



Sunless Airbrush/HVLP Technician Course

SUNLESS AIRBRUSH/HVLP TECHNICIAN COURSE

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NOTE: Special thanks to the staff at Norvell for their knowledgeable input on sunless spray techniques and sunless tan enhancement.



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Chapter 1

INTRODUCTION TO SUNLESS

Over the past five years, we've watched sunless tanning position itself for explosive growth. While sunless provides a new service to existing clients looking to enhance their traditional tanning sessions, it has the potential to expand the tanning and day spa populous with new customers who either cannot or choose not to get a traditional UV tan.

The concept of sunless tanning has come a long way since its introduction to the general public in the 1960s. Today, sunless products can be found everywhere from indoor tanning salons and day spas to department stores and drug stores. Professional tanning salons have the ability to offer superior self-tanning formulas as well as the latest in application processes that include stand-up spray booths and portable airbrush-tanning systems.

SUNLESS AIRBRUSH/HVLP TECHNICIAN

To provide a competitive edge to salons offering airbrushing or HVLP sunless services, NTTI offers the industry's first program specifically designed for the airbrush/HVLP technician. Based on research and testing conducted by some of the leading manufacturers of sunless spray systems, this course takes the technician from setup to application while discussing technique, safety, pricing and more. Professional tanning salons now have the ability to offer superior sunless airbrush/HVLP services delivered by well-trained and certified sunless airbrush/HVLP technicians.

BUSINESS SUCCESS WITH SUNLESS

The mention of "sunless tanning" used to raise the hackles of many indoor tanning salon owners. The whole concept—tanning without the use of ultraviolet radiation—went against everything salons stood for. Maybe it still does in some cases. After all, why would a customer come to a salon when he or she could stay at home and apply a lotion for an instant tan? The question isn't as perplexing as it once was. In fact, the truth is sunless can be a salon owner's friend.

More and more salon owners are warming to the idea of sunless as a complement to their main business of UV tanning. In fact, 40 percent of U.S. tanning salons offer at least one form of sunless services. Twenty-two percent offer sunless airbrush or turbine tanning, according to research conducted recently by LOOKING FIT®. This represents a 10 percent to 6 percent jump, respectively, over the previous year.

Sunless services can be offered as a quick fix when traditional UV clients are pressed for time, a tanning booster between UV sessions, a touch-up for delicate or hard-to-tan areas, and to even out pressure points and uneven spots.

Salons that have added sunless services report an increase in traditional UV tanning sessions by as much as 30 percent after they introduced sunless services.

As sunless-tanning technology improves and education about it spreads through the industry, salon owners are beginning to understand the relationship between salons and sunless. By offering these products, including self-tanners and bronzers, salons can satisfy yet another group of potential customers. They can build upon the trust of their existing tanners and become an authority for all of their skincare needs. When marketed correctly, sunless products can be an excellent ancillary profit center.

Those skeptical of adding sunless to their facilities should remember this: Tanners and non-tanners want to look good and feel good. Only 10 percent of the U.S. population, or 29 million individuals, currently tan indoors, so consider the possibilities. What better way to double or even triple your client base than by introducing them to non-UV tanning?



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HOW SUNLESS WORKS: THE SOLUTION

Due to an increase in spray-on tanning, DHA solutions have experienced tremendous growth in the past few years. Typically, there are three types of bronzers that are used in sunless spray solution. A cosmetic bronzer is visible immediately after being sprayed, but will wash off after showering. A DHA bronzer initially has no visible effect, but will begin to react with the skin in two to four hours and develop color. Erythrulose is a slower-reacting bronzer and is similar to DHA.

With or without the addition of cosmetic bronzers, the solutions use roughly the same ratio of DHA—3 percent to 5 percent—and are available in different viscosities for different purposes.

The tan that is produced is absolutely water-resistant and diminishes only as the dead cells of the stratum corneum flake off. It should be noted, though, that the tan is purely cosmetic and does not provide the protection that a traditional tan would.

COSMETIC BRONZERS

Not all sunless solutions contain a cosmetic bronzer. Ones that do will give an immediate color to the tanner. This color is not permanent and will wash off.

DHA (DIHYDROXYACETONE)

The Academic Press Dictionary of Science and Technology defines dihydroxyacetone like so: “CH₂HOCOCH₂OH, a colorless, hygroscopic, crystalline powder; soluble in water and alcohol; melts at 80 C; used as an intermediate and in fungicides and cosmetics.”

The tanning industry recognizes dihydroxyacetone, or DHA, as the colorless sugar that makes the magic happen in the self-tanning process. DHA reacts with skin proteins, including amino acids, in the outermost layer of skin. The reaction develops brown skin coloring that looks very similar to a natural tan.

Skin coloration takes anywhere from two to four hours and lasts three to five days—depending on skin type and the DHA concentration in the lotion. The “tan” fades as the dead layers of skin slough off, just as in normal tanning.

DHA appeared commercially in the 1960s. Coppertone was one of the first to sell an over-the-counter product, Quick Tan, and unfortunately QT’s streaks, splotches and orange skin tints quickly encapsulated everything viewed as negative about sunless tanning.

DHA was first approved for cosmetic use in 1973. At that time the Food and Drug Administration added DHA to its list of approved cosmetic ingredients. Afterward, cosmetic companies as well as indoor tanning lotion manufacturers began to perfect sunless products and their ability to give a beautiful golden-tan appearance.

ERYTHRULOSE

Erythrulose is very similar chemically to DHA and works synergistically with it to give a more naturally looking tan. Although it is four to five times the cost of DHA, experts say it enhances a sunless tan’s finish and reduces the dryout associated with DHA products.

While DHA changes the color of skin within four to 24 hours, erythrulose needs about two to three days for skin to show a color change. In addition to providing a more luxurious color, it may help to lengthen a sunless tan by a day or two.



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Chapter 2

SETTING UP YOUR EQUIPMENT

There are two types of technician-operated sunless spray systems: the traditional airbrush system and, emerging from the airbrush concept, the turbine-powered tanning system, also known as HVLP (high volume, low pressure). HVLP is vastly different from the airbrush units on the market. It is not an airbrush at all. The machine is driven by a turbine motor rather than a compressor unit seen in airbrush systems. The turbine motor delivers a high volume of low-pressure “soft” airflow instead of a concentrated high-pressure blast found in compressor-based airbrush systems.

The soft air deposits the solution more efficiently on skin, reducing waste and overspray. The high volume and low pressure results in faster application time due to the larger fan pattern that puts out more solution at one time. HVLP allows for total body application in less than five minutes.

Because of the reduced application time, HVLP systems decrease operator fatigue, and more clients can be sprayed in a given time frame, allowing for the possibility of increased profits. On the other hand, traditional airbrush units may be easier to learn to use and allow for ease in detailed work.

SETTING UP YOUR AIRBRUSH EQUIPMENT

In most cases, when you purchase a spray system from a sunless manufacturer or distributor, your airbrush system will come packed with an air hose and several reservoir bottles along with a small- to medium-size electric compressor. The airbrush system is usually ready to use when it is unpacked. No matter which system you use, you should always work in a ventilated area or spray booth designated specifically for spray tanning.

Although some setup steps may vary slightly from manufacturer to manufacturer, the following can be used as a general guide for setting up your airbrush system:

- Attach the air hose to your compressor. The end of the hose with the larger fitting attaches to the fitting on your compressor. Attach the other end of the hose to your airbrush. You should be able to tighten these fittings by hand.
- Plug in your compressor and turn it on. Make sure both fittings are tight and not leaking air.
- To operate your airbrush, hold it in your hand like you would a pencil. The button, usually found on top of the airbrush, is the trigger. A typical airbrush will have two actions: When you press down on the trigger, air is released through the nozzle; when you pull back on the trigger, it releases solution mixed with air in a fine mist.
- When you have confirmed your airbrush is working properly, fill one of the reservoir bottles with your sunless spray solution and begin spraying.
- We recommend you practice your spraying technique on several sheets of paper prior to applying to the body. You may want to practice on yourself or co-workers until you have gained confidence in your equipment and your abilities. The more practice you have, the better you will become at mastering the technique of airbrush applications.



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CLEANING AND MAINTAINING YOUR AIRBRUSH

- Remove all the solution from your airbrush by removing the solution bottle and spray until the brush is empty.
- Pour a small amount of cleaner into your spray bottle and shake vigorously to loosen the remaining bronzer and run this cleaner through your airbrush. Your airbrush manufacturer will recommend a cleaning solution that is compatible with your system.
- Repeat with fresh amount of cleaner, spraying onto a clean piece of paper until spray appears to be clear.
- Remove the needle and or spray nozzle and wipe with a soft cloth dipped in cleaner. Clean any residue on the surface of the nozzle and brush.
- Do not immerse your spray unit in solvent.
- It is normally not necessary to completely disassemble your airbrush unless you feel it has been damaged.
- Always clean your spray unit when you are finished using it or whenever it may be unused for an extended period of time.

Tip: Spattering or spitting of the sunless solution is a sign of a dirty airbrush.

HVLP EQUIPMENT SETUP

The setups for HVLP systems will vary depending on the manufacturer. The instructions listed below are meant to be used as a general guide. It is recommended you follow the instructions that come with your particular unit, and to contact the manufacturer or your distributor with specific questions.

The equipment typically will include the turbine unit, a solution holding cup with check valve assembly, a turbine gun and turbine hose.

- Remove the cap covering the phalange on the gun.
- Screw the fluid-holding cup onto the fluid passage of the gun at the bottom of the cup.
- Make sure that the check valve assembly is on the same side as the phalange.
- Connect the check valve assembly by sliding the end of the tube over the phalange until it is snug.
- Tighten down the fluid cup to make sure there is no leakage.
- Connect the turbine host to the front of the turbine exhaust port.
Do this by screwing it on like you would a garden hose.
- Attach the gun to the hose.
- Pour the solution in to the cup, and replace the cup.
- Plug the unit in, and turn it on.

Troubleshooting Tip: If the gun trigger is pulled and it doesn't spray any solution, it is most likely that the check valve is upside down. Make sure the pressure control at the top of the cup is closed all the way.



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Chapter 3

SKIN PREPARATION AND APPLICATION

Skin replaces itself naturally every 28 days. Twenty-five percent of skin is exfoliated each week, causing a UV-tan to wear away. Sunless spray tans affect only the top 25 percent of skin. Sunless tanners should use a tan-extending program to maintain the level of the sunless tan longer.

PREPARATION FOR THE CLIENT

Exfoliating with a salt scrub or other appropriate product is recommended the day before you sunless-tan. Removing loose, dead, dry skin cells that prevent even application of sunless solution will improve and extend your tanning results.

- Before sunless-tanning, your skin should be clean and dry with no soap residue to interfere with your tan. Avoid bar soap.
- Do not apply deodorant or perfumes to skin prior to tanning. It is recommended you shave the day before you tan. It is recommended you remove makeup before the tanning process, but it is not absolutely necessary.
- Remove any jewelry when being sprayed.
- Select an old, preferably dark bathing suit to wear while being sprayed. Also remember to bring old dark-colored, loose-fitting clothing to wear home.
- * If you are tanning for the first time (pale skin), you should apply a product over your entire body to lower your skin's pH level. It has been shown that a balanced pH level of skin may provide browner, more natural-looking color.
- Apply a barrier cream to areas that tend to attract too much color during the spray-tan process such as cuticles, knees, elbows, hands and feet. Apply to tattoos to reduce spray's effect and keep colors vibrant. Gently wipe off spray color from tattoos after tanning.

Although the likelihood for an allergic reaction is very small, a patch test is recommended for persons who have a known sensitivity to sunless products or the ingredients in them, including fragrances.

Very fair skin types may require a follow-up sunless application 12 to 24 hours later.

After all sunless treatments, wait at least four to five hours before bathing or exercise to allow the DHA bronzer enough time to begin the reaction process.

SUNLESS-TAN MAINTENANCE

We recommend that after every five weeks of spray-tanning, let your skin rest for 10 days. This allows you to completely lose your sunless tan periodically, which helps eliminate patchiness or uneven areas of wear. These areas are caused by normal contact with clothing and other surfaces, which cause unintended exfoliation. Healthy, moist skin will retain the results of your sunless tanning session longer. Sunless spray results will vary by individual.



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Using a moisturizer can help to extend the length of a sunless tan. Also, there are moisturizers that are available with a light DHA bronzer in them to extend the look of a UV tan or sunless tan. The DHA bronzing will help to extend the tan and reduce uneven wear and patchiness.

GENERAL AIRBRUSH APPLICATION

- Once you have become familiar with the operation of the airbrush, you're ready to begin spraying on the body.
- The tanning technician should wear gloves while applying the sunless solution. Overspray and residue may stain hands.
- Begin spraying on the body, working from the top to the bottom. Hold the airbrush six to eight inches from the surface of the skin for best results.
- Hold the airbrush perpendicular to the surface of the skin. Do not tilt the airbrush back and forth while spraying. Maintain an even, relaxed speed across the surface of the skin. Slower movement will result in color buildup, while faster movement causes light areas.
- While spraying in a circular pattern, move the brush in an arch to follow the contour of the customer's face or body. This will create the most even coverage and reduce overspray.

Note: Always spray the face first, as this will give the facial area the longest amount of time to dry. This avoids smudging and staining when the customer dresses.

SPRAYING THE FACE

- Ask the customer to hold his or her face with the chin slightly raised to stretch wrinkles in the front of the neck, but not high enough to cause wrinkles at the back of the neck. Do a general, light overspray of the entire face and neck first to establish an even, overall color.
- Avoid spraying into ears. Oils in the ear often cause ears to over-darken. Overspray from the face will blend color onto the ears nicely.
- Feather the spray lightly into the hairline to give a natural tan effect. Note: Light blonde and platinum hair may be temporarily discolored by this step. Special care should be taken when applying spray to people with this type of hair. Discoloration of the hair typically will disappear after the hair is washed the first time following the sunless process.
- Go back into detailed areas of the face that may not have gotten sprayed evenly on the first pass, such as under eyebrows and nose. (Avoid spraying directly into nostrils.) Pay particular attention to the area of the face shadowed by the nostrils. Have the customer use his or her tongue inside the lower lip to push it out. The lower lip has a natural turndown in this area. This allows you to evenly cover this area often missed.

SPRAYING THE BODY

- Continue spraying the entire body using a circular motion to create an even, natural-looking, non-streaky tan.
- Ask the customer to hold his or her arms out while spraying the sides of the body.
- Have the customer bend slightly at the knee and elbow when spraying those areas to avoid buildup in the folds of skin.



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- When spraying people with heavier builds, have them hold their arms over their heads to raise breasts and improve access to areas of skin in folds.
- See instructions for spraying with a larger-body gun-type sprayer.

BODY GUN OPERATION

In order to improve your operation's efficiency by decreasing the time needed to apply a full-body tan, you may purchase a system that uses a larger sprayer, often called a body gun. The body gun also can improve the overall even application of sunless solution.

Although it can be more difficult to master than smaller airbrush systems, the body gun can be a terrific time-saver. It is specifically designed for use on the wide surfaces of the front and back torso. The experienced operator may want to use it for application to the upper legs. The body gun uses much more air to operate than the airbrush. Some body guns must be operated at a continuous pressure of about 25 pounds per square inch (psi).

Note: It should not be sprayed into the face or used for detailed areas of the body.

BODY-GUN USE

- Begin by attaching the air hose to your body gun at the bottom of the pistol-style grip, and then connect the other end of the hose to your compressor.
- Fill the reservoir bottle from the gun with your sunless spray solution and close the top. Insert the bottle into the gun.
- You will notice that the body gun comes from the factory preset for operation at a higher psi (typically about 25 psi). When you turn on your compressor, it will run for a few minutes until it has filled its on-board air tank. When it shuts off, the tank is full and you are ready to spray at 25 psi or at the gun's preset capacity.
- Hold the gun in your hand in the same manner a pistol is held. Like smaller spray systems, a body gun usually will offer two trigger settings. When you pull back on the trigger to the first stop position, the gun will release only air. When you pull back to the second stop position, the gun will release solution.
- The nozzle of the gun has two fins on it pointing away from the gun. The spray from the body gun will form a flat fan pattern when sprayed. These fins indicate the position of the spray pattern that will come out of the nozzle. When the fins are turned vertically, they will spray vertically, and spray horizontally when turned horizontally. They are set at the factory to spray vertically.
- Practice spraying the gun onto a large sheet of white paper until you are familiar with the operation and spray pattern of the device.
- When using the body gun, begin spraying on the body first. Stand facing the customer with your feet perpendicular to the surface you are spraying. Move around the customer as you spray across the torso horizontally in short bursts that run across the entire body. Keep the gun in front of you and perpendicular to the surface being sprayed. Don't fan the gun back and forth. Continue slightly past the profile of the customer's body but limit overspray to conserve solution. Slightly overlap each pass to ensure a streak-free tan.



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BODY-GUN USE (continued)

- Due to the high volume of air from a body gun, the air pressure will periodically drop too low to operate. You will find that spraying the solution in short 1-second to 2-second bursts across the entire body works best. This will conserve air pressure in the compressor tank and allow longer use of the gun. The compressor will begin running to refill the tank when the pressure drops too low.
- During this time you can switch to your airbrush and continue spraying the face and detailed areas. There always should be enough pressure to run your airbrush.

HVLP SPRAY TECHNIQUES

The solution will spray in a fan pattern. Knobs on the gun can be adjusted to control the size of the fan being sprayed and the amount of the fluid being sprayed.

Like many airbrush gun units, many HVLP guns have a 2-stage trigger pull. Pull a little and there will be mainly air; pull more and more fluid will flow. This allows the technicians to know when and where they want to stop.

To eliminate buildup of solution on skin, the gun should be moving when solution is flowing. For a more precise pattern, the knobs should be closed more tightly.

Most manufacturers recommend to spray in a continuous up-and-down motion, letting off on the solution as the end point of the stroke is reached, otherwise there will be darker lines in the outer areas.

For the face and more precise areas, use the tighter adjustments on the gun for detailing.



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Chapter 4

WORKING WITH THE CLIENT

Customer Instructions

Airbrush tanning is a new experience for many people. They may be apprehensive about their first session. To relax the customer, explain how your system works and explain each step in the spraying process. Once you are comfortable with the system, you will quickly develop your own routine.

- Have customers step into the spraying area or booth. Holding the nozzle away from them, run a few short blasts of air through the brush to clear the mechanism. Pull back on the button to release a small amount of solution to assure yourself the solution is flowing and the nozzle is producing a fine, even mist.
- Turn to customers and explain that the brush will spray both air alone or air and solution mixed. Demonstrate this to them by applying a jet of just air to their hand or arm to show how it feels; then, aiming away from customers, allow the airbrush to release a mist of spray into the air for them to see the difference. You may want to further explain the difference between the cosmetic bronzer that they will see immediately and the color from DHA (dihydroxyacetone) solution that will develop in a few hours. You may want to mention that the DHA color is derived from the sugar-cane plant.
- Explain that having the air sprayed on the face may be an odd sensation at first, and tell them you will do a test run with just air to get them accustomed to the feel.
- Instruct customers to close their eyes and mouth while you make this quick test pass. While you are spraying, you can explain that they should keep their eyes closed the entire time you are spraying their face, and that you always will let them know when you are about to spray over their nose, mouth or eyes so they will have ample time to hold their breath and will not have to hold it long.
- As you gain experience, you can add some darkening on the cheek to highlight the curve of customers, cheekbones, much like how makeup is applied for the same purpose.
- Maintaining an informative conversation will help relax customers.
- During the time you are spraying customers, don't miss the opportunity to review the steps to maintaining a sunless tan. This is an excellent time to mention the benefits of the various retail products you have for sale that will help them maintain their sunless tan and better prepare their skin before the next application.
- The sunless spray solution should dry enough in time for customers to re-dress in eight to 12 minutes, depending on the individual. The clients should wait four to five hours after tanning before showering, swimming or engaging in vigorous physical activity. Avoid immediately wearing tight-fitting clothing that may cause lines in the tan.
- Remember to remind your customers that the cosmetic bronzing color they see immediately will wash off with their first shower. The DHA will begin to activate in two to four hours and will replace the cosmetic color lost when they



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shower. Full results will develop over the next 24 hours. Their natural-looking sunless tan should last four to five days with proper maintenance.

Note: DHA products can lose their effectiveness when exposed to heat. Unless otherwise stated by your sunless-solution manufacturer, you should only order two to four weeks worth of product at a time and store it in a cool, dark place. Avoid placing in direct sunlight. Refrigeration is not absolutely necessary; however, you should refrigerate when possible to ensure maximum product life and performance.

OTHER TIPS

- You can speed up customer drying times by drying them off with a handheld hair dryer set on cool or low temperature.
- You can construct a temporary exhaust fan from a box fan fitted with a heating and air-conditioning filter to remove overspray from the air around the airbrushing area.

ROOM SETUP

It is recommended that semi-gloss paint be used on walls instead of flat paint. When choosing a paint color, look for a medium tone that will mask overspray but will still allow you to see it for cleaning.

A piece of low-pile carpeting can be placed on the floor. Make sure to have clients take care when moving from the carpeting to a hard floor so they do not slip on any potential overspray.

An overspray booth over overspray fans with filters should be set up.

SCHEDULE PLANNING/PRICING

The following information simply provides examples of session times and fees charged for sunless procedures. Your prices will vary based on your market area and clientele.

PRICING AND SESSION TIMES

(times 25 percent to 50 percent shorter for HVLP sessions)

Full Body Session (approx. 20 min.)	\$25
Face/Shoulders/Arms (approx. 6-8 min.)	\$12-\$15
Full Facial/Neck Blend (approx. 3-5 min.)	\$5-\$8



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SUNLESS PACKAGES

Additionally, many salons have developed packages that work well in certain demographic areas.

Examples:

3 Full-body sessions for \$60

5 Facial touch-ups fro \$12-\$20, etc.

Another option would be to combine UV with your sunless packages for tanners who use both services.

Using these guidelines, you can estimate what would be most attractive to your customers. However, these numbers are based on market information from current sunless spray technicians.



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Chapter 5

FEDERAL STATEMENT ON DHA

On July 1, 2003, the Food and Drug Administration (FDA) released information about dihydroxyacetone (DHA), the tanning ingredient in today's sunless products. This statement came in the shadow of the booming sunless craze and after countless questions were raised about sunless booths and handheld sprayers.

WHY DOES THE FDA CARE ABOUT DHA?

According to the July statement, the Food, Drug, and Cosmetic Act (FD&C Act), Section 721, authorizes the regulation of color additives, including their uses and restrictions. Specifically, these regulations are found in Title 21 of the Code of Federal Regulations (21 CFR), beginning at Part 70. If a color additive is not permitted by regulation or is used in a way that does not comply with the specific regulation(s) authorizing its use, it is considered unsafe under the law.

DHA is listed in the regulations as a color additive for use in adding color to the human body. However, its use in cosmetics—including sunless tanning products—is restricted to external application (21 CFR 73.2150). According to the CFR, “externally applied” cosmetics are those “applied only to external parts of the body and not to the lips or any body surface covered by mucous membrane.” (21 CFR 70.3v)

In addition, no color additive may be used in cosmetics intended for use in the area of the eye unless the color additive is permitted specifically for such use (21 CFR 70.5a). The CFR defines “area of the eye” as follows: “the area enclosed within the circumference of the supra-orbital ridge, including the eyebrow, the skin below the eyebrow, the eyelids and the eyelashes, and conjunctival sac of the eye, the eyeball, and the soft areolar tissue that lies within the perimeter of the infra-orbital ridge.” (21 CFR 70.3s)

WHAT DOES THIS MEAN FOR THE SUNLESS PROCESS?

When using products containing DHA as a spray or mist, it may be a challenge to avoid exposure in a manner for which DHA was not originally approved, including contact with the area of the eyes, lips or mucous membrane, or even internally. Because of this, the FDA suggests consumers ask the following questions when considering commercial facilities where DHA is applied by spraying or misting:

- Are consumers protected from exposure in the entire area of the eyes, in addition to the eyes themselves?
- Are consumers protected from exposure on the lips and all parts of the body covered by mucous membrane?
- Are consumers protected from internal exposure caused by inhaling or ingesting the product?

If the answer to any of these questions is “no,” the FDA says that the consumer is not protected from the use of sunless products. In this case, the FDA suggests that the consumers request measures to protect their eyes and mucous membranes and prevent inhalation.



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WHAT DOES THIS MEAN FOR THE TECHNICIAN APPLYING SUNLESS?

Sunless airbrush technicians must take extra care in informing clients to avoid breathing the sunless product during the application process. Consumers also should try to avoid direct application of the product into the eye area as described above, and use a lip balm or other barrier product on the lips and in the nostrils to avoid contact with the mucous membrane.

The FDA's cautious opinion on DHA most likely stems from relying on limited information found in the product's Material Safety Data Sheet (MSDS) originating in 1973. From its original use as a topical substance, DHA was listed with three "risk numbers": R36, R37 and R38.

- R36 Irritating to eyes.
- R37 Irritating to respiratory system.
- R38 Irritating to skin.

These risk numbers are based on pure forms of DHA with no other additives considered such as water and so on. To put this into perspective, the purist form of many cosmetic ingredients fall under the same risk numbers.

To best take advantage of the bronzing effects of sunless products in its newest form, prudent sunless airbrush/HVLP technicians should use care when offering sunless in a spray or mist application.

- Have your clients avoid getting this and other tanning products directly into their eyes. Disposable eye protection may be a good option.
- Protect their lips with lip balm or petroleum jelly.
- A nose filter can be used to protect the mucous membrane and also to provide inhalation protection.
- Disposable undergarments can be used to protect the more private mucous membranes.
- Ensure proper ventilation for staff and clients in the sunless application area of your salon. An overspray booth or overspray fans with filters should be set up to remove overspray in the air. Spray equipment should not be set up near intakes for the salon's ventilation system.
- Although sunless solution contains no known toxins, the repeated inhalation may cause irritation, as it would be with any substance. Common sense would dictate prudent technicians wear a filtering mask while spraying clients.



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Chapter 6

ELECTRICAL SAFETY

U.S. Consumer Product Safety Commission

When using an electrical device like a sunless system at home or in your business, certain basic steps should be followed to help eliminate possible electrical shock. Electrical receptacle outlets in walls and floors may present shock and electrical fire hazards to users. The U.S. Consumer Product Safety Commission (CPSC) estimates that 3,900 injuries associated with electrical receptacle outlets are treated in hospital emergency rooms each year. CPSC estimates that electric receptacles are involved in 5,300 fires annually which claim 40 lives and injure 110 consumers.

Older homes and businesses may have receptacles that are damaged or which, otherwise, may have deteriorated over the years. In one case of a damaged receptacle, a woman suffered severe burns to her hand as she was plugging in a floor lamp. Part of the plastic faceplate of the outlet had broken away, allowing the prongs of the plug to bridge from the electrical contacts to the grounded strap, resulting in intense electrical arcing.

Outlets also deteriorate from repeated use, from plugging-in and unplugging appliances as is often done in kitchens and bathrooms. As a result, when plugs fit loosely into receptacles, especially the two-prong ungrounded type, they may slip partially or completely out of the receptacle with only slight movement of the attached cord. Receptacles in this condition may overheat and pose a serious fire hazard; if covered by a curtain or drape, the fire hazard is even greater.

Only a qualified person should replace deteriorated and damaged receptacles and, when necessary or required by law, upgrade electrical systems to present safety standards. The simplest and most effective method to protect against electrocution is through the installation of ground-fault circuit interrupters (GFCIs) (as shown in FIGURE 3).

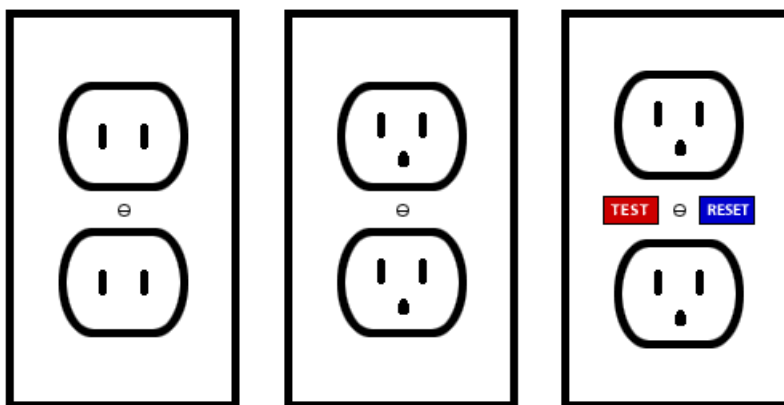


FIGURE 1
UNGROUND (POOR)

FIGURE 2
GROUNDED (BETTER)

FIGURE 3
GFI (BEST)

Another method of protection in the home or work place is to install 3-wire receptacles that will accept either 2- or 3-prong plugs (as shown in FIGURE 2). This method, however, requires a grounding conductor that may or may not be available in the outlet box. The least acceptable method is installing another 2-wire receptacle that requires the use of an adapter for accepting 3-wire plugs. Even though the tab on the adapter may be properly connected to the cover-plate screw, the grounding path may not be adequate to protect against ground faults.



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WHAT TO LOOK OUT FOR

Outlets with poor internal contacts or loose wire terminals may become overheated and emit sparks. Even a receptacle with nothing plugged into it may run hot if it is passing current through to other outlets on the same circuit. To prevent damage to receptacles, appliances like sunless spray systems should be switched-off before unplugging from a receptacle.

- Have a qualified electrician replace damaged receptacles or those which feel hot, emit smoke or sparks, those with loose fitting plugs or those where plugged-in lamps flicker or fail to light.
- Do not unplug a sunless system by pulling on the cord at an angle. The brittle plastic face of the wall receptacle may crack and break away, leaving live parts of the receptacle exposed.
- To protect young children, parents should consider some precautions:
 - Insert plastic safety caps into unused outlets within reach of young children.
 - Be sure that plugs are inserted completely into receptacles so that no part of the prongs are exposed.

The U.S. Consumer Product Safety Commission protects the public from the unreasonable risk of injury or death from 15,000 types of consumer products under the agency's jurisdiction. To report a dangerous product or a product-related injury, you can call CPSC's hotline at (800) 638-2772 or send the information to info@cpsc.gov. Consumers can obtain additional information from CPSC's web site at: publications@cpsc.gov.



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Chapter 7

AVOIDING SLIPS AND FALLS

According to the Occupational Safety & Health Administration (OSHA), slips, trips, and falls constitute the majority of general worker accidents. They cause 15% of all accidental deaths, and are second only to motor vehicles as a cause of fatalities. Like those businesses offering sunless spray services, the OSHA standards for walking and working surfaces apply to all permanent places of employment.

GENERAL OSHA REQUIREMENTS

Workplace Housekeeping

Some of the most frequently overlooked general requirements involve general housekeeping:

- All places of employment, passageways, storerooms, and service areas shall be kept clean and orderly and in a sanitary condition.
- The floor of every workroom shall be maintained in a clean and, so far as possible, a dry condition. Where wet processes are used, drainage shall be maintained and gratings, mats, or raised platforms shall be provided.

AISLES AND PASSAGEWAYS

Aisles and passageways shall be kept clear and in good repair with no obstruction across or in aisles that could create a hazard.

Permanent aisles and passageways shall be appropriately marked. Where mechanical handling equipment is used, aisles shall be sufficiently wide. Improper aisle widths coupled with poor housekeeping and vehicle traffic can cause injury to employees, damage the equipment and material, and can limit a way out in emergencies.

Most experts agree that at the most basic level, a slip occurs because of inadequate slip resistance between the shoe and the floor. Slips are generally caused by the interaction of any or all of three factors:

- Footwear,
- Flooring, and
- Contaminants (substances that may come between the floor and the shoe like sunless solutions).

STEPS TO PREVENTION

The consensus among slip experts is that successful prevention programs address all the controllable factors. Most experts agree that flooring more than footwear and contaminants should be primarily considered. Short of replacing the entire walking surface, there are cost-effective options for increasing a floor's slip resistance:

- Paint floors in high-risk work areas with abrasive material;
- Etch the surface with acids, such as hydrofluoric acid; or
- Place slip-resistant mats in the most slip-prone areas.



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The floor treatment that is most appropriate for a particular work environment will depend on the nature of the floor and the hazards that are present...this means a formal, written program that specifies the proper cleaners for each contaminant, the use of barricades and warnings, and the training of employees on the proper procedure for floor cleaning.

Typically, when cleaning the floor in the area of sunless spray application, you need to do more than mop. That just spreads the sunless solution around. You need to agitate and actually remove the solution with cleaners designed to thoroughly remove anything that may be on the floors surface.