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## **INFORMATION ABOUT Broad Band Light (BBL™) / VASCULAR LESION LASER TREATMENT**

**How do BBL / vascular lesion lasers work?** The BBL / vascular lesion laser (we use) produces a very short burst of intense but gentle laser light. This light has the proper wavelength ("color") to be absorbed by red colored hemoglobin in lesions like small ("broken") blood vessels or spider veins of the face (as in Rosacea) or legs and vascular birthmarks (such as "strawberry" hemangiomas or "port wine stains"). Absorption causes "photothermolysis", or heat damage, just to the red colored spots and lesions, such as visible blood vessels without damaging surrounding tissue. Most BBL/vascular lesion laser light penetrates the skin to a depth of only 1.5 mm, or about 1/20 of an inch. Therefore, scarring is very rare. We have used BBL or vascular lesion laser therapy to treat infants as young as a several weeks old.

**Are there other ways to treat my vascular lesion?** In the past, vascular lesions were removed by surgery (cutting or electrosurgery), cryotherapy (freezing), or tattooing with a lighter pigment. Most of these procedures often cause scarring or other unsatisfactory results, with the exception of electrosurgery that can be satisfactory in the appropriate situation. Other (often, older) lasers, like the ruby, argon, KTP, Krypton or CO2 laser, have also been used to treat vascular lesions. These older lasers produce light whose wavelength (color) is less specific and hence, typically ill-suited to destroying blood vessels without damaging adjacent tissues, in contrast to BBL or pulsed dye laser. These older lasers can cause scarring or other unsatisfactory results.

Although BBL / laser surgery is effective in most cases, one or more treatments may be required and no guarantees can be made that a specific patient will benefit from treatment. Facial broken blood vessels (e.g. Rosacea) usually respond within one to three treatments, while leg spider veins, vascular birthmarks, and scars / stria need a series of treatments to reach the desired or optimal improvement.

**Are there any reasons why I may not be a candidate for BBL / vascular lesion laser therapy?**

Laser treatment may be less effective in moderately dark or black skin.

**What should I expect from this BBL / laser treatment?** Treated areas usually will be more red (lasting minutes to several days or more) and sometimes focally bruised (lasting 5-10 days) depending upon condition and treatment plan / goals.

Successful treatment of small superficial ("broken") blood vessels and rosacea usually takes one or two treatments, but, sometimes three. Larger, darker, more intensely red or numerous blood vessels are more likely to need a 2<sup>nd</sup> or 3<sup>rd</sup> (usually, less extensive) treatment, typically at 4-8 weeks intervals. Most treatments last 15-20 minutes or less; however, this depends on the extensiveness of your condition. Strawberry hemangiomas and port-wine stains may take up to 4 to 12 monthly treatments or more to achieve significant lightening. Newer applications include non-ablative (i.e. no down-time) facial or other skin rejuvenation for wrinkles/aging/red & brown discoloration. Although one treatment will be beneficial, a series of monthly treatments is usually recommended at monthly intervals. Redness lasts minutes to hours and rarely, days. Makeup may be applied immediately, if desired. You may return to work the same day.

**Are there any potential adverse effects?** Any treatment, including BBL / laser therapy has the potential for adverse effects.

The following may happen after BBL / Vascular Lesion (Removal) Laser treatment:

The treated area(s) may temporarily hyperpigment (turn darker). Though unpredictable, this tends to happen more often on darker skin.

When hyperpigmentation happens on the face, normal skin color usually returns within 1-3 months, but may last up to 6 months.

If hyperpigmentation occurs on the arms or legs, the return of normal skin color sometimes takes longer, up to about 1 year.

Scarring is a risk with any procedure, but with the vascular lesion laser we use, this risk is very low (under 1 %).

**Will the treatment hurt?** The laser causes mild discomfort. Patients describe the feeling of a laser pulse as "being snapped by a rubber band", or like "the slight sting of a mosquito bite." Most patients tolerate laser treatment with no need for anesthesia. However, if you need some, the doctor will discuss the right kind to use (for example an injection of "local", or applying a cream approximately an hour before treatment).

**What safety measures are needed during BBL / laser treatment?**

The BBL/laser produces a very bright beam of light. Everyone in the treatment room must wear protective eyewear while the BBL/laser is in use.

If your lesion is not on your face, you may be able to watch the procedure if you wish. If it is on your face, we may place a moistened gauze over your eyes to protect them, or you may wear protective goggles which resemble the "sunnies" used in tanning booths. If there is hair near the treatment area, we recommend that you shave this area on the morning of the procedure. If this is not possible, we may moisten it with water or damp sponges to prevent heat build-up. Even if the hair is singed by the laser, it will grow back normally.

**What will I have to do to take care of the treated area?** Usually, only sun avoidance or protection as per our aftercare instructions.

**Will I be able to swim in chlorinated water?** Yes, the next day [unless any crusts form; then you should wait until they have fallen off (usually about 5-10 days)]. Regardless, you may shower the next day.

**Will I have to stay out of the sun?** No. However, you should use a full-strength sunblock (SPF 30 or >) to protect the treated areas.

**What should I do if I still have questions?** Ask us! We encourage you to bring any questions or concerns to our attention.

## INSTRUCTIONS FOR SKIN CARE AFTER BBL™ / VASCULAR LESION LASER TREATMENT

You have had laser treatment of your vascular lesions. They may be more red or discolored immediately afterward. Please read the following carefully. This information will let you know what to expect, and how to care for the treated area.

### WHAT TO EXPECT

- ◆ The treated area may swell somewhat. This is caused by the BBL / laser energy, and represents inflammation, and not infection. It is a normal and expected part of the healing process.
- ◆ While the laser usually leaves the overlying skin intact, avoid manipulating the treated area for the first week after treatment. [A crust (or scab) may rarely form and is not abnormal nor unexpected. This represents healing and does not necessarily mean the area will scar.] No dressing is usually needed. However, if the treated area scales or scabs up, keep the healing area moist with an antibiotic ointment (see below).
- ◆ Usually, your vascular areas appear more red, which varies from slight to moderate in most, but typically fades within several hours to days. Make-up may be applied immediately after treatment. Occasionally, focal to extensive purpura (bruising or red-purple color) is present, depending on the vascular condition and/or treatment goals, If present, this will last or gradually fade over 5-10 days, although it sometimes lasts 14 days or more. When it goes away, you may still be able to see the treated vascular spots, as the body gradually continues the fading process for several weeks, so that final results may not be seen for up to 6-8 weeks after treatment.

### CARE OF THE TREATED AREA(S)

- ◆ If the treated area scales or scabs up, apply a thin coat of antibiotic ointment (i.e. Bacitracin or Polysporin) to the treated area once or twice daily for 7 days, or until the surface looks healed. [For children, a dressing consisting of a light coat of Polysporin or Bacitracin ointment covered with Telfa non-stick gauze and held in place with hypo-allergenic paper tape should be placed over the treated area. The dressing should be changed once daily for 1 week.]
- ◆ Do not rub, scratch, or pick the area(s).
- ◆ Makeup is permitted, but be very gentle when applying or removing it.
- ◆ You may get the treated area wet, but be very gentle when drying it. Pat dry after showering. Swimming is generally permitted after 2-3 days or once all crusts (if any) have fallen off (usually, 5-10 days).
- ◆ Minimize sun exposure, as best as possible, for at least 1 month before and after treatment. Wear protective clothing (hat, etc.) and a high SPF (at least SPF 30) sunscreen to protect the treated area from direct sun exposure.
- ◆ You may help relieve any swelling by applying an ice pack wrapped in a soft cloth. Leave this on the treated area for 5-10 minutes per each hour for several or more hours.

### PRECAUTIONS

- ◆ Do not use aspirin, aspirin containing medications or alcohol for at least 1 week before and for the first 2 days after treatment. Take Tylenol or another pain reliever that contains no aspirin or ibuprofen, if needed.
- ◆ If the treated area becomes increasingly tender, red, swollen and/or purulent, contact our office immediately as this may represent an infection that may require treatment.

**IF YOU HAVE ANY QUESTIONS OR CONCERNS, PLEASE CONTACT US (702-243-6400).**

**Broad Band Light (BBL™) / VASCULAR LESION (Removal) LASER INFORMED CONSENT FORM**

The BBL/vascular lesion laser we use emits an intense light beam, absorbed by vascular targets, usually within fractions of an inch from the skin surface. This heats superficial blood vessels so precisely that normal surrounding tissue is minimally affected. BBL/laser is used to lighten or remove "strawberry" birthmarks, port-wine stains, visible face / leg / other veins (aka spider veins or "broken blood vessels"), and other vascular conditions or growths of the skin. Other treatable conditions include aging / wrinkles, scars, rosacea, pigmented lesions.

Although BBL/laser therapy is effective in most cases, no guarantees can be made that a specific patient will benefit from treatment. Many conditions for which BBL / lasers are useful need a series of treatments to reach the desired or optimal improvement, from one to six or more. Some conditions lighten, but do not completely disappear. Other vascular lesions may respond minimally to this treatment.

What are the possible side effects and complications of BBL / Laser Surgery?

- Pain** – BBL/laser causes mild discomfort. Patients describe a BBL/laser pulse as feeling like "being snapped with a rubber band", or like the slight sting of a mosquito bite. Most patients tolerate laser treatment with no need for anesthesia.
- Blistering / Crusting of the Healing Wound** - Rarely, a blister, crust, or superficial wound forms which requires care. This crusting does not mean infection. Apply a topical antibiotic ointment like Bacitracin or Polysporin until healed. Any crusting tends to heal within 5-10 days.
- Pigment Changes**  
Treated areas may heal with temporary increased pigmentation (aka hyperpigmentation, i.e. skin color darkening), particularly in darker skin types. We advise avoiding direct, unprotected (i.e. without using a full strength (SPF 30 or >) sunscreen) sun exposure of the treated site(s). Swimming in chlorinated water is permitted once any scabs have fallen off (5-10 days). Even with precautions, however, some patients develop hyperpigmentation. When this happens, the skin usually returns to normal color in 3-6 months; rarely are pigment (color) changes permanent. A few patients may notice instead a decrease in skin color (hypopigmentation), usually after repeated treatments to the same area and more commonly again in darker skin types than in lighter complexions.
- Bruising** – BBL / vascular lesion laser treatment may cause a focal to generalized purple bruising called purpura in the treated area(s). This lasts 5-10 days or sometimes more. Make-up may be applied immediately after, if so desired. When purpura disappears, the treated area(s) will still be visible; lightening continues for up to 6-8 weeks after the treatment, so the full effect of treatment cannot be seen until then.
- Swelling** - After BBL / laser surgery the skin may slightly swell, especially skin of the eyelid, cheek or nose. Ice packs help to reduce this. (5-15 minutes per hour for several hours or more as needed.) This swelling is normal and does not mean infection or scarring.
- Skin Fragility**  
Treated areas should not be rubbed or picked. However, makeup may be applied at once, as long as care is taken to remove it gently.
- Scarring** - Because the BBL / vascular lesion laser emits light which hardly penetrates the skin and is "specific for" (i.e. specifically absorbed by and damaging to) the abnormal vascular tissues; minimal damage to surrounding skin occurs and scarring is rare and less likely than other more older removal techniques. To minimize any chances of scarring, we advise careful adherence to all postoperative instructions.
- Eye Protection** – BBL/laser energy can harm exposed eyes. We therefore provide safety eyewear, which must be worn at all times while the laser is being used.
- Persistence of Lesion** - Some vascular birthmarks may respond only partially or minimally. We cannot guarantee results.

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By signing below, I acknowledge that I have read "Information / Instructions about/for BBL/Laser Treatment of Vascular Lesions", and this foregoing BBL / Vascular Lesion Laser Consent Form, and that I feel I have been adequately informed of the risks of BBL/laser surgery as well as of alternate methods of treatment. I hereby consent to BBL/laser surgery, performed by Dr. Strimling and/or his associates / assistant(s).

I consent to the taking of photographs before, during and after the procedure. These photographs will belong to the doctor and may be used for educational and scientific purposes, including lecture presentations or publication in medical or scientific texts or periodicals. They will not be used for advertising without my express written consent that they may be used for this purpose.

DATE: \_\_\_\_\_

TIME: \_\_\_\_\_ AM / PM

\_\_\_\_\_  
Patient's Signature

\_\_\_\_\_  
Patient's Representative (if signature of parent or guardian is needed)

\_\_\_\_\_  
Relationship to Patient

\_\_\_\_\_  
Witness