel the follicle depth. I'm confused."

The teacher is correct in stressing that students should learn to feel their insertions; however, by combining the "feel" with an awareness of the full anagen depth for hairs of the same type in the area being treated on each individual client, we have the best of both worlds. Utilizing both methods provide further assurance that we are putting effective current in the effected target area, and regrowth is kept at an acceptable minimum.

We know that every follicle to be treated is somewhere within the anagen, catagen, telogen cycle. But the anagen stage of the hair growth cycle is the only period of active growth, beginning at the moment when an inactive follicle "comes to life." And a particular follicle is at its deepest when it's in full anagen.

Plainly, we cannot treat a follicle if the hair has shed (exogen), leaving us without a guide to the follicle ... and let us not forget early anagen hairs that haven't yet peaked out of the follicle mouth, but when a catagen, telogen, or early anagen follicle has a hair to indicate the mouth, and we insert to the full anagen depth, we can be confident we are doing everything possible to insure the destruction of the papilla and all germinative tissue regardless of the cycle of each individual follicle being treated.

An *established depth gauge* is only for the particular area being treated on each individual client, and the follicle depth will vary from area to area. For instance, terminal chin hair usually requires a deeper insertion than its counterpart on the eyebrow or upper lip.

A full anagen hair indicates the deepest level from which the hair-type we are treating grew, when it was at its deepest, or to which it will grow at full anagen. We therefore select an anagen guide-hair (recognized by its moist sheath and bulb), and insert to that depth.

Recently, I instructed a new electrologist who was demoralized by complaints of excessive regrowth. Observing her technique, I felt the release time was too long. We took a depth gauge ... she had not learned how ... which showed the anagen guide-hair was almost twice as long as her probe. Her probe was barely reaching the depth of a late catagen hair.

By changing to a longer probe and inserting to the full anagen level, the releases were smoother, faster and with moister sheaths. She also got less scabbing, which had been a problem with the shallower insertions.

In catagen, the papilla has separated and withdrawn from the lower part of the hair bulb (the matrix). In telogen, the detached hair is dormant, its club root lodged in the upper half of the follicle until it is finally shed during washing, combing or plucking. If, by error, we insert only to catagen or telogen follicle depth, the current could miss the dermal papilla, and other vital germinative tissue. And we must remember that, putting effective current in the wrong place is one of the main causes of regrowth.

10 - CREDITING THE PIONEERS OF SHORTWAVE EPILATION

A LETTER I RECEIVED recently says, "Reading your *Exam Review*, which I enjoyed, and rereading Hinkel and Lind's book *Electrolysis, Thermolysis, and the Blend*, I realized that no one is given credit for the development or early use of thermolysis. But about a week ago I received a sales promotion letter from a manufacturing firm which stated that it was their company, in 1937, that pioneered the general application of the shortwave process. They also claim that it was they, in 1963, who initiated the use of refrigerated, 'sterile air' in shortwave epilation."

"The aim of this literature is to promote a device which uses, as I understand, a high-intensity xenon light, and basic shortwave as a dual process: 'no sensation; no needles.' I've written asking for further clarification. Meanwhile, I am interested in hearing your reaction to these claims." It's amazing how many so-called break-throughs, photo-epilators, electric tweezers, and the like have been made in the last 20 years!

In regard to no credit being given to our shortwave pioneers, I would like to refer you to page 173 of Hinkel and Lind's book (and page 71 of the *Exam Review*), where it established that we are at the centennial of the development of shortwave by Heinrich Hertz. In 1887-1888, Hertz invented the oscillator, the device which acts like an echo chamber, bouncing current back and forth so rapidly that its vibrations produce waves capable of radiating through space at the speed of light.

In 1892, Professor Arsene d'Arsonval, using Hertz's oscillator, demonstrated that one ampere of current could be passed without harm through his body, his assistant's body, and a light bulb. High-frequency oscillation had eliminated the current's harmful effects, and the only sensation felt was a warmth at the conducting electrode. The professor and his assistant were the first to experience a mild form of diathermy, a forerunner of modern thermolysis (short-wave).

Hinkel and Lind also point out that shortwave was first used for permanent hair removal by Dr. Henri E. Bordier, of Paris, France, in 1923. And we know that by the 1950s, the majority of electrolysis operators had exchanged their multiple-needle galvanic units for the new automatic thermolysis (shortwave).

The earliest known air desensitizer device was developed by Harold G. Rosner, who with his wife, Clare, started the Clare Manufacturing Co. (now known as Clareblend Inc.) in 1924. Rosner first installed the unique air-cooling system on their (eight-needle) multiple-needle epilator sometime in the late 1930s.

Around 1963, the first major ad campaign for air-cooling systems was started by Pneumatron, for their "Air Spray Jet Needle." Whether or not the air from these early units was sterile isn't known to me. I admit, though, we sure could use some sterile air here in smoggy Los Angeles.

Yes, it is amazing how many helpful breakthroughs we have seen through the years; however, we must be on guard against claims that are invalid. I'm leery of those who offer "no needle," "no sensation," "no scarring" hair removal. To my knowledge, there is currently no effective way to remove hair permanently without some sensation from the current; unless the epilator isn't plugged in!

11 - POST EPILATION REENTRY TECHNIQUE

WHAT ABOUT the Post Epilation Reentry Technique or PERT?

The PERT technique calls for the electrolysis needle to be inserted in the hair follicle, the current activated, the needle withdrawn and the hair removed in the usual way; then, the needle is reinserted in the vacant follicle and the current reactivated.

This awkward procedure is not new. It evolved from the pre-electrolysis medical practice of tweezing the hair and then inserting a needle, that had first been dipped in a caustic liquid, into the empty follicle. The method was firmly rejected by the nonmedical electrologists who were taking over the profession in the 1880s, because it subjected each follicle to pain and insertion trauma twice, and epilation time was greatly extended.

A few years ago, James E. Schuster, MD, researched PERT and two other old techniques and reintroduced them "for the electrologist's consideration" (*International Hair Route*, August 1981). Along with PERT, he mentions PEET: Pre-Electrolysis Epilation Technique, and PEST-Post-Epilation Sustained-Entry Technique.

PEET calls for the (untreated) hair to be "plucked," before the electrolysis needle is inserted into the empty follicle and the standard dose of epilating current applied. Schuster says this technique was first described by Dr. George H. Fox in 1879. But I might add that a few years later, in 1886, Dr. Fox wrote; "Under no circumstances, at the present time, do I ever remove the hair until it is loosened by means of the electrolysis."

Fox also mentions testing the hair for looseness while the galvanically activated needle is in the follicle, a technique Schuster identifies as PEST. Gordon Blackwell called it "preview testing." But Arthur Hinkel's term, "progressive epilation," I think is more descriptive. Schuster says that Dr. Ellis first described the technique in 1948. However, I believe Dr. Fox or Dr. Michel should again get the credit. Michel, the "father of electrolysis," talked about the difficulty of accurately inserting a needle into an empty follicle. He wrote. "After tweezing a hair, it becomes quite a feat to recognize the opening of the follicle in order to pass a needle into it, even under a strong lens."

PERT, PEET, and PEST all fell into disuse with the advent of shortwave thermolysis, and only PEST received renewed interest with the onset of Blend epilation.

It is true that the papilla, without the protective covering of the extracted hair, is more vulnerable to the current the second time around. But in my opinion, a far superior effect is delivered by a practitioner using manual, moderate-intensity thermolysis, with the two-handed mode and "progressive epilation."

Here's how it works: the right-handed operator holds the needle in the right hand and forceps in the left. Working with both hands simultaneously, hairs are gently tested for looseness while they are being treated; then, keeping ahead of the rising thermolysis pattern, the hairs are epilated and the current deactivated ... to forestall surface overtreatment ... while the needle is still in the follicle.

With the needle left in the follicle after the hair is removed, the operator might decide to linger with a little follow-up current, especially if the release wasn't too smooth. The beauty of this technique is that the electrologist is always on top of the situation ever ready to test the hair being treated; while electrolysis is in progress.

12 - REGROWTH

"MY CLIENT WAS IRATE upon her return from a two-week cruise, because she had had too much regrowth," writes one of my readers. "I had been giving the client 30-minute treatments for six weeks, right up to the time of her going on holiday. She had a deep chin growth with ingrown hairs and distorted follicles due to several months of prior treatments in a beauty shop with a 'new painless galvanic tweezer.'"

"I assured the client she would see permanent results with electrolysis. But she said all the hair had grown back, just like it did with the tweezer method ... which, at least, had not hurt like electrolysis does. I tried to hide my personal disappointment," says this worried practitioner, "But what could I say?" What this electrologist's client experienced was an overlapping of the total electric tweezer regrowth, with normal regrowth following the first electrolysis treatment. The client's unfortunate "magic tweezer" experience (it kills hair by magic) prior to her initial electrolysis treatment accounted for the main influx of regrowth during her vacation.

Regrowth following either tweezing or electrolysis appears in about seven to eight weeks. The practitioner should have anticipated this during the consultation and prepared the client for this overlapping.

The poorly prepared client might find unacceptable the amount of regrowth that an electrologist would consider normal. The client has to be made aware of the regrowth factor, and it could be pointed-out to her that the amount of regrowth is a gauge whereby the electrologist can judge the effectiveness of the treatments. If it is excessive, the electrologist can do something about it by making some changes in technique. When the electrologist is using a blend of shortwave and galvanic currents at a fast manual intensity, perhaps an increase in the two currents, and extended timing, will be required. When a high, instant shortwave technique is being used, a lower intensity and an extended time exposure, allowing a larger area of tissue destruction, may be the answer.

Hairs that "squeak" [pulled out] as they are lifted out of the follicle are a sure sign of undertreatment and excessive future regrowth. If we are confident that the amount of regrowth is normal, then the client must be reassured, and the same technique continued. Moreover, most clients forget the amount of hair they had at the start of treatments.

A certain amount of regrowth will always occur after electrolysis, even when it is performed by a skilled operator. While authorities differ as to what is an acceptable amount of regrowth, most of them estimate that for electrolysis to be considered effective at least 40 to 50 percent of the hairs treated should be destroyed permanently. I believe the average should be 50 to 60 percent, with 60 and 75 percent being possible highs. Experts cannot be dogmatic on this, for in every case they must consider the variables of the treatment area, i.e., the type of skin, moisture content, hair type, and pain threshold, etc. The operator's skill in working with these variables will determine the percentage of permanency for each individual treatment.

Regrowth can't be blamed on things like distorted follicles. The electrologist is the one controlling the intensity and working the needle and forceps. If Mother undercooks the holiday turkey due to lack of intensity and time, who takes the blame? The oven?

13 - WHAT SHOULD EXAMINERS LOOK FOR DURING THE EXAM?

AN ELECTROLYSIS examiner from a recently licensed state asks, "What signs of poor technique should I be aware of during the practical portion of the examination?"

Applicants for a regulatory examination should be prepared to demonstrate a basic technique at entry level. And "entry level" means that while applicants are not expected to have the expertise of an experienced electrologist, they must demonstrate effective acts of permanent hair removal via electrolysis-shortwave or a blend of both modalities, with practical skills, and knowledge of such things as sterilization, sufficient to ensure the health, safety and welfare of the consumer.

To confirm that an exam has validity and uniformity, regulatory agencies must implement an examination score sheet ... one for each applicant ... which the examiner will use to score each applicant's ability in the various categories.

The performance criteria section in the *Electrolysis Exam Review* outlines the score sheet which I recommend. If the basics of these criteria are not properly demonstrated, it could result in an applicant's failure.

A. Correct needle Size. The needle should be about the same diameter as the hair being treated and long enough to reach the determined full anagen depth.

B. Depth of Insertion. A depth guide should be established by examination of an epilated, full anagen hair. The depth of insertion should approximate the distance from the epidermis to the full anagen depth as determined by the anagen guide.

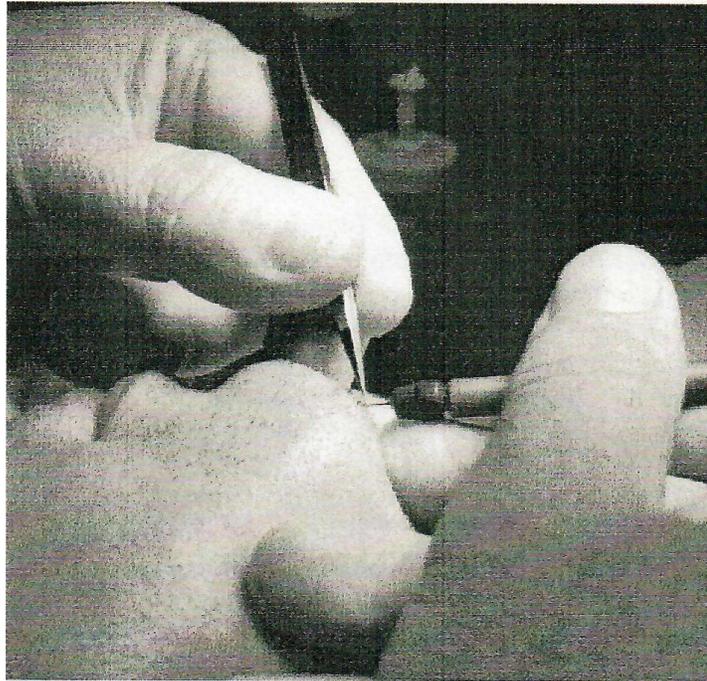
C. Smooth Insertions. The needle should slide gently into the follicle without excessive pressure, and without poking or excessive skin depression.

D. Correct Angle of Insertion. The needle should enter the follicle on an angle usually duplicating the direction and angle at which the hair shaft emerges from the follicle.

E. Excessive Manipulation. There should be no excessive tugging of the hair.

F. Current Balance. The balance of current intensity and timing should be proportional to the follicle's full anagen depth, resulting in a smooth release within a reasonable time.

G. Smooth Releases. The treated hair should slide-out easily, without skin elevation; that would indicate the hair was tweezed.



Examiners should look for proper insertion techniques

H. Skin Condition. The skin should not show signs of overtreatment, i.e., excessive redness, swelling or blistering, blanching, or other signs of excessive trauma, indicating the intensity was too high or too long, and insertions too shallow, or too close.

Examiners should focus on these fundamentals and not be sidetracked by nonessentials like: "Is the applicant's uniform slightly wrinkled?" or "Are the containers on the table lined-up in military order?" The exam is difficult enough without unnecessary hurdles.

Prior to the exam, there should be a warm-up period, permitting each applicant to question their model in regard to the pain threshold, and to establish a working point.

It's not fair for the examiner to get down at skin level right away. Examinees are usually a mass of nerves, and it helps if the examiner adopts a gentle voice instead of a crisp, bureaucratic tone. The less intimidated the applicants are, the more they will be able to demonstrate proper technique. A good examiner is objective and radiates a little personal warmth.

14 - WHAT IS A "UNIT OF LYE?"

A STUDENT ASKS: "In textbooks on the Blend technique I frequently come across the term 'units of lye'. Could you please explain exactly what the term means?"

The term that the writer refers to was first used, in connection with electrolysis, by Arthur Hinkel in his textbook *Electrolysis, Thermolysis and the Blend* (1968)

In 1947, Hinkel became one of the first two state-licensed electrology instructors in California, and a year later he opened the first Blend training center in Los Angeles. Teaching the new method, Hinkel soon realized the need for a reliable means of determining and describing the flow of galvanic current. Working with a number of former students, he developed our present system for measuring the production of lye via the flow of galvanic current in the follicle.

What Hinkel devised followed Faraday's law. This basic chemical principle ... again, viewed from the context of our field ... says that the amount of sodium hydroxide produced by electrolysis is the product of current used times the length of time the current flows.

According to Hinkel, when one tenth of a milliampere of galvanic current flows for one second, one "unit" of lye is produced. Put another way: When the milliammeter reads one tenth for one second's flow of galvanic current, one unit of lye is produced. Milliampere X seconds = units of lye. One can think of a unit as being a microscopic droplet of lye.

At last, with the "Units of Lye Chart," a simpler yet more scientific means was established to guide the Blend operator in judging the amount of galvanic current to be blended with the shortwave (thermolysis) exposure time, in proportion to the follicle's depth.

Referring to the table in the Hinkel textbook makes this clearer. But we should consider this table to be a guide, or recipe. As with any recipe, which may be interpreted differently by different chefs ... one might prefer more seasoning in his beef stew, while another might prefer less than that called for by the recipe ... it comes down to a matter of personal judgment based on experience and common sense. With the meter and the computation table, however, we at least have a *working guide* to use as a base.

If you are working away with a high, body technique; dealing with heavy, deep hairs on a man's back, the shortwave setting at the top intensity, hair flying out every one or two seconds, you can't pour in 80 units of lye, even though the table calls for it. You don't have time. Moreover, with that high manual intensity of shortwave, you don't need it! Under these conditions the manual shortwave alone will be sufficient to effect proper follicle destruction.

The time when you really want to "pour in" the galvanic, is with the deep, terminal facial hairs (or ingrown hairs, curved follicles, etc.). The exact amount of "galvanic current flow" will vary from follicle to follicle, depending on your release time. If one feels it prudent to move it up another 1 / 10, one may do so, since this is where the lye is needed. But it must not be overdone, we don't want the "liquidity" of the lye to drown the action of the shortwave. To produce a good blend, both currents must complement each other.

15 - HELPFUL TIPS ON POSITIONING THE PATRON

I RAN INTO A FORMER pupil recently, who told me that even though she's been in her own practice for some months, there are still times when she has difficulties with positioning. Of particular concern to her when we met was an extremely obese client who is seeing her for under-chin and underarm treatments. .

Positioning for under-chin and throat work can be difficult, particularly with large people who have a short neck and a large chest. Like the dentist, who insists that the uncooperative patient "open wide," we must insist that our client moves to the top of our treatment table, allowing her head to hang slightly off over the back edge. Use a folded towel or thin pillow under her neck to relieve the pressure.

Naturally, the client will want to settle down into a more comfortable position, but the operator must think about herself. It might take 30 minutes to treat the area, surely the client can cooperate for that long especially when it is explained that it is important in order for you to make good insertions and ensure that there will be no more than normal regrowth. Yes, these clients may be uncomfortable for a brief time, but you will have a misplaced spinal column very shortly, if you remain timid about getting their cooperation in this!

Some hairs slant almost horizontally close to the surface, and hair depth may range from medium to deep. Take a depth gauge and insert to the full anagen depth. If your method is automatic shortwave, or a higher blend face technique, you have a lot of action coming off the needle. If you're going to make a mistake, it's best to over insert than to under insert. A moderate intensity with ample timing is recommended. The low threshold of this tender area will keep you in a moderate range. The area requires much patience. If using progressive epilation (with manual) don't lift prematurely, let three fourths of the time pass before testing. Nothing worthwhile ever happens in a hurry; so be patient!

For underarm work, position the client on her back, with the arm overhead. Support the raised arm with a pillow. The more relaxed the patron is, the easier the treatment. Because of the high moisture content, be careful not to work too high or too close. The skin has a low threshold and can break down easily. However, it seems to heal easily.

Be aware that some skins tend to freckle from overtreatment. Obviously, the client wanting electrolysis in this area is desirous of a clean flawless look. But hair growth here can be deep, close and heavy, so scatter your work; save some for the next treatment. "Freckling" is usually normal PIH in predisposed clients.

The angle of hair inclination is between 45 degrees and horizontal. The texture can vary from fine to coarse, and the skin can be tough. Make sure you choose a needle that isn't too flexible. Match the diameter of the needle to that of the hair as it emerges from the follicle's opening. If the area hasn't been shaved, make it easy for yourself by clipping the hair shorter ... with the patron's permission, of course.

16 - SENIOR STUDENTS AND OVERTREATMENT

JUST RECENTLY I received a telephone call from a school instructor who wanted to discuss the question of senior students overtreating school clients. It is a problem that is not as uncommon as one might expect.

As your students advance in their studies, they tend to fall into what I call the senior syndrome. They work an area too high, too fast, and too close. For example: a freshman will give a 15-minute upper lip treatment without any difficulty; and then, as a senior, the same student working on the same upper lip with the same epilator at the same settings will have treatment results that are totally unacceptable. "Why?" we might well ask.

The answer lies in the fact that as a senior, the student is working faster, closer, and perhaps a touch higher. Thus, there is an overlapping of the fields of shortwave current within the target area. And, where we have an overlapping of the shortwave field, we have twice the intensity within the follicle.

Not long ago I was talking to a recently-graduated electrologist who confided that she still had days when she felt like a freshman ... experiencing anxiety and butterflies prior to, and during, treatments. I told her, "You're in good company. I've been in practice for a long time, and I still get butterflies. The secret is to make them fly in formation."

Longevity in practice is no guarantee of immunity from senior syndrome. Seasoned electrologists must continually be on guard, and as we work there should be an underlying concern about the effectiveness of our technique. All too frequently, in a hurry to *clear* the treatment area, we move along like we are hooking a rug. And, if we drop our guard during a long, tedious treatment. Our sense of perception is dulled, and we cannot discriminate between an area in which a lower, moderate approach would be more prudent than that of a higher, faster technique.

Regardless of what modality we use, the moderate, effective pace of our treatments must be presented to the consumer as a positive selling point. It is better to treat 300 follicles an hour effectively, with a minimum of regrowth, than twice that number with an excessive amount of regrowth.

Clients will grade us not by the number of hairs tweezed per treatment, but by the number of follicles permanently eliminated. They are paying for permanent hair removal; not a tweezing service! Clients who insist on a fast, painless tweezing service will be better off waxing or threading.

Electrologist instructors must remember that as students advance, they often need more guidance; not less. Some of the students may not think so, but a good teacher knows what can happen and will guide the pupil away from the pitfalls and anticipate problems before they happen.

17 - STERILIZING THE CATAPHORESIS ROLLER?

"**I HAVE A QUESTION**," writes one of my readers, "about the sanitization sterilization of the cataphoresis roller. Where I work, each of our epilators are equipped with two metal rollers, one large, and one small. Between clients, the rollers are stored in 70% isopropyl alcohol, which we change weekly.

"Recently it occurred to me that, personally, I wouldn't want my upper lip treated with a roller that had just been used on someone's bikini line. The thought also made me curious about the possibility of germs from cold sores around the mouth being transferred to the bikini line are. Is this possible? There is a lot of information on sterilization but I have never seen anything about the cataphoresis roller. Are we using adequate methods of sanitization? Since it is a metal roller with a plastic handle, I am assuming that it cannot be sterilized in the dry heat sterilizer. Can it be sterilized in an autoclave?"

I've been waiting for someone to ask this question. Following a Blend or multiple-needle treatment, the soothing, germicidal effect of the positive pole can be distributed over the treatment area via the cataphoresis roller electrode. The distribution of the positive modality neutralizes the action of the negative current used for the electrolysis treatment and helps reduce redness. Many clients find it a nice way to end a treatment. ·

Disinfection, Sterilization and Preservation, an authoritative text used as a guide by the US Centers for Disease Control (CDC) sets the following standards for sterilization and disinfection. Also refer to the AEA standards of infection control. Public website: www.electrology.com

1. Sterilization may be accomplished by either: (a) An FDA-registered autoclave-type sterilizer-5 psi (pounds per square inch) at 250° F (121 ° C) for 30 minutes; or (b) an FDA-registered dry heat oven-type sterilizer-340° F (170° C) for 60 minutes.

2. Sterilization forceps between clients requires that the instruments be thoroughly cleansed of debris. An ultrasonic cleaner with a dilution of a surgical detergent is suggested before autoclaving or dry heat sterilization. Rinse and remove moisture by patting with a towel, place instruments in sterilizer and secure door or covering. The selected temperature should be reached in about 15 minutes. Check thermostat setting to be sure it is for the correct temperature and make sure you have set timer for proper sterilizing cycle. Follow the manufacturer's directions.

If one wishes to sterilize the cata-roller, it can (usually) be unscrewed from the plastic handle, put in the autoclave or dry heat oven, and sterilized as outlined above. If one has a roller which is apparently impossible to detach from its plastic handle and cord, then the recommendation for "eye-shield disinfection" would be the method I would use. It reads: ·

The disinfection of eye shields can be accomplished by cleaning with detergent and water, rinsing and submersion in either (a) 70% (alcohol for at least 10 minutes; or (b) all EPA (Environmental Protection Agency) registered disinfectant with demonstrated bactericidal, fungicidal and viricidal activity.

Though disinfection of the cata-roller appears to have been overlooked in this text, my correspondent's practice of cata-roller disinfection does appear to conform to these recommendations for eye shields. However, disinfection is not sterilization, and we never give electrolysis treatment or administer cataphoresis on any area with a cold sore or open lesion. The clients themselves certainly don't want to risk having herpes spread from one part of their body to another. *All lesions should be considered infectious* until they are completely healed, and even then, the electrologist might choose (as I do) to cover the roller with facial tissue or cotton, saturated with witch hazel, alcohol or wintergreen, to avoid putting it in direct contact with the client's skin.



18 - WILL THE "BULGE" CHANGE OUR TECHNIQUE?

NOW THAT RESEARCHERS have pinpointed a new site within the hair follicle for germinative hair growing cells (at the base of the sebaceous gland, in the so-called "bulge" area) we might well ask, "How will the new information affect our epilation technique? Is the destruction of the papilla still warranted?"

For those electrologists who are followers of the gospel according to Hinkel's book *Electrolysis, Thermolysis and the Blend*, your technique will not change. The new research simply confirms what Arthur Hinkel already suspected back in 1968 when, speaking of regrowth he wrote:

"Destruction of the existing papilla is not sufficient to frustrate the growth of new hairs from any given pilosebaceous unit. The hair germ cells themselves must also be eliminated. As research has revealed, the cells of the outer sheath in the upper part of the follicle comprise the permanent portion of the hair germ. These cells are known to possess a variety of potentialities. When sebaceous glands are destroyed, for instance, the cells readily produce new gland structures to replace those which were lost. There is no reason why these cells could not replace a lost follicle structure as well, after its papilla cells had been destroyed."

In 1978, research into the factors that result in hair regrowth (published in the *Journal of Dermatologic Surgery and Oncology* in May, 1979), appeared to back-up Hinkel's long-held opinion. Conducted by three doctors in Japan, this study showed that "the most important requirement for permanent epilation by electrocoagulation is not only to destroy hair bulbs, but to destroy the isthmus regions of hair follicles and the sebaceous glands." The isthmus region referred to here is that area where the upper portion of the follicle narrows, just below the sebaceous gland.

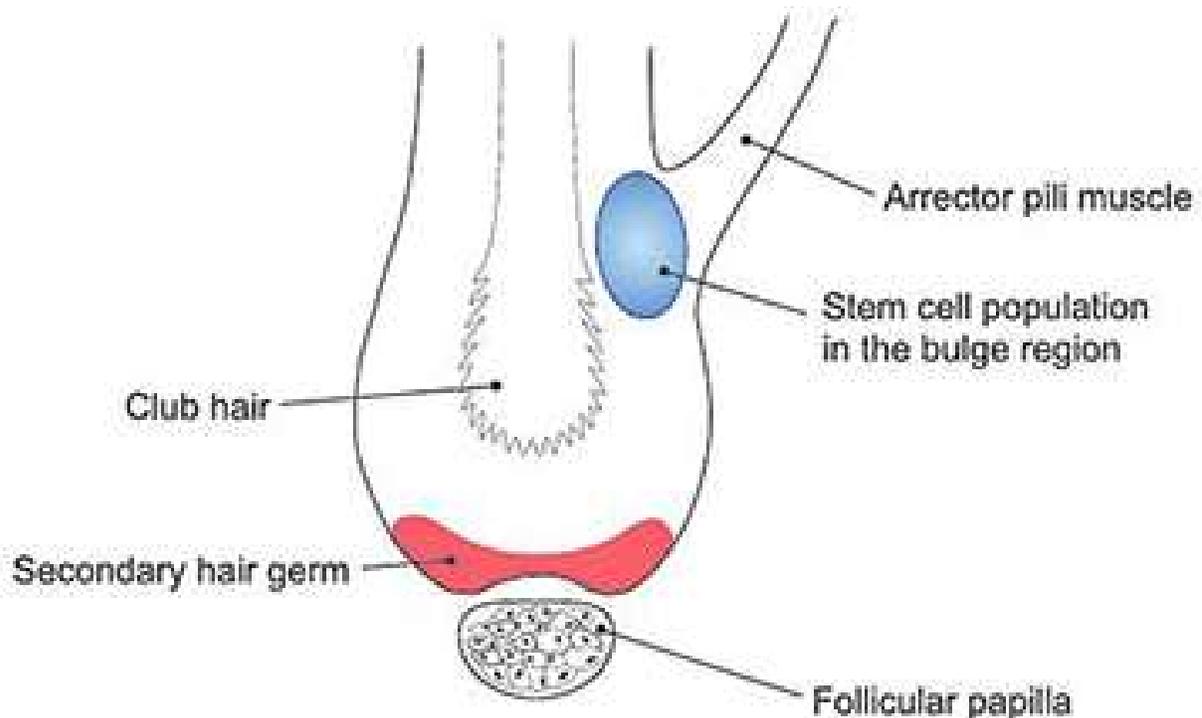
We must understand, of course, that neither Hinkel's theory or the findings in the latest research rule out the need for destruction of the lower dermal papilla. Gordon Blackwell, who published *Electrolysis Digest* ... the definitive journal in the electrolysis field for more than 30 years ... probably summarized the situation best when he said in a February 1986 article: "... as professional electrologists, we feel there is much merit in advocating the destruction of the lower half of the follicle, including the hair germ, if permanence is to be achieved."

This does not mean forgetting the papilla. It means that the papilla is our main target, and in the process, we should strive to eradicate the hair germ cells and a good portion of follicle structure as well.

What then did we learn from the latest research? Nothing that we didn't already know, if we were listening to electrologists like Hinkel and Blackwell. The follicle is a pocket-like invagination of the germinative-papillary layers of the epidermis and dermis, and since anagen hairs are "conceived" at the base of the degenerated telogen follicle, before embracing the dermal papilla for their main source of nourishment, at the full anagen level ... doesn't it seem logical that more than just the tiny papilla should fall within the electrologist's target area?

When a dormant telogen follicle still has a hair to mark it, our needle is inserted ... to the full anagen depth ... and sufficient current is applied to deactivate all of the follicle's growing cells. When we do this, we can be confident that the dormant tissue of that telogen follicle will not regrow another hair.

I believe at least three-fourths of the follicle should be treated, from the base of the sebaceous gland to the full anagen depth. The weight of evidence, supported by practical results, indicates that hair regrowth is lessened when more of the follicle is exposed to treatment. When the electrologist's timing is extended, with a moderate intensity, the area of influence is enlarged and the important germinative cells in the lower and upper regions of the follicle (that might be missed by a smaller pattern) will be destroyed.



19 - TREATING VELLUS HAIRS

I HAD AN INQUIRY FROM an electrologist overseas who wants more information about treating vellus hairs. She says, "Although I have been in practice for three months, I am still uncertain about vellus hair treatment. I believe this subject was inadequately addressed in my initial electrology instruction."

Knowing that vellus hair originates in a tiny cluster of cells within the sebaceous gland, without any substantial root structure, she questions how electrolysis can be effective in these cases. "Since we are not able to remove typical hair reproductive structures, i.e., sheaths and papilla," she says, "what sort of prognosis is there for permanent epilation of vellus hair?"

As well as wanting my professional point of view on the matter, the writer asks how I would counsel a client who requests that large areas of her vellus facial hair be removed.

Vellus hairs are abundant on "hairless areas" such as the forehead and side face, and between terminal hairs on normally hairy areas. While they are shallow ... growing and receiving nourishment from a sebaceous gland lobe ... and lack the usual terminal hair papilla, there is no doubt that electrical current effectively delivered to the right area will result in minimal regrowth.

An epilated hair with its sheath attached is not necessarily evidence of a more effective treatment than a hair whose sheath was sloughed-off below the stratum lucidum, or a sheathless catagen or telogen hair. Though we all like nice juicy epilations, with sheaths and bulbs intact, we need not put all our faith in the external display. More important is the effectiveness of the current we have applied to the source of the hair's nourishment. Electrologists are not skilled at destroying hairs: They are skilled at deactivating hair-growing tissue.

Vellus hairs, even with the help of a magnifier and strong back lighting, are almost invisible to the electrologist; though never to the client! Often there is difficulty in determining exactly where to insert the needle, and nothing can be more frustrating, even when the client has marked the tip of each downy hair with nail polish ... as one of my clients used to do. This client wore trifocals and how she managed to blaze each unwanted hair in this way, is beyond me.

Although true vellus hairs are practically untreatable, due to their near invisibility, the fine hairs we frequently refer to as vellus are actually intermediate type hairs, which are rooted much deeper and require different treatment. However, these intermediate hairs are just about as difficult to deal with as vellus hairs, for the experienced operator.

You might explain to the client who is self-conscious about a soft, nonpigmented down on her face that electrolysis was not intended to treat such a growth; that, to some degree, most women have these vellus hairs; and that they add to the illusion of softness of the skin. A skin lacking vellus hairs has a shiny, waxed or shaved appearance.

Those women afflicted with a heavier matt of down (often a side effect of cortisone) might choose to have the area waxed by a cosmetologist. But the best results, of course, will come to those clients who manage to find an electrologist with the necessary patience, and who persist with regular treatments.

The lady who sent me this question says she has been in practice three months. I would like to remind her that this is hardly sufficient time to see either vellus or intermediate hair regrowth. You are still running on faith. Don't get discouraged, and remember: effective current, at the correct target area will result in permanent hair removal regardless of whether the treated hair is vellus, intermediate, or terminal.

My article prompted the following response from a reader ...

Dear *Hair Route*:

I'm writing to you about an article that John Fantz wrote in *Hair Route*. In this article, Mr. Fantz wrote: "Those women afflicted with a heavier matt of down ... often a side effect of medication ... might choose to have the area waxed by a cosmetologist." I believe this is very wrong advice!

I have had hair all over my body (lip, chin, back, shoulders, breast, stomach and lower arms), since I was 14 years old. What I have is 21 hydroxylase deficiency of the adrenal gland. I travel back and forth to John Hopkins Hospital in Baltimore, Maryland. I have done this for 12 years. I'm also associated with two endocrinologists, Frank L. Schwartz, M.D., and Ronald C. Michels, M.D.

Now, with regard to waxing. Waxing can be stimulating to vellus hair and cause it to accelerate on the face. Then after it is stimulated to greater depth and coarseness. Also, if you have vellus hair. That, right there, tells you that the person has a problem with testosterone or 5X-dihydrotestosterone.

Waxing is a specialized tweezing method. And we know that tweezing leads to darker, coarser hair, and distorted hair follicles. If you have stimulation hormones, and you wax (tweeze), the blood supply to that area is increased. If vellus hair is already growing from the lobe of a sebaceous gland, an increase in the blood supply to the immediate area greatly enhances its growth. With nourishment, it tends to grow deeper and coarser. A plentiful supply of blood is necessary for the development of a hair to become deeper. Blood supply merely nourishes existing hairs. I don't think Mr. Fantz should have put anything in his article about waxing. I think it was very unprofessional.

Jane Doe, W.
Virginia

Mr. Fantz responds:

In my May '91 column I wrote: "Those women afflicted with a heavier matt of down (often a side effect of cortisone) might choose to have the area waxed by a cosmetologist. But the best results, of course, will come to those clients who manage to find an electrologist with the necessary patience, and who persist with regular treatments. "

While I would not normally recommend facial waxing (and never terminal hair), clients distraught over an extensive vellus matt of down, that's beyond electrolysis treatment, might wish to consider the option of waxing. It would be their choice.

20 - SUPERFLUOUS HAIR: A LIFELONG PROBLEM

NOT LONG AGO I received a very touching letter from a practicing electrologist (I will refer to her as Ms. X), who personally has had a lifelong problem with superfluous hair. "I became an electrologist," she writes, "after years of treatment for facial hair. I also have dense dark hair on my forearms, thighs, lower back and buttocks."

"At age 31, this thing has become a horrible obsession with me. My body image is so poor I shower in the dark. Since I was 15, I have hoped there would be advancements in the electrolysis field that would bring me some relief, but that has not been the case. In recent months I have undergone 10-hours of electrolysis treatment on the buttock area alone, with no visible results. Is this something I'm going to have to live with? I feel like a freak and have no self-confidence; it is affecting every aspect of my life. Do you have any suggestions?"

I answered the writer personally, by telephone, and I hope my advice gave her encouragement in a meaningful and practical way. It might also be helpful to other, similarly afflicted individuals, to review Ms. X's problem in this column.

When the electrolysis technique was developed in 1875 it was intended only to remove an occasional wild eyelid hair: there was no thought of treating extensive hair growth, as we do today. However, it's still the only successful system we have, and I can foresee very few changes ahead. Although a laser modality might be possible in the future, no proven, effective equipment of that kind currently exists for our use. Meanwhile, the best we can do for the hereditary hirsute female is reassure her that a program of regular effective electrolysis treatment, and patience will eventually be worth the effort.

During a telephone conversation, Ms. X told me that she uses the high frequency modality. She also said that while she feels her "face technique" on clients is effective, she has not been pleased with her work on bikini lines.

Now, the groin is an area of difficulty with a very fast, intense body technique, because the hairs are deep and the skin is tender and moist. And this leads me to wondering whether that might be the problem Ms. X's own electrologist encountered when treating the buttocks.

If the hairs are deep and coarse, they will require a longer exposure of high frequency at a moderate coagulating intensity. The needle diameter should be about the same diameter as the hairs being treated, and it must be long enough to reach the follicle's full anagen depth.

With a deep heavy growth, the technique of extending the intensity and timing (a moderate intensity) creates a larger pattern of coagulation, one that can reach out to the vital target area. The epilated hairs should release smoothly. Hairs that epilate with excessive traction signal future regrowth.

Treatments should be confined to a single area until it is observed that there is a minimum of regrowth, the permanent clearing of an area then becomes more evident, and thus more encouraging.

Ms. X must not refer to herself as a freak! Let's stop that kind of talk. Each client sees her hair problem as the worst. In reaching out to help her clients, becoming less self-conscious and more other-people-conscious, the electrologist may have the key to coping with her own hair problem. Above my treatment table, tacked to the ceiling, is the famous poster of a cat hanging from a scarf.



21 - THE MULTIPLE NEEDLE MODALITY

I HEARD FROM an electrology student who is interested in multiple-needle galvanic epilation but would like further opinion on this modality. She writes, "In my new practice, I will be working on a longtime client who has excessive amounts of body hair, and I am wondering if I should purchase a multiple-needle epilator. Do you feel the technique is outdated? It's a large investment, and I realize that most other new clients will only be familiar with flash thermolysis or the blend. I need to know more about this topic."

The multiple-needle epilator was the ingenious idea of Paul M. Kree, who in 1916 added five extra needle outlets to a single-needle galvanic epilator. Because early-day single-needle galvanic epilation was so slow, treatments were usually confined to the face, but consumers were always urging operators to remove the more extensive growths of body hair. With Kree's invention, this became more practical.

Today, few of our practicing electrologists employ galvanic current, and I think that's unfortunate. It's a shame so many of our schools shy away from exposing students to our oldest modality, which not only gave us our name but our reputation for permanency.

The galvanic process first used by Dr. Charles Michel in 1875 to remove wild eyelid hairs has had poor press since the advent of shortwave epilation. Until 1924, however, galvanic electrolysis was the only method for removing unwanted hair. Though not as fast as the new shortwave, it did offer a minimum of regrowth, due to its slower, thorough action. It didn't really lose favor until the early 1950s, and by that time it had enjoyed great success for some 80 years. A "distorted follicle" excuse was never needed for galvanic current.

Many current-day ophthalmologists prefer the fluid mobility that galvanic current offers in the treatment of wild eyelid hairs. A 1971 American Medical Association publication compares galvanic to shortwave this way: "On the other hand, electrolysis [galvanic] by a proficient operator is less likely to produce scarring, and the incidence of regrowth is less ... most experts estimate that about 15 to 20 percent [regrowth] is normal; the higher percentage being more common to electrocoagulation (shortwave/thermolysis)."

I think all our schools should cover the basics of galvanism and give every student the opportunity for some practical instruction in this modality. Using a single needle, beginners can practice insertions (without current) on their own arm and then, once insertions are mastered, gradually start adding 3 to 5 tenths of galvanic current.

Some novices seem to have a fear of the galvanic modality. To allay those fears, there's a little routine I use that demonstrates, very simply, the character of this current. After inserting the probe into a follicle on my forearm, I quickly turn the epilator's galvanic current all the way up to the top of the meter and quickly back again to zero; something you'd hesitate to do with even a low-level shortwave intensity. Indeed, there is no time for the galvanic to do anything.

Once they have worked with galvanic, freshmen have less fear of this slower current, and more respect for the faster shortwave. Which modality the electrology student chooses to use in future practice will depend on personal preference, but such decisions must come out of knowledge. Persons choosing not to use galvanic electrolysis should arrive at that conclusion only after receiving education in the different modalities. Those who do choose to use galvanic current, be it via multiple-needle or the blend (which is merely single-needle galvanic with added low-level shortwave), will be utilizing a modality which has a venerable record.



Multiple-needle in the UK
<http://electrolysisbysimcha.com/>

22 - EVALUATING POST-TREATMENT CRUSTS

DISCUSSING THE SUBJECT of scabbing with electrologist instructor Michael Bono not too long ago, he said to me, "Every tiny pinpoint crust isn't necessarily a sign of overtreatment, and we should differentiate between the various levels of overtreatment." And it was this remark by Michael that came to my mind when a Japanese colleague recently asked for my opinion on treatment scabs.

Let's define post-treatment scabs/ crusts; categorize their levels of effect on human tissue, discuss how we can explain scabs (when they occur) to our clients, and look briefly at how they can be avoided.

Post-treatment scabs are caused by epidermal blanching/blistering due to overexposure from automatic or manual thermolysis, causing tissue and/or blood fluid to secrete from the injured follicle and form a dry crust.

The three thermolysis effect levels are:

Level I: minor blanching: tiny pinpoint scabs; skin pink for about thirty minutes. Healing within a week.

Level II: large scabs: blanching and blistering; skin red, swollen and moist. Healing, in about two weeks.

Level III: very heavy scabbing; blanching and blistering; skin red and swollen: weeping follicles. Healing four to five weeks-a high probability of permanent lesions.

The color and size of scabs is a clue to the level of overtreatment. Pinpoint honey-colored scabs indicate the minor first level, larger red scabs, the second and very large, dark red scabs the third level. Yellowish-grey scabs indicate infection.

When a client is disgruntled because she had to cancel an engagement due to some Level I scabbing on the upper lip, what can we say to put her at ease? I must confess that I occasionally push a client's skin too far, and when I'm called on to explain I usually say something like: "Well, I guess we tried too hard to 'kill' those hairs." Then I explain that the tiny temporary scabs are nature's Band-Aid, formed as a protective covering during healing. And I urge them not to pick them off and thereby retard recovery.

I also tell them that because their skin is apparently very sensitive, I will change the procedure to a more moderate "face technique." This way, I'm letting the client know that the situation is easily corrected.

When discussing overtreatment with clients, we must choose our words wisely.

Electrologist educator Jane Riddle suggests we use the word "manifestation" with our clients; I agree: No matter how good we are at our work, minor post-treatment manifestations cannot be avoided totally ... unless, of course, we forget to turn on our epilator.

Thankfully, scabbing is not as common following facial treatments as it is with body work. This is because clients expect (and often encourage) their electrologist to work on the more extensive body hair at a faster, more intense pace than they would on the face.

There is an old adage in our business: "Sell the spots on the body, avoid them on the face." But we must take care not to misread this, for the old cliché refers to pinpoint-sized Level I scabs-that might be tolerated on a man's back, but never on a woman's face. The problem is not always to do with the overtreatment level of the scab, but rather where it's located!

It is best to avoid all scabs, regardless of how minor. Unfortunately, no matter how proficient our epilator technique, every once in a while, we will push the treatment area a little too far; yes, perhaps even a shade beyond Level I. And when this happens, we must remind ourselves of the prime contributing factors. They are: working too intensely, too long, too shallow, or too close.

In their advertising, too many clinics emphasize "minimum regrowth" and "rapid results," which puts tremendous pressure on the operator and frequently results in gross overtreatment. So, I often encourage private practitioners to reevaluate their marketing. Yes, we have to sell electrolysis as permanent, but at the same time we must alert consumers to the possibility of some regrowth and, especially with body work, to some once-in-a-while Level I scabbing.



Cindy Cassady School in Florida

23 - IS THERE REALLY "NO REGROWTH?"

THERE ARE TWO "NEVERS" in our profession. Never market painless, and never market "no regrowth" treatments. But an article by electrologist Harvey Grove, appearing in the January 1992 issue of the American Electrology Association's *Journal of Electrology*, has the subtitle "Regrowth is Mostly an Illusion." In this article, Mr. Grove says, "Until proven otherwise, electrologists should take the position there is no such phenomenon as regrowth [in electrolysis]." Grove backs up his statement with a quote from Dr. William Montagna: "The phenomenon of regrowth is an illusion," says the renowned biologist, writing in a magazine for cosmetologists.

I suppose one could say how nice it is that Dr. Montagna has such a high regard for the effectiveness of our treatments, but his premise is not realistic and such misinformation is misleading.

Dermatologist Dr. Richard Wagner made the following statement at a recent electrolysis association congress: "Electrolysis regrowth is complex and mysterious; no one knows if it really exists or not." And he, too, supported his statement with the quote by Dr. Montagna.

Does this mean, then, that whenever our clients grumble about regrowth we should dismiss the distorted follicle alibi and quote Montagna and Wagner, telling the client, "It's only an illusion. Nobody knows whether electrolysis regrowth really exists or not."

There's nothing complex or mysterious about post-treatment regrowth (not to be confused with apparent regrowth, which may be new growth). It's very simple and could be compared to gardening. As spring approaches each year, gardeners of the world de-weed their treasured plots, knowing that a few days later some of the treated weeds will sprout through the soil again. Why? Because, apart from new seed growth (apparent regrowth), the roots of active plants beneath the soil surface (impossible to see), were not properly eradicated.

Like the gardener who extracts weeds, electrologists understand that a percentage of the hairs they treat will reappear. This is because we are working blind; trying to destroy a target we can't see, and sometimes we miss the target or simply don't apply enough current to the target area.

Yes, a certain amount of post-treatment regrowth is a normal, acceptable part of our work. But how much treatment regrowth is acceptable? At least one official set of standards for permanent hair removal treatment submits the following guideline: "A process alleged to be effective must remove permanently at least 40-50% on initial treatment; 50-60% should be average, with possible highs of 60-75%. The increase of percentages would be proportionate to the practitioner's proficiency."

While Mr. Groves' "no regrowth" theories are supported by innumerable references from eminent medical doctors, let's not be too hasty to embrace the theoretical encyclicals of non-electrologist authorities whose theories are backed up only by experiments with mouse whiskers.

While there may be no medical research to show that there is treatment regrowth, we electrologists don't need proof. It's something we experience in our daily work. And each treatment we give, via a good epilator technique, is a challenge for us to keep regrowth to a minimum. The weight of visible evidence, supported by experienced working electrologists and practical results, indicates that while some treatment regrowth is normal, we can keep it to a minimum when more of the follicle is treated. And that should be an acceptable goal for good electrologists and their properly prepared clients.



24 – ELECTROLOGY DURING RECESSION

"AM I FOOLISH TO start my own practice during the recession?" a writer asks. "I'm currently working with a well-known chain of clinics, and I've reached the point where I'm analyzing the benefits of self-employment. My job is secure and I don't know how many of my clients would follow me. Please, I need some advice."

Recession or not, it takes a leap of faith to start your own practice, and it can be especially difficult if you don't have a loyal following. This brings me to the first of several important points, i.e., a recent U.S. court decision ruled that your current clients are not your clients but your employer's clients. I know it doesn't seem fair, unless you're the boss, but that's the way it is in our field.

If you signed a work contract with your present employer, blow the dust off it and review it carefully. It is not unusual in these agreements to have a clause which prohibits a departing employee from starting up a private practice within a certain radius for a number of years. Far too many electrologists sign such restrictive contracts without reading the fine print.

Work contracts aside, a person opening up a new practice can't count on old clients to follow them. For numerous reasons it just doesn't seem to work that way, especially when the electrologist is leaving an established clinic, where a competent replacement is close at hand.

Considering the poor economic situation these days, and given that your present job is secure, I think I'd suggest that you hold back this important move for a while; especially since you seem uncertain as to how many of your old clients you can rely on. Meantime, you might want to start gradually purchasing some of the equipment you are going to need when things are more settled and you are ready to take your leap of faith.

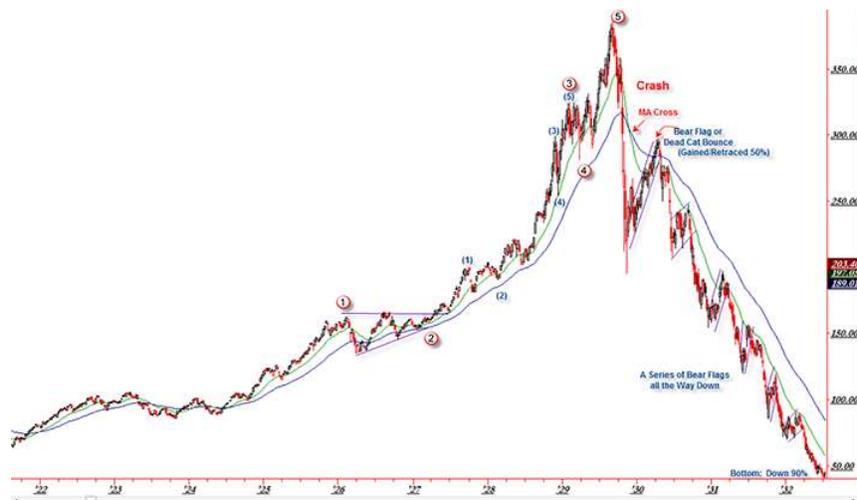
All right, so you've considered all the factors, and yes, you still think you can make a success of being your own boss. I don't blame you. I made such a move a number of years ago and have never regretted it. Two things now take priority: finding an office location; and finding clients to work on.

One of the best things about the electrolysis business is the fact that it does not require a lot of space. But that's also a problem for us, renting minimum footage in the right area, with minimum rent. A good idea is to scout around for a space that is unused and currently unproductive, such as An unused storage room, a beauty shop, chiropractic office, health spa or nail boutique. All of these locations might give you shared access to a reception room, receptionist, washroom facilities and parking.

The telephone is another large, but crucial item, for those in our field. There are now few land-lines in use today and your cell phone will be your business life-line. Be sure your outgoing message is warm and friendly and be sure you know how to do texting, because most clients prefer to make appointments by text. Also, check-out the many on-line appointment aps that will make your life much easier.

For the first year, until you get established, you might persuade the landlord to accept a percentage of your business earnings as rent. And if you're spending your own money to paint and fix-up space that was formerly nonproductive, you might even get the first few months' rent-free.

Once you have your office, you're faced with building up a clientele. Advertising plays a big part in this, but how can we advertise without spending too much money? Yellow Pages used to be the best bet in our business, but such advertising is nearly worthless today (and it was expensive). Your best option is to invest in a website. Your website doesn't have to be fancy or expensive. Such programs as WordPress allow you to design your own website. If you're a member of the AEA (American Electrology Association), they can design a website for you at a reasonable cost.



Stock market crash of 1929

25 - HOW TO "SELL" ON THE PHONE

LECTURING TO STUDENTS in different parts of the world, I am frequently asked to discuss "telephone sales" techniques for electrologists. I know I shouldn't be, yet I'm always surprised when young people seek advice on this subject; to "seasoned practitioners" like myself, the answers always seem so obvious. But I've also been around long enough to know that it's dangerous to get overly confident or too complacent in these matters; especially in these recessionary times.

For a number of years, one of the telephone companies ran a promotional campaign with the theme: "Reach out and touch someone." Similarly, this is how we must respond to those potential clients who call us on the telephone. We have to reach-out and "touch" them with empathy: let them know that we understand *how they feel*, and assure them that their case isn't going to be handled lightly or frivolously when they come into our clinic. They won't be just another follicle.

When a woman contacts us by phone, usually via your website or on-line listings, we know that she is familiar enough with electrolysis to look us up on-line, and has, perhaps, shopped around and heard contradictory advice. What we must do is find something to say that will persuade her that we are the best person for her needs. How can we do this? What recession-busting technique can we use?

To begin, let's never underestimate the amount of courage it takes for the average prospect to make that first telephone call ... or email. Understanding this, we can make it easier for her by projecting real concern. Perhaps she wants to have the work done, but is unwilling to make an appointment at this time. However, anything we can ethically say to get her into the office is appropriate because the office is the only place to conduct a professional consultation.

On the phone, or via email, you can't answer a lot of questions from a first-time caller. It's especially difficult if you're in the middle of a treatment session with a valued client. Tell the caller, "I want to help you as much as I can but I'm with a client right now. May I call you back in 20-minutes?"

Once you have the person's name and number you can return their call at your convenience, when you're calm, in control, and you've had a few minutes to study your appointment book and figure out what would be the best time to get her in for a complimentary consultation.

Back on the phone, you'll have to answer the proverbial questions concerning the cost of your services, etc., but you must get the conversation around to the subject of a complimentary consultation (and maybe a short demonstration) as quickly as possible. Tell her, "Come in and let's talk it over. I've got time at 2 p.m. today." Never say, "Just drop in. I'm free anytime this afternoon." If you're free all afternoon, she's bound to wonder what's wrong with your work. True, much of your time may not be booked, but it's also true that you are available at 2 p.m., so make a definite time for the appointment. Even if it's one of those very slow days, you can create an illusion of activity by booking appointments back-to-back. As one enters, the other is just leaving. Everybody's happy.

The complimentary consultation and demonstration will encourage the client to take action. It's an opportunity for her to look you over without major obligation. She isn't going to get pressured into a series of prepaid treatments.

At no time do you need to be intimidated by the fact that you are new to the business. If you're a recent graduate, you will be forgiven if you place a potted plant so that it obscures the recent date on your graduation diploma. Once the client has heard your presentation and had a few sample hairs removed, she will be convinced of your capabilities and it won't matter that you're the new kid on the block.

Just remember that the key to a successful phone technique is, "Reach out and touch the client." Let them know that their case is of special interest to you, be approachable, and stress the need for a personal consultation in your office.



26 – ELECTROLOGY IN NORWAY

TRAVELING OVERSEAS TO lecture and being able to observe how electrologists in other countries go about their business is a great educational experience, and I have been fortunate to have had several such opportunities. However, flying over the "pond" toward Norway last October, I realized I was experiencing more than the normal amount of pre-podium butterflies. The Norwegian author and electrolysis educator, Sidsel Thomsen, was sponsoring "A Weekend with John Fantz" at a fashionable hotel in downtown Oslo, and I felt I was not totally prepared.

Ms. Thomsen is editor of *Beauty and Health*, a Norwegian magazine that had promoted the Fantz workshop, and response had been very good. About a hundred electrologists were coming to hear me talk about blend epilation techniques, and I wasn't even sure I'd have a blend epilator to work with! I certainly wouldn't have my own trusty machine to rely on.

About a week earlier, I had taken my travel demo into the manufacturer to get it converted for use with the higher voltage current I would be using in Europe. Unfortunately, I had left it too late to get the work done before my scheduled departure.

The blend epilator is not well-known in Europe, and I feared that their shortwave machines would be much too intense for my purposes. I fervently hoped that my Norwegian sponsor would be able to provide me with an epilator cool enough for me to demonstrate manual shortwave techniques. Arriving in Oslo the day before the seminar, I shared my concern with Ms. Thomsen.

"This afternoon, I'll show you what can be done," she replied, "I have a client who won't mind you sitting in." And as I observed her technique later that day, I was relieved to learn that her shortwave epilator would give me the output I'm used to. I certainly wouldn't have the blend, but I would have the manual low-level intensity thermolysis current I needed.

My presentation and workshop was well received. Some of the students in attendance were novices, some were recent graduates, others were seasoned operators. Many of them were hearing for the first time about the two-handed technique, progressive epilation, and lower, extended shortwave exposure. I worked with a small, smart-looking English shortwave epilator, with intensity settings between 1 and 2. I got smooth releases on deep, heavy, chin and body hairs in three to five seconds (depending on depth). A smaller, German-made epilator gave me the same good results.

Although the Norwegians' epilators are manual, my method of working with long, low-level shortwave (i.e., for more than just a quick one-second tap) was unheard of. I was watched with great interest as I treated deep heavy hairs on a man's beard smoothly and progressively. Everyone felt like they were learning something different, and they were excited about it.

I learned a lot, too. I learned to work with an epilator that had a finger-switch control on the needle-holder (replacing the footswitch). I found it quite difficult to push the button and keep the needle steady at the same time, but my hosts told me I did well.

I also learned, to my surprise, that most electrolysis treatments in Norway and Europe are confined to abnormal growths of hair on the face (beard area). While some Norwegian women will shave their underarms and legs before vacationing, it's still not a common practice around home. Few women visit an electrologist for things like eyebrow arching, and there's a large untapped market of body work.

Our seminar went for three days, with two days of intense tutoring on a one-to-one basis. The students spent their mornings listening to theory and did practical work on clients in the afternoons. Everyone had a chance to try out the two-handed, low-level manual shortwave technique by removing hairs from my forearm.

I'm looking forward to a return engagement, with a blend machine, next time. The people and the country are beautiful, and I'm now hooked on pickled herring.



27 - MY FAVORITE "HINKELISMS"

TEACHING electrology students a practical working technique is like showing a youngster how to ride a two-wheel bicycle. At the start, you attach training wheels, and after ample experience, you remove them.

This metaphor was one of the first ever related to me by Arthur Hinkel after I started working for him as an instructor at his Wilshire School of Electrology. I would enjoy hearing many more such analogies in the ensuing years, for colorful speech was an integral part of the Hinkel mystique.

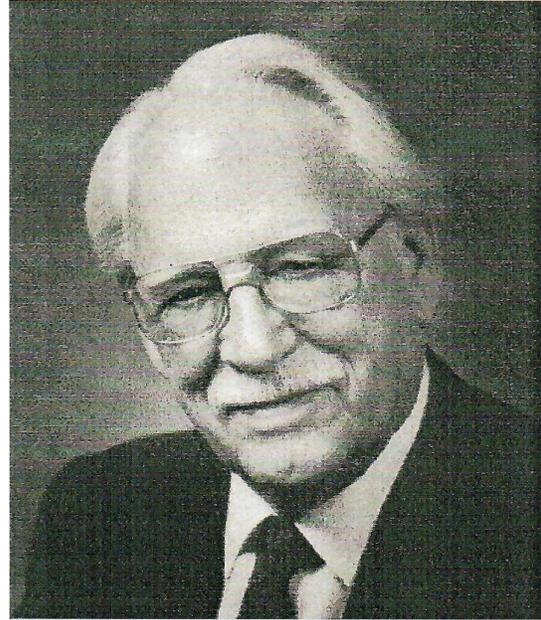
It is well known that Arthur Hinkel was a coinventor of blend epilation and that he authored the textbook, *Electrolysis, Thermolysis and the Blend*, but his abilities as a teacher are known only to those who studied with him prior to his retirement.

Usually, after giving his daily lecture to students, Hinkel would retire to his office to have a cup of coffee.

On one of these occasions, after complementing him on his lecture, I asked him why he hadn't put a certain point in his textbook. "If I had put everything in my book," he said, with a smile, "I'd have nothing to jawbone."

While Hinkel always emphasized that alarm words should be avoided in public relations material directed to the consumer, his school lectures were full of graphic, thought-provoking allegories that made dull subject matters come alive for his students.

Still, many of his more humorous quotes could be misinterpreted, and therefore inappropriate for a textbook. I recall how upset Hinkel was when, shortly after the first printing of his book, a reviewer critiqued him for referring to treated follicles as "cooked" follicles. However, while recalling some fond personal memories of Hinkel, following his death [January 17, 1993], it occurred to me that some of the master's unpublished sayings, axioms, and ruminations, Hinkelisms I call them, should be recorded for posterity. Below are some of my favorite Hinkelisms or out-takes that didn't make it into his famous book.



Arthur Hinkel

FOR THE STUDENT

The following are some of the pearls of wisdom Hinkel gave for students who attended his school.

"Community health, happiness and well-being should be the objectives of a student taking this course."

"It takes skill to smoothly insert a needle into a follicle, destroy only hair germ cells, and leave the rest intact."

"A painless treatment is a worthless treatment." (My favorite!)

"Be aware of clients that can take pain, but have skin that won't ... skin that can take pain, on clients who can't."

"If the head wants the hair removed, the skin can take it. If the head can't take it, the skin can't."

"With the blend, you should be able to work on just about anybody. It's more painful to have injections by a dentist than it is to have work done with the blend-provided, of course, that you aren't making your own follicles."

"We are just big friendly mosquitoes. A little firefly puts out more current than we do."

"Think of electrolysis as an art, not a science. Our field is a practical trade, in which we develop an artistic skill."

"Doctors are not experts at hair removal. You students remove more hair permanently in one day than all the doctors in North America do in one year."

ABOUT TECHNIQUE

The paramount theme in Hinkel's instruction was to "slow down, and put effective current within the target area. Hinkel would continually exhort his students to "work at a moderate pace and you'll get a higher percentage of kill. Your finished cases will give you more personal satisfaction, and they'll be your best form of advertising."

"If you're epilating away, fast and mindlessly, like you're hooking a carpet, with an ineffective current and you're not getting results, you're robbing your clients. It's got to hurt the client either in the follicle or the pocketbook."

"You don't have to stretch the skin of all clients; some clients have skin as firm as a table top."

In a February 1986 interview published in *International Hair Route* magazine, Hinkel said, "One thing I always hoped my book would get across ... and I'm not sure it has ... is that it is more important to go slower and treat a higher percentage of hair permanently, than it is to try to impress a client with speed."

"Don't apply too much pressure. Don't overstretch. Don't overtreat. We don't want patrons leaving the school with faces looking like a spanked baby's bottom."

"If you overtreat, you can't blame the equipment. In your kitchen, you know how to regulate the oven heat relative to what you're baking. If you burn the cake, you don't criticize the oven."

2.

"Some electrology educators in the old days taught their operators to line-up all the removed hairs on a piece of cotton ... all with nice little bulbs and connected tissue so the client could see how many hairs had been permanently killed." **Hinkel was very critical of this procedure. At the Wilshire school he told students:** "Sure, all the hairs on the cotton are killed, to kill them more permanently you'd have to hit each one with a hammer but that doesn't guarantee no regrowth **in the follicle.**"

"You can't tell if an epilated hair is permanently removed simply by observing that it has a bulb on the bottom of it. The only way you know whether a hair is going to grow back is to wait and see if it does or not!"

"Any clown can do the poke, tap, and pluck technique. Wiggling the needle, they say 'Oh I'll just move it up and down to make sure I'm at the proper depth.' This is called the 'I'll get you wherever you are' method."

"Don't epilate too much in a small area-pushing the skin too far, beyond its ability to hold up. Don't gamble on the short side. Like the stock market, more people play it long than short. Always leave a margin

"We are asked by the consumer to deliver the impossible: to painlessly remove every superfluous hair in one treatment, with no regrowth, no swelling, no pinkness, no 'nothing!' An electrologist is not invincible. You can't successfully treat all that fine blond fuzzy invisible down; you'll go blind trying. Recognize your limits, you can't perform miracles."

Photo: entrance to Hinkel's school in Los Angeles



28 - THE INITIAL CONSULTATION

LAST NOVEMBER IN THIS column, I gave some advice to students on the subject of phone sales techniques. As a result of that article, I recently received a letter from a young practitioner who wants some tips on handling the first office consultation that follows the primary telephone contact with a potential client.

As a general rule, students graduating from schools of electrology today are fully aware of the rules for giving a good consultation. How to conduct one's self professionally, how to give a brief description of the electrolysis procedure, and the importance of acquiring a full and accurate case history are topics that usually get well covered in class; so, I will confine my comments here to some personal ideas I have about how to deal with two critical points, pain and regrowth.

Electrologists of long experience know that the word "pain," even though it may have been carefully avoided by the practitioner during consultation, is never far from the minds of most new clients. Sooner or later, the subject is going to come up. Why, then, would we not face the problem head on?

I take the direct approach and get the "pain" topic out of the way early in the consultation. Reading the client's mind, I point to my wall chart and explain how the follicle resembles a pocket. You can then say: "We insert a tiny probe into the follicle. It's like placing your hand in your pocket, you won't feel it. When I do the epilation you will feel a little warmth, and it's the warmth that stops the hair from growing.

The warmer you can take it, the more hair I can remove. It's in your best interest to allow me to use as much warmth as you, and your skin, can tolerate. But you are in the driver's seat. In other words, if it's too warm, let me know, I'll make it less warm. By the same token, if you don't feel any warmth, let me know, because it must be warm to be effective. You are paying for permanent hair removal, not a tweezing service."

It's not uncommon for the inquirer to ask if we guarantee our work. You can reply: "Yes, I guarantee that every follicle that is properly treated by me will not grow another hair; but I am going to miss a few, because I'm trying to get at something I can't see. So, each time I treat an area I'll permanently remove most of the hair, but not 100 percent."

We must be honest and up-front with our clients in regards to regrowth and pain. The client who has been sold on the basis of unrealistic expectations is bound to be unhappy. If, on the other hand, we explain to the client that we are using the only means known to permanently remove hair and convince them that we are skilled with our techniques, their response can only be one of trust and confidence.

Firstly, when you're telling clients what they can expect from electrolysis, it's best to discuss the question of regrowth right up front. I like to proceed in the following manner: "Ms. Edmondson, suppose I treat 100 hairs on your chin. Of those 100, perhaps I'll remove 75 permanently. So, 25 will grow back because I missed them. You see, even though I'm using the best of my skill and the finest state-of-the-art equipment, I can't see under your skin. We are trying to destroy all hair-growing tissue, and sometimes it's difficult to put the proper 'warmth' within the target area.

"We treat a number of follicles and remove most of the hairs permanently. But those that we miss will appear several weeks later as regrowth. I'll treat them again and destroy most of them when they reappear. It may take several months to clear the area, but as we near the completion of our work, each treatment session will be shorter and shorter. Electrolysis is a process of elimination."

This easy-to-understand explanation makes it clear to the prospective client how the treatment program works, and gives her a realistic understanding of what the electrologist can and cannot do. We are not miracle workers!



29 - INSTRUCTORS MUST BE PATIENT WITH STUDENTS

IN THE QUESTION-and-answer periods following my presentations, I occasionally get impatient and start giving my answer to a question before the questioner has finished asking it. Why? I guess it's because I immediately recognize certain questions, I've heard most of them so many times before. This is rude on my part, of course, and it isn't fair to the person making the query, or to the audience who wants to hear it.

Though we may have heard a question a thousand times before, as professional instructors we must be mindful that everything is new to the novice, and our answer has to be crystal clear and fresh.

That certain questions are asked over-and-over-again attests to their importance at least to the newcomers in our field, so it is essential that we review them periodically. Here are some perennial favorites:

"With the blend, which of the two currents is most effective, shortwave or galvanic?" I usually answer this question with the analogy that asks: Which tool was the most effective for Michelangelo when he was sculpting his figure of David, the mallet or the chisel? The answer, of course, is that each tool is dependent on the other for its effectiveness. And the same is true in our field: for effective blend epilation, the shortwave and galvanic currents are each dependent on each other for optimum results.

"If you had to choose between the two modalities to work with (shortwave or galvanic), which one would you choose?" is another question I hear all the time. My answer is: a low-level intensity of shortwave that would allow me to use the manual, progressive epilation, two-handed technique. It would be the same technique I've used for years, except it would lack galvanic.

"Which hurts more, shortwave or galvanic?" When used alone, both currents, to be effective, should be felt. When blended, the shortwave is felt and usually the galvanic isn't noticeable.

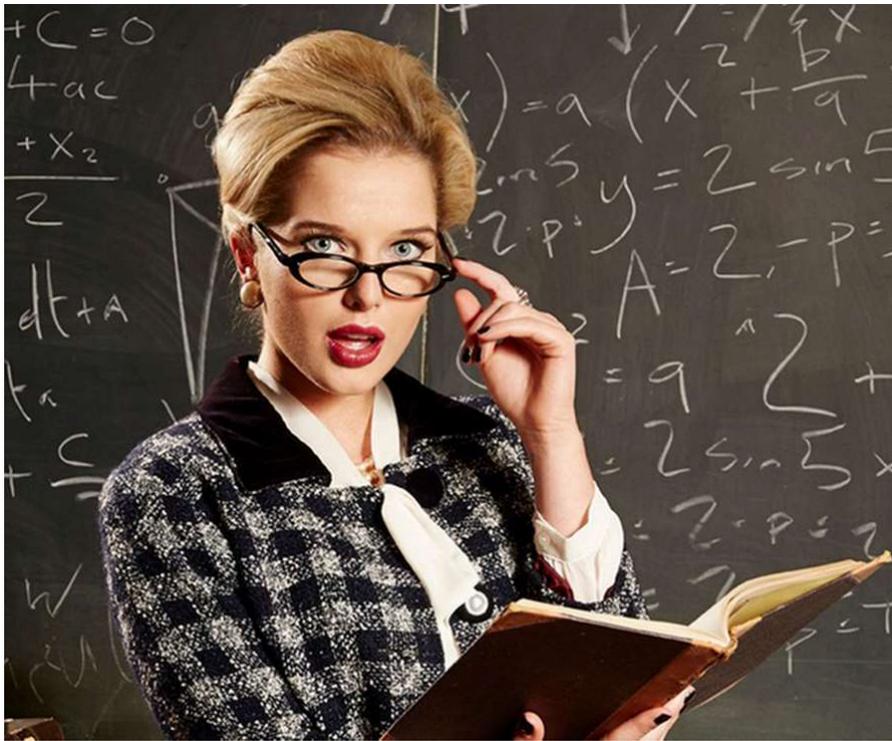
"I have purchased a new, non-computerized blend epilator, and I'm confused what is a basic formula for calculating the amount of galvanic to use with the blend?" Answer: divide the number of seconds it takes for the average shortwave release; into the units of lye you want to induce into the follicle. For example, if you want fifty units and your average shortwave release time is ten seconds, set the galvanic meter to five tenths (50 divided by 10, equals 5). Think of one tenth as a tiny, microscopic droplet or "unit" of lye.

I continually get requests from students who need help with the time and intensity settings on their epilator. To answer these questions, I usually fall back on a rule formulated by the late electrologist pioneer, Clare Rosner, who said: "Remove hair according to hair depth, skin, and pain tolerance level, by increasing intensity and decreasing the time or, by increasing time and decreasing the intensity".

Another oft repeated question is: "Which is more effective, a higher intensity, or a lower intensity?" To which I usually reply: An effective low intensity or an effective high intensity technique are both good. It matters not whether you kill a fly with a swatter or the six-pound Sunday newspaper, either way the fly is dead!

Of all the questions I've been asked, one that stands out in my mind came from a student at a school where I was teaching. She was a senior student, only three days from graduation, and she came into my office to tell me she had overtreated her client's upper lip. Through tears she asked me, "Mr. Fantz, how much current is too much?"

I always keep that student's question in mind in my daily practice. It's also the main theme I use in my presentations, and I will attempt to address this question further in a future column. As I have said, it's not by coincidence that the same old questions are asked over and over again; so it's extremely important that we review them periodically.



30 - ELECTROLOGY IN JAPAN

AN AMERICAN INSTRUCTOR writes: "Later this year, I'm going to be teaching several students from Japan. Even though they can speak and read some English, I'm concerned that there might be communication problems. Since you have taught foreign students, I would like your advice on 'basic curriculum,' along with any other useful tips or information you could pass along."

My first experience teaching foreign students was in the mid-1970s, beginning with Masaoki Nakanishi of Kobe, Japan, who came to the U.S.A. in 1975 looking for education in electrolysis. At that time, I was teaching at Arthur Hinkel's Wilshire School in Garden Grove, and I remember how frustrated Mr. Nakanishi was by the time he got to me. He is a very strong-willed man, but prior to contacting us, he had been turned away by all the other schools because of his lack of English skills.

I could appreciate the problem: getting electrolysis information across to students is difficult enough in English! But I was impressed by the visitor's show of determination, and I decided to take on the challenge.

The curriculum we followed at the Wilshire School in those days was a solid, primary course covering all the fundamentals and, with some minor allowances for the language problem, it designed an excellent program for my first foreign student, and for many others who I have taught since then. With a little updating, I use the same basic course to this day, with equal success.

In 1975, the California State Board of Cosmetology required that an applicant for electrolysis licensing have 500 hours of training. The training could conceivably be compacted into a three-month course, working seven hours a day, six days a week, but at the Wilshire school we stretched the course over a period of five months. Mr. Hinkel didn't want anyone to graduate before they could personally see effective results from their epilation technique, and for this purpose he always tried to find for each student a couple of good "face" and "body work" clients who would continue with treatments through the school term. He wanted the graduate to know from firsthand experience whether or not they could remove hair permanently.

The first couple of weeks' training was devoted to the study of hair and skin, and working with galvanic electrolysis. The students would start practicing insertions on their own arms, without current at first, then gradually with three to five tenths of galvanic. During this same period, the galvanic effect would be observed on a slice of fresh beef.

The third week of the course was spent with shortwave/thermolysis current. Experiments were conducted with egg white and beef to illustrate the action of shortwave coagulation, and the difference between high and low intensity shortwave would be demonstrated. At this point the students would work on each other, using the low-level, manual, two-handed technique, on arms and legs only.

Having worked first with the slower galvanic current, students were always impressed with the speed of shortwave. By the fourth week, they were ready to be introduced to blended currents, but only after 150 clinic hours of practice on various parts of the body. Students would start their facial work at the base of the neck. Lectures would cover needle insertions, current action, client interviewing, post-treatment care, over- and under-treatment. Students would give consultations, answer phone inquiries, and book appointments.

For his first few weeks of schooling with us, Mr. Nakanishi, our first Japanese student, hired his own translator, and I took advantage of this valuable time to get across to him the basics. After the translator left, I taught him by rote, and by personally demonstrating the basic "Hinkel technique."

Mr. Nakanishi graduated tops in his class and was the first to introduce electrolysis to Japan, where he started a blend school and founded the Japan Electrolysis Society. I'm so happy I accepted the challenge. It's an honor to have been instructor to the "Father of Japanese Electrolysis," he is a feather in my instructors' cap.

To the instructor who writes asking advice about teaching foreign students, my best advice is to keep the program basic, with emphasis on a practical, effective, epilator technique. I can guarantee that the experience will be a rewarding one for both the teacher and the students.



31 - BLEND VS. SHORTWAVE?

I AM CONSTANTLY asked the question, "Is the blend modality more effective than shortwave alone?" To longtime practitioners this question may appear to be very much overplayed, but it is something that must be addressed for the benefit of every new generation of electrologists. A letter I recently received from a reader of this column asks a closely related question: "From what I've read, for blend epilation to be effective the duration of galvanic current must be no less than six seconds. Many electrologists I've spoken to don't practice this technique: Is the six-second minimum necessary?"

In answer to the last question; I believe that a four- to six-second blend. Exposure, for deep anagen facial hair, is more effective than a similar duration of shortwave alone, same time and depth. I use the following points to support my belief in the blend's superiority:

A low-level intensity of shortwave accelerates the effectiveness of the galvanically produced lye in three ways, **1. Causticity**: It heats the lye, and thereby increases its caustic properties; **2. Porosity**: It coagulates the follicular tissue into a receptive, spongy mass, allowing it to quickly absorb the lye like a sponge absorbs water; **3. Turbulence**: The liquid lye is literally whipped into action by the oscillating pressure of the shortwave thermal field, driving it into cracks and fissures of the scalded, spongy tissue, where it penetrates the outermost corners of the target area.

Isn't it obvious, with the thermal effect of the shortwave elevating the tissue temperature to a range of 130-200 degrees, that the heated lye is going to be much more effective than the lye normally produced by the galvanic process alone?

Imagine the forceful action that is taking place within the follicle due to the combined action of the two currents. The internal trauma is heightened even further when the two-handed progressive epilation technique is employed: as the hair is removed, leaving the needle in the follicle, with both currents on for an after-count, the naked dermal papilla and germinative tissue is exposed to the full effect of the blended currents. As the hair is withdrawn, it leaves a vacuum that sucks the follicle into the turbulence within the porous tissue.

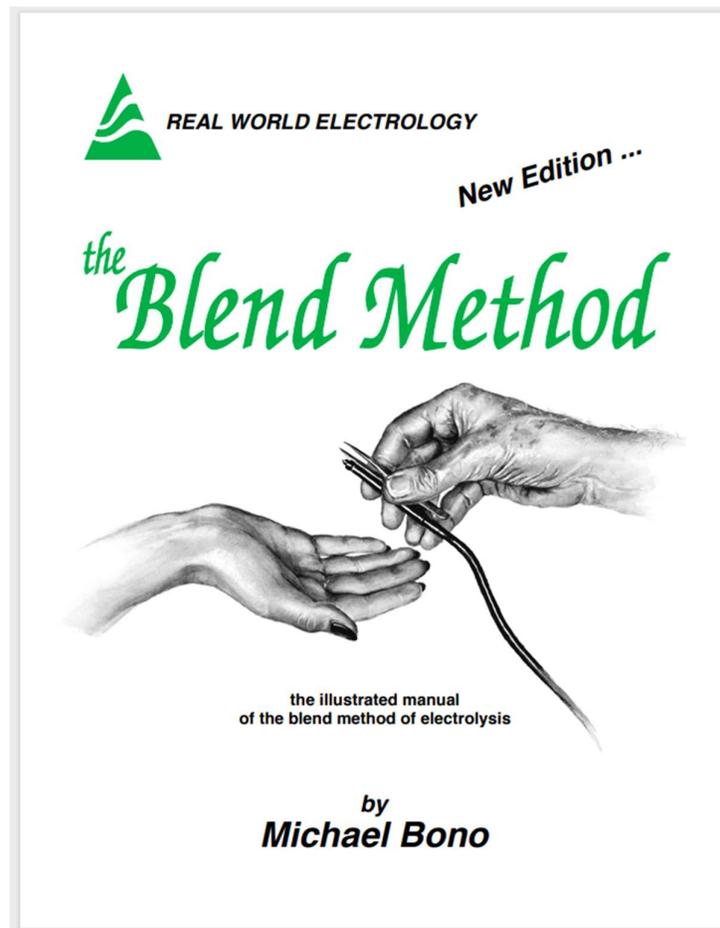
The superiority of a slower, longer, blend exposure over a fast flash of shortwave is obvious if we consider these two facts: **1. The shorter the exposure time, the narrower the pattern of coagulation**; **2. The longer the exposure, the larger the area of coagulation**. More tissue destruction means, of course, less post-treatment regrowth.

Any technique which employs short flashes of high intensity shortwave just isn't going to be as effective as a longer exposure technique, especially when the work involves deep follicles. Even when the needle is right on target, a fast, narrow pattern will not be sufficient in its depth and width to reach out and deactivate all hair growing tissue from the full anagen lower depths to the upper bulge area.

We electrologists must stop working like we're hooking a carpet. The instantaneous, feather touch technique, is old news. We've got to lower the intensity, and slow down. It's quality, not quantity, that counts! Our clients aren't paying for a painless poke-tap-and-pluck tweezing service.

One full-second count of 20 tenths of galvanic is too short for that slow-acting current to even begin to "wake up" and develop any significant pattern of chemical decomposition. And combining this with "super-flash," a fast, manual tap of shortwave, will add little to the effectiveness of the treatment.

We have to allow sufficient time for the shortwave current to induce a pattern of coagulation with the proper width, depth, and length. And to my correspondent's question, "Is the six-second minimum rule necessary?" Concerning the galvanic duration, I believe a 4- to 6-second minimum blend exposure is a good rule of thumb for the average deep terminal facial hair, for the galvanic to be effective.



32 - IS THE BLEND A GIMMICK?

I RECENTLY MET a doctor (a reader of this column) who apparently took exception to my article about the meritorious qualities of blend epilation. "Come on now," he said, "isn't the blend just a clever marketing gimmick?"

"In my clinics we have been trying a new auto-flash blend technique," the doctor went on, "and we really can't see any advantage to it over high frequency alone. "

Based on this conversation, it is clear to me that the doctor's understanding of the blend method, as conceived by its inventors, is practically zero. His knowledge is limited to a hybrid blend technique that utilizes a "super-flash" of high frequency current with an added obscure dash of galvanic current. This bastardized version, frequently promoted as accelerated galvanic blend, can certainly be described as a gimmick, a stratagem employed to promote a product. But it is wrong to give the blend name to such a poor interpretation of the unique method devised by Henri St. Pierre and Arthur R. Hinkel 55-years ago.

We know that a high, fast intensity of either automatic flash or manual high frequency can quickly release a deep hair, while galvanic current alone will take anywhere from 60 to 90 seconds to effectively decompose the follicular tissue and insure a smooth epilation. In applying the blend correctly, ample time must be allotted for the low-level high frequency current to accelerate the galvanically produced caustic agent, sodium hydroxide (lye).

For galvanic electrolysis to be an effective partner to high frequency thermolysis, we must allow the combined currents to flow for a few seconds depending on the current intensity and the release time; higher intensity, shorter time; lower intensity, longer time.

In order to have a true blend, the galvanic current must be a significant feature and shouldn't be obscured or misrepresented. The advantage of a moderately paced, manual blend technique is its versatility and its ability to tackle any epilation problem: deep heavy hair in soft moist skin, distorted follicles, near misses, and ingrown hairs. All can be effectively treated with progressive epilation, with a minimum of regrowth. And for clients with a low tolerance to pain, the lower-level blend intensity offers a full intensity range that can be tailored to fit each client's threshold.

Now, here's the paradox: just because I always work with a blend epilator doesn't mean I'm always working with a blend of both currents. Imagine you are watching a colorized version of an old movie classic on your color TV and, purist that you are, you decide you want to watch it in its original black and white form. You simply turn off the color and enjoy it the way you remember it. Your TV is still a color set, but you've chosen to utilize only the black and white settings. The blend epilator allows you similar options. The concern you have for the success of the treatment, and the skin and hair type being treated, determines the choice you make.

While it would be very rare for me to not use some galvanic current in a treatment, for example, fine vellus hairs are "shortwave" hairs and don't really require the blend of both currents, it is a choice I can make. When I'm treating deeper hairs I want the full blend effect, with a lower, moderate, longer intensity/ time exposure, and ample time to pour in the galvanic.

I have no argument with those who choose to dispense with galvanic when treating shallow vellus hairs or when working with a high intensity body technique putting in what galvanic they can. My argument is with those who persist in promoting the blend as a super-fast automatically controlled technique. **There is no such thing:** it's like trying to combine oil and water. As I have said many times before in this column, the blend and speed don't mix.

In response to the doctor's question, I have to say: Yes, the follicle is being short changed if it gets only a quick dash of galvanic with a super-flash of high frequency. And yes, such a technique is definitely "just a clever marketing gimmick."



33 - THE AUTOMATIC HIGH-FREQUENCY TECHNIQUE

A COLLEAGUE HAS suggested that I discuss a methodology that will give better treatment results when the automatic high frequency epilation method is employed.

To keep things simple, let's visualize the pre-combination automatically timed HF epilators that were in use by the majority of electrologists up to the mid-1970s. Still popular today, five North American companies are manufacturing basic automatic epilators. Through the mid-1970s (and at present) these units had only two controls: an HF intensity dial and an automatic timer dial. These basic HF epilators didn't have an HF meter. Practitioners used the numbers (usually 1 to 10) on the intensity and timer dials-as reference points for their intensity and time exposure settings

Over the years, the following two steps have served as a sound guide for establishing a practical working technique for HF (short-wave/thermolysis) epilation. 1. Set the timer to where you judge the HF exposure will be proportional to the tissue mass to be coagulated and the skin's moisture content. A rule of thumb being: Shallow to medium insertions moderate to faster timing, 1 to 1/2 second. Medium to deep insertions moderate to longer timing, 1 to 1/2 seconds. 2. Insert the needle to what you believe is an effective depth. I'm a strong advocate of establishing a full anagen depth guide during these initial steps. Then, starting at a lower intensity setting, the HF intensity is prudently increased, follicle by follicle and tap by tap, until a smooth one tap/pulse release is achieved within the client's pain and skin tolerance level with the preset, automatically timed HF deactivating prior to surface overtreatment. To put it more clearly: lower intensity; longer timing (1 sec.): higher intensity; faster timing.

Dr. Henri E. Bordier of Lyon, France, who in 1923 was the first to experiment with automatic HF as a means of permanent hair removal, left us this account of his insertion technique " ... the current is turned on with the footswitch and allowed to flow for 1/4 to 1 second, depending on the size of the hair and the current intensity. When properly treated, the hair should release without offering any resistance, as though it had been previously epilated and slipped back into the follicle."

While today's computerized epilators with the combined currents are much more complex than the basic automatic HF units of yesteryear, the basic formula for an effective automatic HF working technique is much the same as that used by Dr. Bordier.

As simple as the early methodology may appear, we must never underestimate the amount of skill and good judgment it takes to establish a workable technique. Keeping this in mind, I've always encouraged my thermolysis colleagues to practice the lower/slower approach adopted by Dr. Bordier. Why? Because HF/thermolysis is by nature a fast-acting current. The HF-electrologist is racing the clock to destroy all hair-growing cells in the follicle before the current turns-off. Even the slower, 1-second exposure doesn't give the operator much time.

I believe any exposure 1/2 second or faster, falls into a "super-flash" technique, which I do not advocate, but an effective, low-level HF intensity/exposure, properly placed within the target area for at least 1-second, should result in a minimum of post-treatment regrowth.

In my text, *Electrolysis Exam Review*, I wrote: "The time exposure [for automatic HF epilation] is generally between 1/10 to 1 second." At the time of publication, HF epilators were very "hot." Most epilators on the market today are of a more moderate, lower-level intensity, allowing a longer intensity exposure.

When seeking the best methodology for automatic HF epilation, it is wise to remember that, in the final analysis, our clients will judge us not by the speed of our technique, but by the effectiveness of our treatments.

Photo: "The Elite Spectrum" by Instantron USA



34 - THE "HINKEL AND FANTZ" APPROACH

AN ENGLISH electrologist writes: "For seven years, I've been a high frequency operator, but for some time now, I've been struggling to learn the blend, using the Hinkel & Lind textbook as a guide. Recently, I discovered your book, and I'm confused between your approach and Hinkel's."

"I'm currently treating deep hairs on a gentleman's back, and in order to put in the required 80-units of lye and obtain a smooth release, I'm using six-tenths of galvanic with combined one-second pulses of HF for a fourteen second count, plus an additional 1-second after-count. Please critique my technique, at the current rate of progress it will be 'donkey years' before I clear him up. Please; is there an easier way?"

Many blend novices, unable to make the transition from Hinkel's teaching technique to the more practical working technique in my book *Electrolysis Exam Review*, turn the simplicity of the blend into a slow and complicated process. Critiquing your technique, 15-seconds per follicle is way too long for that area. I'm sure you can move it up a little higher, thus cutting down the exposure. I strongly disapprove of your pulsing the HF; that's surely slowing your release time. Pulsing is a common practice with flash operators converting to manual blend, but it's contrary to the essence of the blend. With the blend, the dual action of both currents must be simultaneously activated until, via progressive epilation, the hair smoothly releases.

Aside from the pulsing, your technique is good for a freshman treating her first school client. It's a slow teaching technique, which enables the student to practice the two-handed progressive epilation technique. After a few hours practice, when you've gained confidence, little by little the HF intensity can be moved up a touch, thereby cutting down your exposure time. This should cut down the pain factor. I bet it will!

Most flash-to-blend converts need help with the HF intensity because, missing the security of the flash automatic timer, they work with the HF much too low, pulsing the exposure. Not only does the tapping technique slow down the process, it frequently results in excessive post-treatment regrowth.

Former flash operators unduly fear the manually controlled HF on a blend epilator, not realizing it is of a much lower intensity than that on the automatic HF epilator. There are three basic HF intensity theories or techniques: 1. the lower, longer, manual face technique; 2. the higher, faster, manual body technique; and 3. the higher (much higher) automatically timed flash technique.

With flash, the time exposure is set: it's exact. Manual isn't set: exposure is variable. The time factor is very important with a fast, manual blend body technique. That's when the blend operator may lean toward a kind of automatic technique. However, it's still manually controlled by the operator's judgment, and not by an auto-timer. When treating a deep, extensive growth of heavy body hair on a man's back, don't be overly scrupulous about the after-count and "the required 80 units of lye." Put in what galvanic you can during the brief exposure of galvanic (i.e., 3 to 4 seconds, around .10 to .15 milliamperes of galvanic.

Some might argue that we are shortchanging the follicle by not putting in the full 80 units of lye, but I think the higher HF intensity is sufficient to compensate for the lower galvanic. The faster your technique, the less time you'll have to "pour in the lye." The recommended units of lye chart in Hinkel's book is not an infallible rule: that was not Hinkel's intent. The chart is a guide or recipe, and like all recipes, there are variables that have to be factored into the formula. We must make our decision about how much galvanic to use only after "reading" the skin. Where we want to really emphasize the galvanic is with the lower, slower, face technique.



35 - LEARNING THE BLEND

I HAVE A LOT OF empathy for those electrologists who, for whatever reason, must learn the blend method of epilation with only a book as their guide. As I said in my *Hair Route* column last November, an English colleague's frustration in trying to learn the blend in this way is understandable.

Learning the blend wasn't easy for me either (hey, I'm still learning), even though I had Arthur Hinkel as my teacher! I learned the technique in pre-computerized epilator days, with an uncomplicated, completely manual, basic blend machine. That was the only kind available in the 1960s.

Difficult as it was for me, in near-perfect circumstances, I can appreciate the plight of those people who are trying to learn the blend method on their own, using today's more sophisticated (intricate?) equipment.

I believe it's important that newcomers to the blend understand how the method was set up in the "good old days." And it will be helpful to take another look at the basic blend epilator as it was before computerization, and then discuss how to set up a practical, working technique in two easy steps.

First, let's take a good look at the high frequency (HF) side of our basic blend unit.

We note that it lacks an automatic timer. Why? ... Because the essence of the blend technique, as conceived by its inventors, was one of complete manual control. What do we mean by manual control? We mean that when the footswitch (or, in the UK, the needle holder finger-switch) is activated, the current stays on until it is deactivated.

There is a dial for the HF intensity settings, but no HF meter. The HF settings are registered via numbers around the dial (1 to 10). However, these numbers have no meaning in themselves; they are arbitrary units of measurement, intended only as a guide to relative HF intensity.

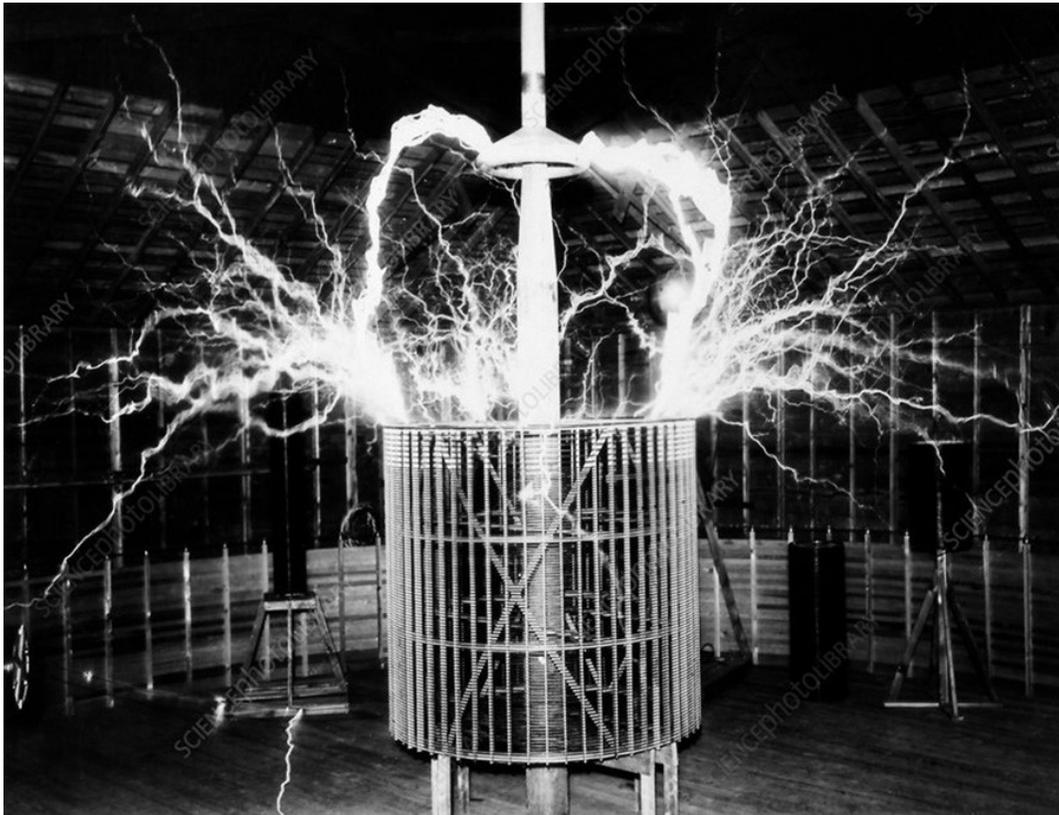
Turning to the galvanic side of our epilator, we have another dial, which controls galvanic intensity and registers it in tenths on a galvanic meter located, as a rule, in the center of the epilator. Most electrologists are familiar with the basic principles involved in removing hair with a blend of galvanic and low-level HF currents. What we need from this point is an easy, working-blend technique. And for this we must return to the old original two-step formula:

1. **With the needle inserted, we prudently advance the manually activated HF** from its lowest intensity to the point where a smooth release is obtained, within a reasonable time and within the client's pain and skin threshold. Once we have established the HF intensity, average release time and anagen hair depth gauge, we proceed to step two of our formula:

2. **With the needle inserted, and both currents activated, the galvanic is quickly adjusted to the number of tenths** (seen on the galvanic meter) that we judge will give the follicle target area an effective blend of both currents (referring, when necessary, to Hinkel and Lind's "Units of Lye" table).

And that's it! Two easy steps. You build up your HF intensity as you would with automatic HF. The only difference is that there is no automatic turn-off. With manual, the turn-off is via your foot. You, the operator, are in control; not a timer.

And when, at some point in the distant future, an electrologist blows the dust off an old faded copy of this issue of *International Hair Route* and reads this column, I predict, as long as the needle method and blended current epilation is in use, that these two steps will still be the yardstick for measuring a basic blend technique. Fortunately, if I'm wrong, I won't be around to be corrected. Just remember that the laws of electricity are unchangeable.



36 - SHAVING BEFORE ELECTROLYSIS TREATMENT?

A READER WRITES, "What is your viewpoint on having clients shave an area prior to electrolysis, to ensure that only growing, anagen hairs are treated, and not resting hairs?"

While it's obviously true that we can't treat a telogen hair, or sometimes even a late catagen hair, if it's already shed, I have always maintained that resting, telogen follicles, when tagged by a hair, can be treated just as effectively as follicles in anagen. Consider, if some poor soul is struck by lightning and dies, it is clear that their passing had nothing to do with their age? Furthermore, it doesn't matter whether a superfluous hair is terminated while it's in youthful anagen, mid-life catagen, or in the older, telogen stage.

David Landolfi, M.A., writing in the *Daniel Mahler Monograph Series* (Instantron, 1985), believes that a follicle containing a telogen hair is vulnerable to electrolysis: "The dermal papilla of an active follicle is completely surrounded by the clavate base of the follicle called the bulb. In telogen, the lower part of the follicle that includes the bulb, largely disappears, leaving the dermal papilla more vulnerable to destruction by diathermy (high frequency)." However, as electrologists move busily along from follicle to follicle, they can't always tell from a hair's external appearance the growth stage (anagen, catagen, or telogen) of each hair being treated. My question is: Why would anyone care?

A follicle doesn't have to be in the full bloom of anagen to be put out of commission. Just as we can uproot a plant that's in its winter shedding phase, so can we treat a dormant telogen follicle, as long as it's still tagged by a hair. When our needle is inserted to the full anagen depth, (or what was the full anagen depth), in the case of catagen or telogen hairs, and the target area is properly treated, we can be reasonably sure that the dormant tissue of a telogen follicle will not bloom ... come the spring of anagen.

What led to the belief that telogen follicles are untreatable? Maybe it's because epilated telogen hairs don't have the nice moist sheath that anagen hairs have; but we are aware that the external appearance of an epilated hair has absolutely no bearing on the effectiveness of the treatment.

Perhaps the treatment of telogen follicles has come into disfavor because telogen hairs usually don't release as smoothly as anagen hairs; yet we know that all follicles we treat aren't going to be easy anagen follicles. Some are going to have a telogen hair stuck, like a tired old elevator, somewhere near the top floor. And it might take a few more seconds for our high frequency field's coagulation pattern to climb up the shaft and unbind the hair.

I don't think telogen hairs follicles are any more difficult to destroy than those in anagen; it just sometimes takes them a little longer to release. Telogen follicles that are still tagged by a club hair stubbornly clinging to the upper part of the follicle are usually crucified by the few extra seconds (if using manual) of current they receive, and any early anagen cells that might be forming in the lower bulge are also destroyed.

I have always urged electrology students to treat all follicles that are tagged with hairs and to discourage clients from pre-treatment shaving. Destroying catagen and telogen follicles, along with the anagen follicles, helps reduce the amount of new hair growth.



37 - THE "MAGIC LANTERN" LASER

HERE WE GO AGAIN WITH another system for removing unwanted hair using what I call a "magic lantern" device. In the last two or three months, I have been swamped, as has every other electrolysis educator, with inquiries from anxious electrologists who want to know what I think about the recent newspaper stories concerning a new laser method of epilation: "Is it going to put us out of business?" everybody asks.

It is important that electrologists remember they are involved in the permanent removal of hair and not "long-term hair removal," as advertised by those who sell beauty supplies. No matter how you slice it, nonpermanent hair removal is temporary hair removal, and I find it interesting that the publicity material for the latest magic lantern makes only long-term removal claims.

Unfortunately, authorities like the USA's Food and Drug Administration (FDA), which were designed to protect the public from dangerous or fraudulent equipment and practices, fail to make the proper distinction between "permanent" and "long-term," and the burden has lately been on electrologists to prove that traditional needle electrolysis does what it claims. [Note: FDA has changed these definitions as of 2022.]

It's very frustrating for us to be in the position of proving our credibility to civil servants who will readily give marketing clearance to an electronic tweezer the grand-daddy of all magic lantern devices. Why do we have to prove that electrolysis works? Have we been tweezing for the past 150 years? No way! Since 1875, our needle method has been validated by hundreds of thousands of happy, permanently satisfied clients.

Hair growth retardant ointments are also products that I put in the Magic category. These concoctions made the rounds in the 1970s, but I guess they're back for an encore: I recently received promotional material through the mail from two different companies who wanted to sell me their "Hair Growth Inhibitor."

One of the companies says that its product is "... a mix of four alpha-hydroxy acids [these are fruit acids, very trendy these days as a skin beautifier], held in an extremely fine oil that penetrates the follicle."

According to their brochure, the product is designed to "significantly reduce the germination of new hair cells immediately after the hair follicle has been emptied through depilation ... either by waxing, sugaring, or electrolysis." If you can believe what you read, the fruit acids prevent new hair cells from "linking" together. They go on: "After several treatments, the whole germination process is severely retarded or destroyed within each hair follicle." (Note how the word "destroyed" is slipped in to suggest permanency).

The other company's Hair Growth Inhibitor is also based on plant extracts - with papaya and pineapple listed as the active ingredients contained in a fine penetrating oil. "The enzyme action created by the fruit gradually diminishes the hair growth," says the advertiser. [In 2022, these potions are still being sold!]

The definition of "inhibitor," according to my dictionary is, ... *a substance used to retard, slow, delay the growth process*. In other words, it doesn't stop hair growth, it just slows it down a bit.

Magic tweezers, magic oils and magic lanterns may be legitimate means for removing (or inhibiting) unwanted hair, along with shaving, waxing, and depilatory creams; but they are not electrolysis even if they compare themselves to electrolysis. **They are not permanent!**

On the other hand, if you feel the need to add a little magic to your electrolysis practice you might try getting some long-term appreciation from your clients by offering them a pineapple and papaya juice after-treatment beverage. Giving them the fruit as a drink won't speed up their hair removal, but they'll probably find it more satisfying than having it rubbed into their skin.

Eventually, in the coming years, we may find that the new lasers being developed work well enough for our consideration. We may find that electrologists might want to use lasers in their own practices to "round-out" their beauty offerings. Indeed, "time will tell!"



38 - THE NEVER-ENDING QUESTION: REGROWTH

WITHOUT ANY DOUBT, the most frequently asked questions in electrolysis have to do with regrowth. Each new generation of electrologists wants answers to this persistent problem. It was certainly the No. 1 question way back in 1967, when my wife Norma and I were students together at Arthur Hinkel's Wilshire School of Electrology. I recall how shocked we both were to hear Mr. Hinkel, in his first-day, freshman class lecture to us on the positive and negative points of our newly chosen profession, put such emphasis on post-treatment regrowth. My heart sank when I heard the word "regrowth." I leaned over to my wife and whispered, *"Is he saying it's all going to grow back? I thought electrolysis was permanent!"*

All of us soon learn, however, that no treatment at the outset is totally free of regrowth, and we know our clients will judge our ability to remove hairs permanently by the amount of returning hair: the number of hairs that must be treated again. Knowing this, it is better to treat fewer hairs and show less regrowth, than it is to treat more hairs and have more regrowth. The client will despair if you treat 1,000 hairs and 800 return, whereas she will be mighty pleased if just 500 hairs are treated and only 50 come back.

The two causes of regrowth are 1. [an inaccurate insertion that puts the current outside the target area](#), and 2. [an accurate insertion that puts insufficient current within the target area](#).

The percentage of "kill" can be calculated by figuring the amount of time it takes to clear an area for the first time around, versus how long it takes to clear the same area in the later, pick-up treatment, keeping in mind that there was a percentage of undergrowth that was untreatable during the first session, even if the client hadn't tweezed.

Let's say that in a 1-hour period you clear a square of thick heavy growth on a man's back. Then, a couple of months later, you remove all the new growth in the area in 15 minutes. In this case, you can estimate that your original treatment permanently removed about 75 percent of the hairs; allowing for a small percentage coming from follicles that had no hair tagging them during the first treatment, because they were in the shedding phase of their cycle.

In my practice I like to be perfectly candid with my clients when discussing regrowth. Some long-time practitioners might think I put too much emphasis on the subject, but in the long run I believe my approach keeps me out of trouble. Why? Because the properly informed client has more realistic expectations.

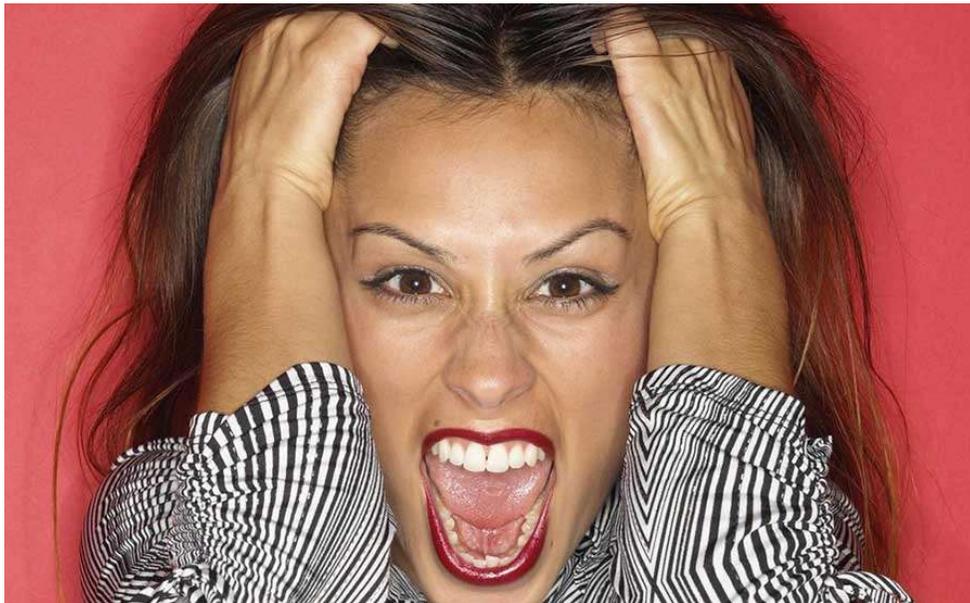
We must level with our clients on regrowth, and not make any statements declaring how long treatments are going to take or how much the total cost will be. How can we possibly know, especially at the beginning of treatment, exactly how long or how costly a particular case will be?

When making any statement to a client regarding the number of weeks or months of treatment, we must carefully explain exactly what we mean. We do not tell the client we are "going to 'clear' the treatment area of hair in six or eight weeks," when we only mean we that we will have an opportunity to treat most of the larger hairs in the area for the first time. The client will remember the number of weeks we quoted and claim that we said she'd be finished ("cleared") in that time.

When a client comes to us with an excessive growth of hair due to a hormonal imbalance, the aging process, or as a result of hereditary, we must remind ourselves that we are not treating the *cause* when we remove the unwanted hair. It's up to an endocrinologist to correct any systemic change or imbalance that is causing the excessive-hair problem. Our function is to treat the side-effect: the resulting hair.

Students find it difficult to understand the regrowth problem, so it is not surprising to find that our clients also find it difficult. Bearing this in mind, always allow time to explain to the client exactly what an electrologist can and cannot do.

“Oh No ... RE-GROWTH!!!”



39 - OVERTREATMENT: A COMMON PROBLEM

HOW COMMON IS overtreatment? When I think about this subject, I cannot help but recall an incident of a few years ago when one of the students in my class overtreated a school client's eyebrow, due to a technique error. The student was one of the best I have had, and from the beginning she had her heart set on becoming an electrology instructor. But this accident, just a few days prior to her graduation, came as a great shock to her. Her pride was wounded, and she was extremely despondent. She took the incident as a sign that electrolysis wasn't her vocation, and talked about not proceeding with her state board examination. "I think I should call it quits," she wept. "How can I ever hope to be an instructor?"

It was only after a good deal of persuasion, and many assurances that such things can happen to the best of us, that I was finally able to restore her confidence. As I pointed out to her: If every electrologist who made a technique error got upset and quit, the field would very soon be left with nothing but heartless practitioners, and that would be a terrible disservice to consumers.

I've never known an electrologist who hasn't overworked a treatment area. Let's be honest, every treatment is a battle to avoid overtreatment. As educator Michael Bono aptly states in his book *The Blend Method*, "We're all fallible ... and mistakes can happen. Evading the issue simply invites professional stagnation and undermines dispassionate understanding when problems arise."

For a moment, let's imagine that we searched the world of electrology and came across one perfect electrologist who had never overtreated an area; not even one tiny scab. How could such an impeccably flawless, no-mistake practitioner help a student with an overtreatment problem when she has absolutely no overtreatment experience of her own to draw upon? There would be a barrier between the students and this "flawless" instructor.

Yes, the student/instructor barrier must be eliminated, but how? I have personally found that it can be removed when instructors share their vulnerability, some of their difficult cases. I used to find that a talk on "The Technique Errors I've Made" was a good way to get my students' attention in the Monday morning lecture periods. They were always relieved to hear about the time that I (the "expert"), overworked Mrs. Whittier's upper lip; or the time I left Ms. Lois Angeles with an ugly black and blue mark on her eyebrow. One of her capillaries got in my way; boy was she upset! The truth was, I made a lousy insertion.

Being honest and candid with my students made me approachable, they weren't afraid to call me. Thus, overtreatment was frequently avoided, and this made for happy school clients, and let's not forget, that's what our students are paying for: the opportunity to work on school clients under the watchful eye of the instructor.

Regardless of the remoteness of the treatment area, whether it's a few hairs on toes that come out of hiding for the summer, or a cluster of scratchy hairs on the antitragus, obscured by a long hair style, all areas must receive our fullest attention. We must always analyze the most hidden treatment area with the same prudence and concern that we would have for an eyebrow or upper lip.

It must be remembered that at no time can the treatment area be taken for granted.

As we work, we must continually keep in mind the four main causes of overtreatment: working too high, too long, too shallow or too close.

Regardless of how much we've learned, and no matter how long we've been in practice, we're still bound to stub our toes once in a while. But it is important that we don't get too disheartened, and with students particularly, discouragement has to be turned into encouragement: We all start from scratch, and to stay successful we must keep on scratching.

Photo: overtreatment on the upper lip



40 - THE FUTURE OF OUR PROFESSION IS IN KEEPING AN OPEN MIND!

WHEN MY WIFE NORMA AND I enrolled in Arthur Hinkel's Wilshire School of Electrology in 1967, our profession did not have its own textbook. Electrology schools were using Milady's *Standard Textbook of Cosmetology*.

Toward the rear of Milady's text, sandwiched between chapters on beauty therapy, was a thin chapter on flash shortwave/thermolysis and multiple-needle. No mention was made of Hinkel's new manual blend. Few outside of Hinkel's Southern California graduates knew about it. The material within that chapter was dated; however, it was the only text available.

Today, we are fortunate to have a good selection of books written by electrologists for electrologists. By reading these books, we grow in knowledge, become more open minded and less biased or opinionated.

There is an old adage which says: "He who knows only his philosophy, doesn't know his philosophy ... for philosophy is the study of philosophy." Let's change that a bit; let's say: "**Electrologists who know only their technique, don't know their technique ... for technique expertise necessitates the study of other techniques.**" In other words, how can we fully appreciate our epilator technique if we have never measured or compared it with other epilator techniques?

To be complete electrologists, we should be knowledgeable with all proven needle techniques of permanent hair removal. By the same token, we must be aware of non-needle fake methods, thus enabling us to explain to the inquiring consumer why such method are not effective.

After one of my presentations, a colleague approached me and said: "While I always enjoy your lectures, I don't always agree with everything you say." To which I responded: "I don't always agree with everything I've said either." You see, looking over some of my old lectures ... well ... today I'd want to change some of the material, perhaps take a different approach. Why?

Thirty years ago, our target area consisted of the lower papilla only, whereas today we have expanded our target area to include the upper bulge area ... thus many instructors teach that the time exposure should be extended.

Consider how our profession has evolved from Dr. Michel's 1875 single needle galvanic battery technique to the computerized combination epilators of today. The questions we must ask ourselves are: "Am I keeping abreast of valid changes in epilator techniques and sterilization. Or, am I at least aware of these changes?"

Obviously, with sterilization, we must be more than just aware of current CDC guidelines; we must practice them. With technique, we can make choices; not with sterilization; it's not as flexible! As we have entered the 21st century, old divisions between flashers and blenders have become yesterday's news. We continue to grow closer together.

Along with our educators, credit for this comradeship should be given to our manufacturers who, attuned to our needs, have produced combination epilators that embrace the three high frequency theories or techniques. These techniques are: 1. [The very high level of high frequency flash technique.](#) 2. [The low-level manual body technique.](#) 3. [The much lower-level manual face technique.](#) By adding galvanic electrolysis to 2 and 3, we have the blend.

By working with these three levels of high frequency intensities, we can see how the last two levels of manual HF evolved from the first automatic level and how all three levels are dovetailed together. Yes, the more we know about the modalities we use for permanent hair removal, the more we know *we don't know!*

What, if any, similarities can we find between flash and manual HF? The other day, I was working on a male client's back, the hair growth was very deep and heavy. I was using a fast manual pace of high-level blend body technique, three to four seconds of continuous current, and it dawned on me that my technique was leaning toward kind of a moderate flash technique.

My dominate current was the higher-level HF and my time exposure was really too brief for the galvanic to have any effect. By the same token, I thought, isn't an automatic flash operator leaning toward a similar technique when working with a lower level of HF, giving two, three or four back-to-back 1-second pulses or taps?

Yes, the old hedge between flashers and blenders has been trimmed down, allowing both sides to lift the best of both techniques. Today, the vast majority of electrologists work with epilators that embrace both high frequency, all three levels, and galvanic electrolysis. The popular success of these combination epilators has brought the world of electrology together.

Colleagues, least we remain in a box, let's not hold onto everything we accepted as gospel truth in the past; our field isn't a science, it's an art. And, art (the application of technique) changes, it evolves. Sometimes old techniques are rediscovered, such as manual and progressive epilation.

Yes, electrolysis has come a long way since 1875. Many advances have been made and we should try to keep up with these changes; not change for the sake of change, but change that has been proven to be effective and to the benefit of the consumer.

[Remember: "Those who know only their technique, don't know their technique.](#) For technique is the study of technique." And, I'll never agree with everything I've said in the past. We all must continually progress.



AEA Council on Accreditation

John Fantz (right) and Mike Bono (center)