INCREDIBLE DEVICES

" The Most POWERFUL, COMPACT & VERSATILE IPL in North America "

SkinBrite Mult-IPL™

The **INCREDIBLE SkinBrite Mult-IPL** System **Training Manual** provides essential guidelines for safe operation, installation, maintenance and optimal treatment results.

HEALTH CANADA LICENCED

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Dedication

Dedicated to the passionate pioneers who have built their dreams from the ground up in the aesthetics industry. With unwavering determination, creativity, and expertise, you have turned your vision into thriving Clinical Practices. Your success is a true reflection of your dedication and hard work!

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Disclaimer

Legal, Safety & Compliance Information

Important Safety Information

Before operating this device, all users must carefully read and understand the instructions, warnings, and safety guidelines provided in this manual. Failure to follow the recommended procedures may result in equipment malfunction, injury to the operator or client, or ineffective treatment outcomes.

This device must only be used for its intended purpose and within the parameters specified in this documentation. Operators must always follow recommended safety protocols and ensure that appropriate protective measures are in place during device operation.

Protective equipment, including eye protection where applicable, must be used according to the treatment requirements described in this manual.

Operator Responsibility

This device is intended for professional use only. It must be operated by trained and qualified personnel who possess adequate knowledge of aesthetic or medical treatment procedures.

The operator is responsible for ensuring proper training before operating the device, following all safety instructions and treatment protocols, assessing client suitability prior to performing any treatment, maintaining proper hygiene and safety standards during procedures, and operating the device in accordance with local regulatory requirements.

The manufacturer assumes no responsibility for outcomes resulting from improper use, lack of training, or failure to follow the guidelines outlined in this manual.

Contraindications & Precautions

Before performing any treatment, operators must conduct a thorough consultation and assessment to determine whether the treatment is suitable for the client.

Certain medical conditions, medications, or skin sensitivities may contraindicate treatment. Operators must exercise professional judgment and follow accepted clinical standards when determining treatment eligibility.

If any uncertainty exists regarding a client's suitability for treatment, consultation with a qualified medical professional is recommended.

Maintenance Responsibility

Routine inspection and proper maintenance of the device are essential to ensure safe and effective operation.

Users are responsible for maintaining the device according to the maintenance guidelines provided, ensuring the device is used in an appropriate environment, preventing unauthorized modifications or repairs, and ensuring that servicing is performed only by authorized personnel.

Improper maintenance or unauthorized modifications may result in device malfunction and may void warranty coverage.

Documentation & Product Updates

The information contained in this manual is based on the most current product knowledge available at the time of publication. The manufacturer reserves the right to update or revise the device design, specifications, operational procedures, and documentation at any time without prior notice.

Users are responsible for ensuring they are working with the most recent version of the user guide and operational documentation.

Limitation of Liability

The manufacturer shall not be held liable for any direct, indirect, incidental, or consequential damages resulting from improper operation, unauthorized modification, failure to follow instructions, or use of the device outside of its intended purpose.

Use of this device constitutes acceptance of the guidelines and limitations described in this documentation.

Intellectual Property Notice

All content contained in this manual, including text, illustrations, diagrams, and technical information, is protected by intellectual property laws. No portion of this publication may be reproduced, distributed, translated, or transmitted in any form without prior written permission from the manufacturer.

Warranty Disclaimer

Warranty coverage for this device is provided only as outlined in the official warranty documentation supplied with the product.

Warranty may be voided if the device is modified or altered without authorization, serviced by unauthorized personnel, used outside recommended operational parameters, or damaged due to misuse, negligence, or improper handling.

Consumable components and normal wear and tear are not covered under warranty unless explicitly stated.

General Warnings & Safety Symbols

This device must be used only for its intended purpose and in accordance with the procedures described in this manual. Failure to follow instructions may result in equipment damage, operator injury, or client harm.

Users should read this manual before operating the device, ensure only trained professionals operate the equipment, use appropriate protective equipment when required, avoid modifying the device, disconnect power before cleaning or maintenance, and ensure the device is used in a safe environment.

If the device appears damaged or operates abnormally, discontinue use immediately and contact authorized service personnel.

Safety Symbols

Certain symbols may appear on the device, packaging, or documentation to indicate important safety information.

Common symbols may include warning indicators, electrical hazard signs, instructions to refer to the user manual, protective equipment requirements, temperature limitation symbols, and notices indicating that the device should not be disassembled by unauthorized personnel.

Treatment Contraindications & Precautions

Before performing any procedure using this device, operators must assess whether the treatment is suitable for the client.

Treatments should not be performed or should be performed with caution in individuals with active skin infections, open wounds, severe skin sensitivity, inflammatory skin conditions, recent surgical procedures in the treatment area, known hypersensitivity to light or heat-based treatments, pregnancy without medical approval, or use of medications that increase photosensitivity.

Operators must exercise professional judgment and conduct a proper consultation prior to treatment.

Client Consent & Practitioner Responsibility

Before performing any treatment using this device, the practitioner must ensure that the client has received a full consultation and understands the nature of the procedure.

The practitioner is responsible for explaining the treatment process and expected outcomes, discussing potential risks and aftercare instructions, obtaining informed client consent, maintaining client records and treatment documentation, and selecting appropriate treatment parameters.

The manufacturer is not responsible for treatment outcomes or complications resulting from practitioner error or failure to obtain informed consent.

Table of Contents

Chapter 1 - Training Orientation & Device Overview

1.1 Purpose of the Training Manual

The purpose of this manual is to provide comprehensive guidance for the safe, effective, and standardized operation of the **SkinBite Multi-IPL™** device. It is intended to ensure that all user-licensed practitioners, technicians, and support staff—understand the device's functionality, clinical applications, and associated safety requirements.

This manual serves to:
Educate Users – Provide detailed information on device components, operational procedures, treatment protocols, and maintenance requirements.
Promote Safety – Outline all necessary safety precautions, contraindications, and protective measures to minimize risk to both practitioners and clients.
Ensure Consistency – Establish standardized procedures for clinical assessment, treatment planning, and documentation to optimize treatment outcomes.
Support Compliance – Provide information aligned with relevant regulatory standards, electrical and optical safety requirements, and legal compliance guidelines.

Facilitate Troubleshooting & Maintenance – Offer guidance for routine maintenance, troubleshooting, and escalation procedures to maximize device performance and lifespan.

This manual is intended as a practical reference to support both initial training and ongoing professional development, helping users deliver safe and effective IPL treatments while maintaining the highest standards of client care.

1.2 Intended Users & Training Requirements

Intended Users & Training Requirements

This Clinical Training Manual is intended for **qualified professionals** who have completed, or are in the process of completing, formal training on the **INCREDIBLE SkinBite Multi-IPL™.**

Intended users include, but are not limited to:

- Licensed medical professionals
- Certified laser and light-based device practitioners
- Medical aestheticians and skin care professionals
- Other practitioners are legally permitted to perform IPL treatments under local regulations.

All users must practice **within their scope of licensure, certification, and local regulatory requirements**. It is the responsibility of the practitioner and the facility to ensure compliance with all applicable laws and professional standards.

Training Requirements

Before independently performing treatments with the **SkinBite Multi-IPL™,** all users must:

- Complete **NAIMA**-approved theoretical and hands-on training
- Demonstrate understanding of IPL safety principles and contraindications
- Understand patient assessment, skin typing, and treatment planning
- Demonstrate competency in operating the device safely
- Understand treatment endpoints, risk mitigation, and post-treatment care

Hands-on training includes supervised clinical practice and may involve live models. Successful completion of training is required before the device can be used clinically.

Continuing Education & Competency

IPL technology and clinical best practices evolve over time. Users are strongly encouraged to:

- Participate in ongoing education and refresher training
- Stay current with clinical guidelines and safety standards
- Review updated protocols or device updates as provided by **NAIMA**

Professional Responsibility

This training does not replace professional medical judgment. Practitioners are responsible for:

- Proper patient selection and informed consent
- Adhering to all safety protocols
- Recognizing when to modify, postpone, or discontinue treatment
- Referring patients when conditions fall outside the scope of treatment

NAIMA assumes no responsibility for treatments performed outside the scope of training, licensure, or regulatory compliance.

1.3 Scope of Training vs. User Manual

Scope of Training vs. User Manual

This **Clinical Training Manual** is designed to support **hands-on education, clinical decision-making, and safe treatment execution** using the **SkinBrite Multi-IPL™** system.

It is intended to complement — **not replace** — the official User Manual supplied with the device.

The **Training Manual** focuses on:

- Clinical application of IPL technology
- Patient assessment and selection
- Treatment planning and technique
- Recognition of correct treatment endpoints
- Risk management and complication awareness
- Practical, real-world treatment workflows

The goal of this manual is to ensure that trained users understand **how and why treatments are performed**, and how to apply the technology safely and effectively in a clinical environment.

The **User Manual**, by contrast, serves as the device's **official reference document** and contains:

- Regulatory and compliance information
- Detailed system specifications
- Technical descriptions of device components
- Engineering and hardware-related details
- Manufacturer-mandated warnings and instructions

Certain technical or regulatory information may be briefly referenced in this Training Manual for context; however, **the User Manual remains the authoritative source** for all device operation requirements, safety labelling, and manufacturer instructions.

All users must:

- Review and understand the User Manual before operating the device
- Follow all manufacturer instructions at all times
- Use the **SkinBrite Multi-IPL™** only within the scope of their professional training, licensure, and local regulations

This Training Manual does not replace professional medical judgment and does not supersede regional regulations, scope-of-practice laws, or clinical standards. It is the operator's responsibility to practice within their professional qualifications and in accordance with applicable regulatory requirements.

1.4 SkinBite Multi-IPL™ — Clinical Capabilities Overview

The **INCREDIBLE SkinBrite Multi-IPL™** is an advanced, multi-application Intense Pulsed Light (IPL) system designed to support a broad range of **clinical aesthetic treatments**. When operated by trained practitioners, the device allows for safe, effective, and

customizable treatment across multiple indications while prioritizing patient comfort and treatment consistency.

This platform integrates intelligent energy delivery, advanced cooling, and flexible treatment modes to address both **hair reduction** and **skin rejuvenation concerns** with minimal downtime.

Hair Reduction

The SkinBrite Multi-IPL™ is designed for long-term hair reduction across a wide range of skin and hair types. By targeting melanin within the hair follicle, IPL energy disrupts follicular activity during active growth phases.

Clinical benefits include:

- Effective hair reduction for various body areas
- Adjustable parameters for different skin types and hair characteristics
- SHR technology for gradual energy delivery and enhanced comfort
- Reduced risk of epidermal injury when proper protocols are followed

Skin Rejuvenation

Skin rejuvenation treatments using the SkinBrite Multi-IPL™ focus on improving overall skin quality, tone, and texture. Controlled IPL energy stimulates dermal remodelling while addressing superficial chromophores.

Rejuvenation applications may include:

- Improvement in skin texture and smoothness
- Reduction in the appearance of enlarged pores
- Skin brightening and enhancement of overall radiance
- Support of collagen stimulation and photo-rejuvenation

Results are progressive and typically achieved through a series of treatments.

Pigmented & Vascular Treatments

The SkinBrite Multi-IPL™ can target both melanin and hemoglobin, making it suitable for treating common pigmented and vascular lesions.

Treatable indications may include:

- Sun spots and solar lentigines
- Freckles and uneven pigmentation
- Diffuse redness and telangiectasia
- Cherry angiomas and superficial vascular lesions

Pigmented lesions may temporarily darken after treatment, while vascular lesions may gradually fade over the following weeks.

Key Clinical Features

- **Multi-Technology Platform**
  Combines traditional IPL with **SHR (Super Hair Removal)** and **SSR (Skin Safety Rejuvenation)** modes to expand treatment versatility and safety.
- **Adjustable Wavelength Filters**
  Multiple filter options allow practitioners to target specific chromophores while preserving surrounding tissue.
- **Intelligent Cooling System**
  Integrated contact and air cooling enhance patient comfort and provide epidermal protection during treatment.
- **User-Friendly Touchscreen Interface**
  Intuitive controls support efficient parameter selection, treatment mode adjustment, and session monitoring.
- **Integrated Safety Features**
  Includes emergency stop functions, handpiece recognition, system lockouts, and compliance with international electrical and optical safety standards.

Clinical Scope & Reference to User Manual

This Training Manual provides guidance on **clinical application, treatment planning, and safe use** of the SkinBrite Multi-IPL™. For detailed technical specifications, device setup, calibration, software operation, and advanced troubleshooting, users must refer to the **SkinBrite Multi-IPL™ User Manual**, which remains the authoritative technical reference.

Summary

The **SkinBrite Multi-IPL™** is designed to support safe, effective, and consistent aesthetic treatments when operated by trained and certified practitioners. Its combination of advanced IPL technology, flexible treatment modes, and integrated safety features makes it a versatile solution for professional aesthetic practices seeking high-quality clinical outcomes.

Chapter 2 - Installation Requirements

2.1 Authorized Usage Only

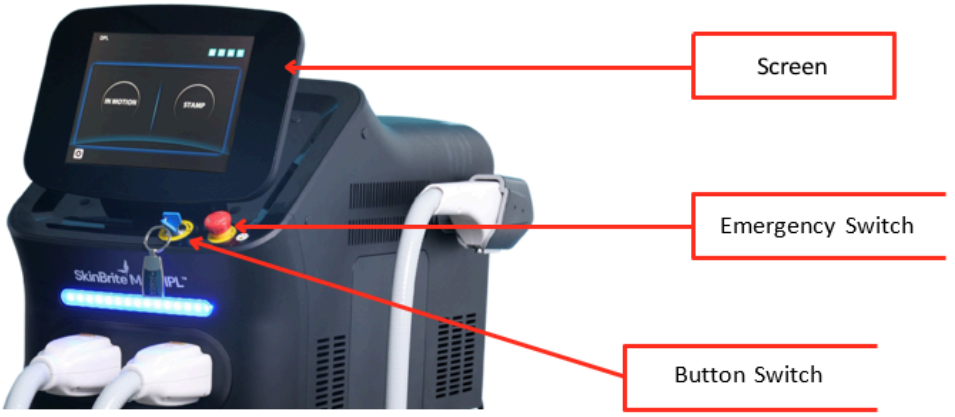
The SkinBrite Multi-IPL System is a state-of-the-art medical spa device designed for advanced skin rejuvenation and hair removal treatments. To ensure optimal performance and safety, proper installation is essential. This includes a stable power supply, adequate ventilation, and a clean, dedicated treatment space. Professional setup guarantees seamless operation and client satisfaction.

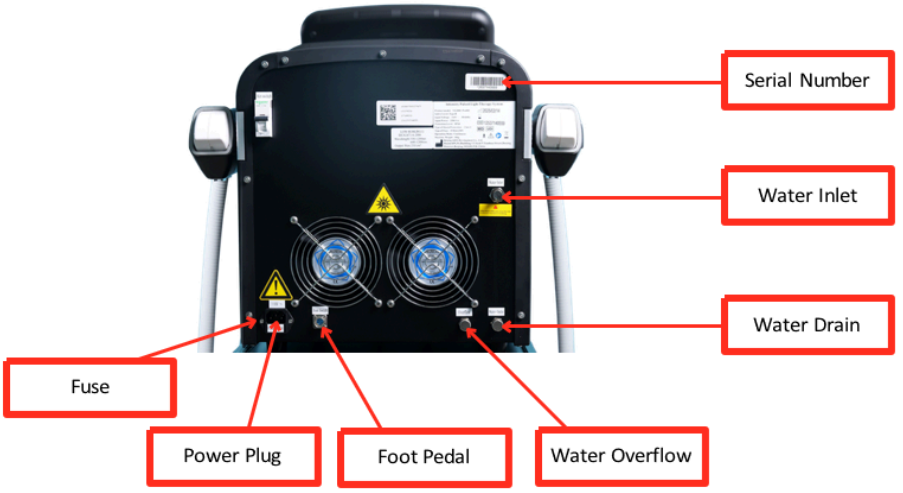
Specifications

- Input Voltage Range: 95-120VAC, 220-250VAC Rated current: 1.8A
- Rated Power: 400VA
- The Number of Handles: **2** pieces
- Operating Temperature: 18-35℃
- Storage Temperature: 0-40℃
- Noise Level: 45dB
- Electric Shock Protection: I Class, BF Type
- Anticorrosive Liquid: Normal

2.2 Appearance Introduction

The SkinBrite Multi-IPL System boasts a sleek, modern design that complements any medical spa setting. Its compact yet powerful build features an intuitive touchscreen interface, an ergonomic handpiece, and a durable, high-quality finish. Designed for both functionality and aesthetics, it enhances the treatment experience with style and efficiency.



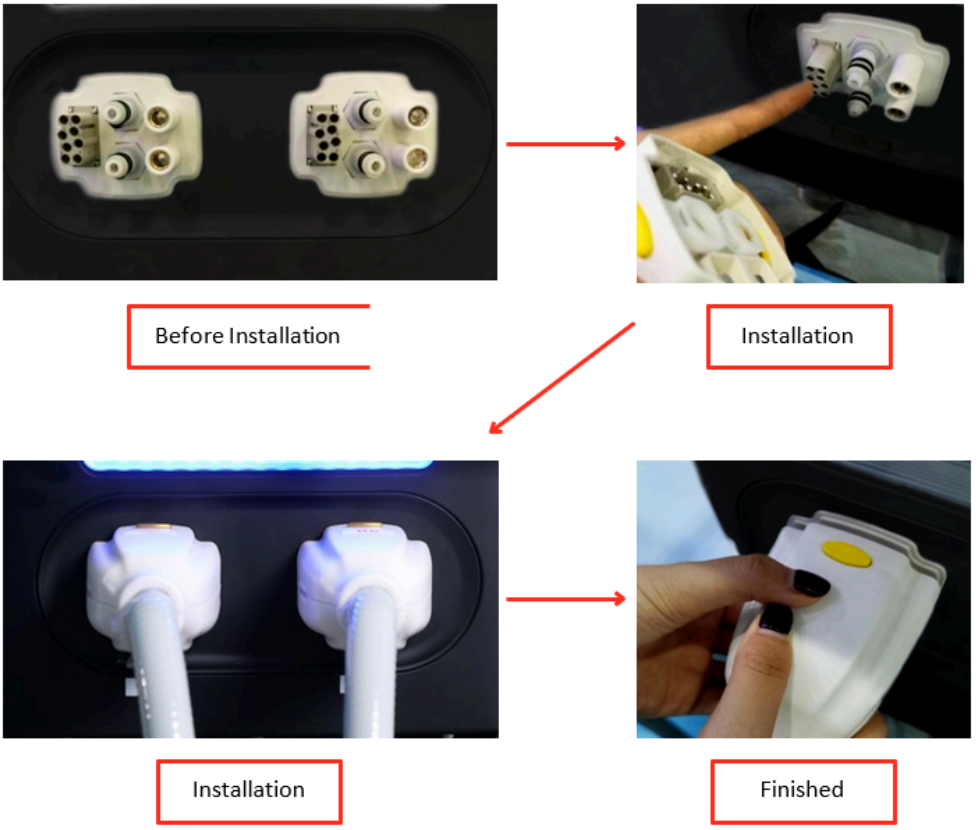


2.3 Equipment List

Item	Name	Picture	Quantity (Unit)
1	Handle		2
2	Water funnel		1
3	Pedal (reserve)		1
4	Professional protective eye patch		1
5	Professional protective glasses		1
6	Power Cord		1
7	Fuse		2
8	Holder		2

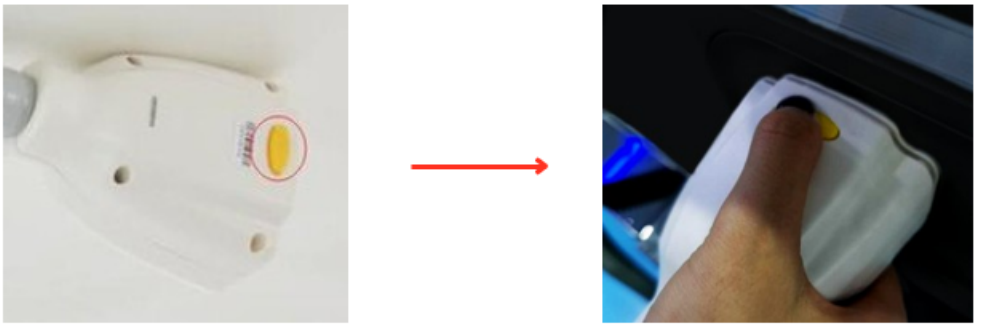
2.4 Installation Accessories

2.5 Installation Handle Description



2.6 How to Remove the Handle

Press and hold the yellow button on the handle and gently pull it out, as shown in the figure below.



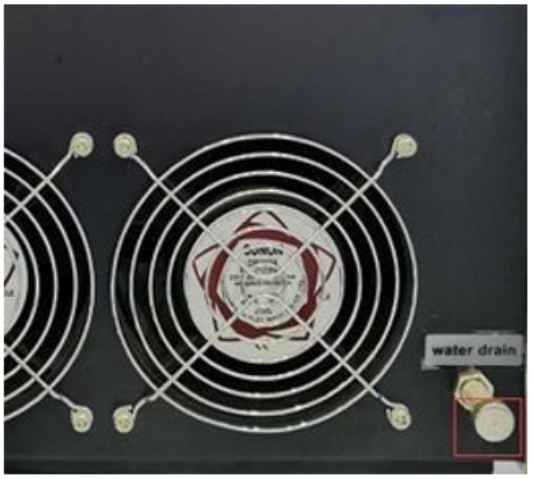
2.7 Water Filling Procedure

When adding water, it is essential to unscrew the caps of both the water inlet port and the overflow port simultaneously. Failure to do so will prevent proper water intake.

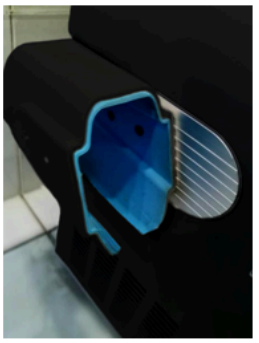
Connect the water funnel and input deionized water.

Water Drain Outlet

The water drain plug must be removed to drain all the water from the machine. After draining, the plug should be tightly closed again.



2.8 How to Install Handle Holders



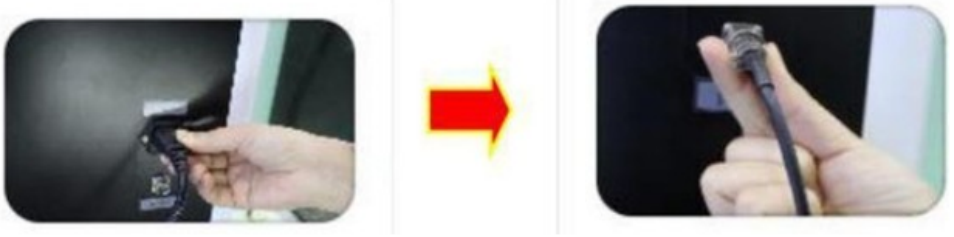
Position the Handle Holder as illustrated in the image and securely fasten the two screws.

Insert a suitable screwdriver through the two holes and tighten the screws.

Insert the handle into the holder in the direction shown in the image, ensuring that it is securely positioned.

2.9 Install the Power Cord and Foot Switch

Note: You must make sure that both are fixed.



2.10 Turn on the Air Switch

Note: It is always in the “ON” state when working.

Attentions for Installation

The machine can be installed in hospitals or beauty salons.

Installation precautions include:

- Unpack and put the machine in a pre-selected location
- Checkup machine and accessories, make sure there is no damage, no loss
- Check whether the connection power is well-grounded
- When installing the handle, be sure to install it firmly and that the handle wire connection is stable
- Test whether all functions of the equipment are normal

Chapter 3 - Operation Instruction

3.1 Exclusion Criteria

- Actinic keratosis
- Current or history of cancer and premalignant condition
- Demyelinating diseases
- Defibrillator/Pacemaker
- Uncontrolled disorder of the thyroid gland
- Epilepsy
- Fever
- Infection in the treated area
- Multiple sclerosis
- Mental diseases
- Metal implants near the treated area, excluding dental implants
- Moles in the treated area
- Ongoing use of Isotretinoin (e.g. Roaccutane)
- Pregnancy or IVF procedure
- Active inflammation and/or infection in the treated area
- Degenerative neurologic diseases
- Diseases stimulated by heat (such as recurrent herpes simplex in the treatment area)
- Varicose veins
- Skin-related autoimmune diseases
- Silicone implants and injections in the treated area

3.2 Precaution Criteria

- When treating the face, avoid areas that have undergone facial laser resurfacing or deep chemical peeling within the last month.
- In the case of Botox injections, natural fillers, and implants in the treatment area, wait one month after the last injection before starting treatment.
- Tanned skin should not be treated. Instruct patients to avoid tanning throughout the treatment sessions.
- The operator must wear certified protective eyewear at all times during the procedure.
- Patients must wear designated protective eye shields before and during the procedure.
- Do not look directly at the visible intense pulsed light (IPL) emission.
- Protective eyewear does not completely protect against direct laser exposure or laser reflections from glass, mirrors, or polished metal surfaces. Direct observation of laser light is strictly prohibited.
- The operating room must be free of flammable and explosive substances, including anesthetic agents, volatile liquids, and gases.
- The operator and the patient must remove watches, necklaces, and other metallic accessories during the procedure.

- Comprehensive eye protection must be provided for the patient. Inadequate protection may result in ocular injuries such as keratitis, corneal abrasion, or, in severe cases, permanent vision loss.
- Do not attempt to open the machine's panel, even when it is powered off, as this can expose you to high voltage.
- Ensure that all screw caps are securely tightened before moving the equipment to maintain stability and prevent operational hazards.

3.3 Treatment Room Warning Sign

3.4 Setting Up the Device

Preparation

- Place the machine on a flat surface.
- Fill the machine with an appropriate amount of distilled or purified water.
- Power on the machine and ensure the proper internal water circulation by listening for the sound of water flow.
- Waiting for 3-5minutes until the probe cools down.
- Note: Operating the machine without proper water circulation or with an overheated probe may damage the handle.
- If an external filter is present, ensure it is properly inserted into the designated slot.
- Test the machine to confirm it is working properly.

Important: All the above steps must be completed before proceeding with any operation. Failure to do so may result in damage to the handle or the machine.

3.5 Water Temperature System Alarm

The system's minimum allowable water temperature is 15°C, while the maximum allowable temperature is 55°C. The machine operates normally within this range (15°C to 55°C). If the water temperature falls below 15°C or exceeds 55°C, the probe will cease to output pulses.

Chapter 4 - Before Treatment

It requires an experienced therapist and patient cooperation to achieve good results.

4.1 For Patients

Achieving optimal hair removal results requires both an experienced therapist and patient cooperation. Certain patient actions can inadvertently reduce the treatment's safety and effectiveness.

Avoid Tanning

Tanning is a significant factor affecting treatment outcomes. It should be avoided for 4–6 weeks before the procedure. Self-tanning creams and sprays must also be completely faded before treatment. During the treatment period, if sun exposure is unavoidable, apply a broad-spectrum sunscreen with SPF 30 or higher as a thick layer at least 20 minutes before exposure.

Maintain Hair in the Follicle

The hair should be in the Follicle at the time of treatment. The laser targets the pigment melanin in the hair beneath the skin's surface. To ensure effective treatment, patients must avoid waxing, tweezing, bleaching, threading, or the use of depilatory agents for at least 4 weeks before treatment. However, for facial hair, a 2-week avoidance period is typically sufficient due to its faster growth cycle. If hair removal is necessary during this period, shaving or clipping is recommended, as these methods preserve the hair within the follicle. Some visible hair growth on the day of treatment is generally preferred.

Remove Topical Products

Before the procedure, lotions, creams, makeup, and deodorant must be removed, as these substances may interfere with or refract the laser light, reducing its effectiveness.

4.2 For Operators

Skin Classification

This treatment is safe and effective for individuals with white, brown, or yellow skin tones.

Pre-Treatment Skin Preparation

Ensure the treatment area is clean and free of perfumes, lotions, or cosmetics.

Documentation

Use a digital camera to capture images of the treatment area from different angles for medical records.

Anesthesia (If Required)

If necessary, apply an external anesthetic cream one hour before the procedure to enhance patient comfort.

Hair Preparation

Shave the hair, leaving approximately 1 mm above the root for optimal laser absorption.

Cooling Gel Application

Clean the treatment area and apply a 3 mm thick layer of cooling gel to the skin before starting the procedure. The cooling gel enhances patient comfort during treatment and facilitates effective penetration of intense pulsed light into the deeper layers of the skin.

Adjust the appropriate treatment parameters (refer to the guidelines below for selecting the correct settings).

Tap “Ready” to activate the crystal.

Press the control button on the handpiece or use the foot pedal to initiate the flashes. To ensure consistent energy output during treatment, direct the first three flashes toward the ground.

Initially, place the probe firmly against the skin, then continuously press the handpiece button or foot pedal to begin the treatment.

Refer to the instructions below for the treatment method.

4.3 During Operation

Ensure that the patient wears protective eye patches, and the operator is equipped with professional safety glasses, a respirator, and medical gloves.

When treating areas with prominent bone structures, such as the forehead, mandible, and cheekbones, reduce the RF energy settings slightly based on the patient's condition.

During treatment, slide the bipolar probe vertically across the skin with a balanced pressure, ensuring it maintains proper contact. Overlapping each shot by 1 cm enhances treatment coverage.

Gradually increase the energy from low to high in small increments, ensuring no more than three steps are taken at a time to prevent the risk of burns.

Continuously press either of the two buttons on the handpiece or use the foot pedal to maintain symmetrical energy output.

Please do not press the button on handle one press by one press nor step the foot pedal step by step. That will make skin gets different energies which will sure hurt the customer.

To stop the treatment or switch to a different treatment area, first release the button on the handpiece or the foot pedal to prevent accidental electric shock.

Warm Tips

Allow the machine to rest after 2-3 hours of continuous operation to prevent overheating.

The handle is delicate; handle it with care when holding or placing it on the holder.

Start the treatment with lower energy settings, then gradually adjust the energy based on the patient's specific conditions.

Chapter 5 Clinical Treatment

5.1 Welcome Interface

Turn on the machine, open the logo page, and tap the screen to open the function selection page.

Interlock Alarm Button: Check the machine to see whether the interlock is on

Flow Level Alarm: A higher or lower flow level cannot work normally. You need to check whether there is enough water input. At first, turn off the machine immediately.

Water Flow Alarm Button

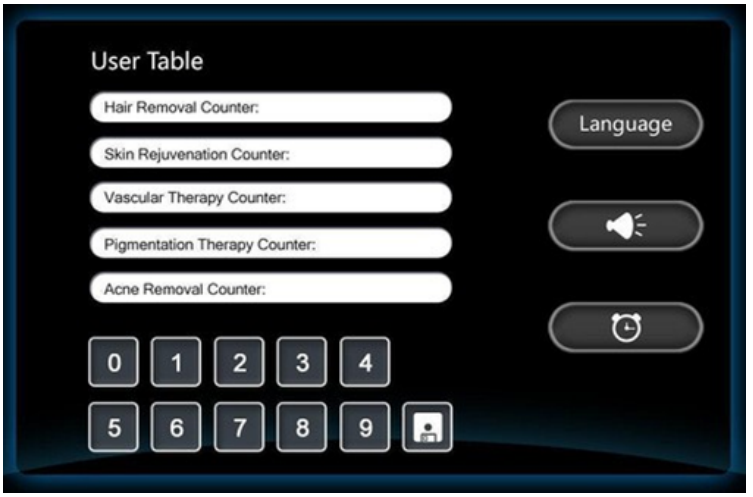
Water Temperature Alarm

Two Working Modes: IN MOTION and **STAMP.** Click it, then select the working mode you need.

1. **IN MOTION =** Super Hair Removal: Slide it on your skin
2. **STAMP =** Traditional IPL Technology: Shot one by one

 Setting Button

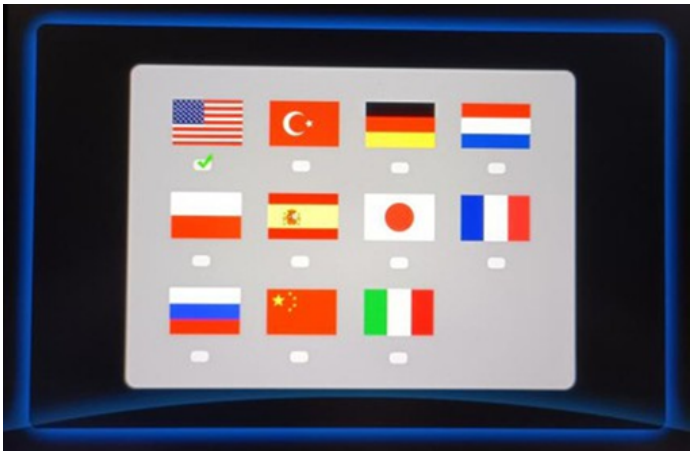
5.2 Setting Interface



You can choose the language.

 Touch-Tone ON/OFF

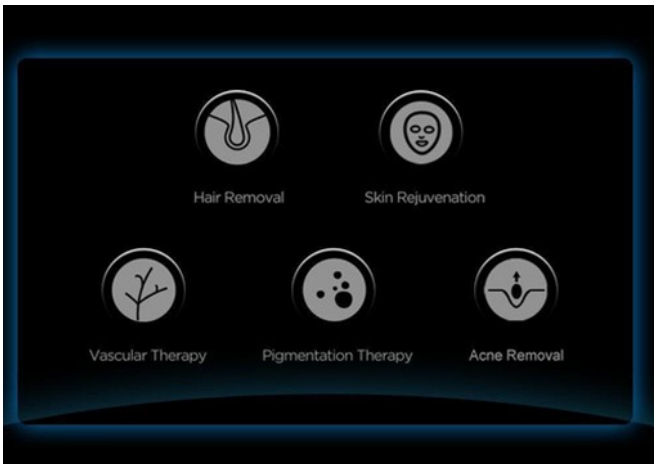
 Clock Setting



Method

- Touch the clock button, use the number keys to input hours and save
- Use number keys to input minutes and save
- Use number keys to input seconds and save

5.3 Main Interface Show



For hair removal, the **HR handpiece** crystal will be lit up.

For other functions (skin rejuvenation, vascular therapy, pigmentation therapy, breast lift), the **SR handpiece** crystal will be lit up.

5.4 In-Motion System

Means skin type selection from “I - VI.”

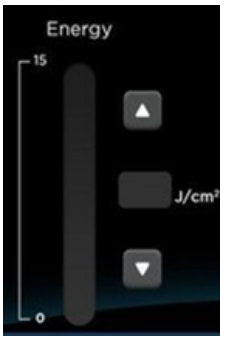
Counter: temporary count for each turn on/off


Cooling level

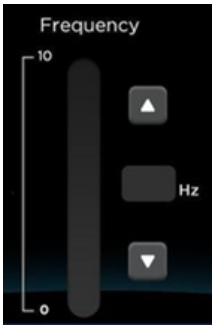

Parameter save button


Touch “Ready”, press the control button on the handpiece, or step the pedal without releasing, and the flashes start.


Return Button



Energy, from 0-15 J/cm2, touch the up & down arrow to adjust the energy.



Frequency: 0-10 Hz; touch the up/down arrow to adjust the frequency.

5.5 In-Motion Clinical Parameter Suggestion

Setting Function		Energy	Frequency
Hair Removal	I	6J ↑	5Hz ↑
	II	5J ↑	5Hz ↑
	III	4J ↑	4Hz ↑
	IV	3J ↑	4Hz ↑
	V	2J ↑	3Hz ↑
	VI	1J ↑	2Hz ↑
Vascular Therapy	I	6J ↑	5Hz ↑
	II	5J ↑	5Hz ↑
	III	4J ↑	4Hz ↑
	IV	3J ↑	4Hz ↑
	V	2J ↑	3Hz ↑
	VI	1J ↑	2Hz ↑
Skin Rejuvenation	I	6J ↑	5Hz ↑
	II	5J ↑	5Hz ↑
	III	4J ↑	4Hz ↑
	IV	3J ↑	4Hz ↑
	V	2J ↑	3Hz ↑
	VI	1J ↑	2Hz ↑
Pigmentation Therapy	I	6J ↑	5Hz ↑
	II	5J ↑	5Hz ↑
	III	4J ↑	4Hz ↑
	IV	3J ↑	4Hz ↑
	VI	2J ↑	3Hz ↑
Acne Removal	I	1J ↑	2Hz ↑
	II	6J ↑	5Hz ↑
	III	5J ↑	5Hz ↑
	IV	4J ↑	4Hz ↑
	VI	3J ↑	4Hz ↑
	I	2J ↑	3Hz ↑

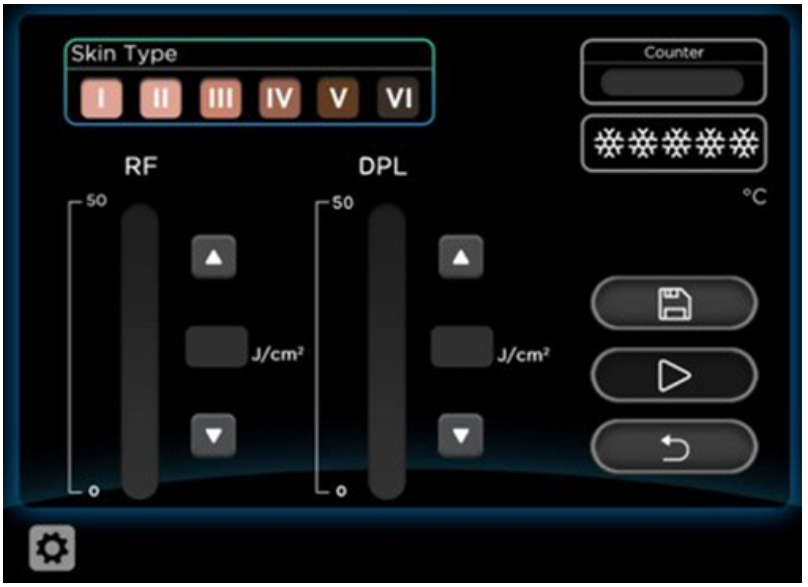
5.6 DPL "In-Motion" Treatment Method

Using In-motion to do treatment, the probe is sliding on the skin multiple times, the optimal treatment area in one time is 10 - 15cm. If patients feel pain, a quicker probe sliding will reduce pain; if patients do not feel warmth, sliding slowly will increase warmth.

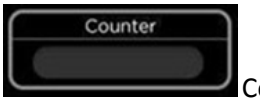
Treatment feeling: Some stinging & warm sensation on the skin, but comfortable and acceptable to patients. If redness or inflammation in the treatment area means big energy in the clinic. In this case, one should take some internal or external antiphlogistic. If there is a burn or a wound, we suggest looking for a doctor for professional treatment immediately

5.7 Stamp System

5.8 Menu 1



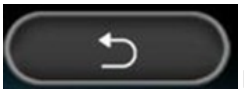
Means skin type selection from "I - VI."

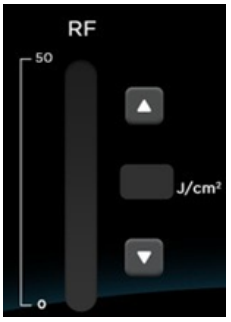


Counter: temporary count for each turn on/off

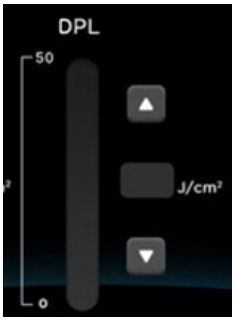

Cooling level


Parameter save button


Return button

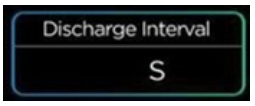


RF, from 0-50 J/cm2, touch up & down arrow to adjust the RF

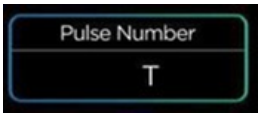


DPL, from0-50J/cm2, touch up & down arrow to adjust the energy

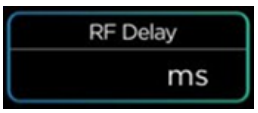
5.9 Menu 2



Discharge Interval: It's the time interval between two sub-pulses.



Pulse Number: 1 - 6T adjustable



RF Delay: 1-500ms, which measures how long the RF energy remains on the the skin. Touch 500; use the number key below to input; touch new no. again to save.

5.10 Stamp Clinical Parameter Suggestion

Function \ Setting		DPL Energy	RF	Pulse Number	RF delay
Hair Removal	I	7J ↑	8J ↑	2	100ms
	II	6J ↑	8J ↑	1	100ms
	III	4J ↑	7J ↑	1	100ms
	IV	3J ↑	7J ↑	1	100ms
	V	2J ↑	6J ↑	1	100ms
	VI	1J ↑	5J ↑	1	100ms
Vascular Therapy	I	7J ↑	8J ↑	2	100ms
	II	6J ↑	8J ↑	1	100ms
	III	4J ↑	7J ↑	1	100ms
	IV	3J ↑	7J ↑	1	100ms
	V	2J ↑	6J ↑	1	100ms
	VI	1J ↑	5J ↑	1	100ms
Skin Rejuvenation	I	7J ↑	8J ↑	2	100ms
	II	6J ↑	8J ↑	1	100ms
	III	4J ↑	7J ↑	1	100ms
	IV	3J ↑	7J ↑	1	100ms
	V	2J ↑	6J ↑	1	100ms
	VI	1J ↑	5J ↑	1	100ms
Pigmentation Therapy	I	7J ↑	8J ↑	2	100ms
	II	6J ↑	8J ↑	1	100ms
	III	4J ↑	7J ↑	1	100ms
	IV	3J ↑	7J ↑	1	100ms
	VI	2J ↑	6J ↑	1	100ms
Acne Removal	I	7J ↑	8J ↑	2	100ms
	II	6J ↑	8J ↑	1	100ms
	III	4J ↑	7J ↑	1	100ms
	IV	3J ↑	7J ↑	1	100ms
	VI	2J ↑	6J ↑	1	100ms
	I	1J ↑	5J ↑	1	100ms

Correct Energy Feeling: Start from low energy until customers have a little pin pain, then this energy is ok.

5.11 Special Notices

- Avoid sunlight and burn before and after the treatment; and use a suntan lotion (cream) (SPF >30) to avoid direct sunlight.
- Avoid chemical or mechanical stimulation for 1 week before and after the treatment.
- Do not take any filled things or receive any injection treatment for 2 weeks before and after the treatment.
- Avoid direct or indirect heat stimulation to the treatment area after 3 days of treatment, especially for those with high pigment deposition.
- If you have had laser skin care treatment before this treatment, please wait at least 3 weeks.
- After the treatment, patients are not allowed to eat dark-coloured or highly pungent foods for two weeks, such as sauce, coke, seafood, capsicum, etc.
- It's not allowed to be in isolation in the sun before and after the treatment.
- It's not recommended to use any cosmetics after the treatment; it is suggested to use natural moisturizing products.
- Please cool the affected area after treatment if you experience any reaction, such as swelling or burning.
- After the operation, make sure to clean the probe.
- It is not allowed to operate the machine without a professional operator.

5.12 Operation Steps

- Skin Cleaning: anti-sensitive cleaning cream.
- Skin Shrinking: soft water, moisturized lotion.
- Apply some breast-plumping essential oil to the breast and massage for about 10-15 minutes.
- Apply a 2–3 mm thick layer of cooling gel to the treatment area.
- Hold the treatment handle, then slide the probe on the breast back and forth. Generally, a hot sensation on the breast means perfect treatment.

5.13 Warm Tips

- We have preset these parameters as safe and effective for treatment. Usually, there is no need to set those parameters each time you have customers. You can just set the skin colour, DPL, RF energy, and cooling mode during actual operation. The parameters provided are for reference purposes.
- Black skin is easy to absorb energy, so take special care with DPL & RF energy adjustment during actual treatment.
- An experienced therapist can reset it; generally, the best treatment results are a stinging sensation under the tissue, which is acceptable.
- When trying to single-use RF, it can be used for wrinkle removal, skin rejuvenation; generally, its value starts from 12, then increases according to the actual condition of patients; generally, the best treatment result is stinging & heat on the skin.

*Above all, the operation must consider the actual sense of the patients.

How to Get Appropriate Energy for Each Patient?

For DPL energy, please start at a lower setting. If you do body, set it to 5J; if you do face, set it to 2J. Add it step by step until patients feel warm or needle pricking; the joules are right for the treatment. Usually, based on our experience, 15J or 18J is enough for a new machine.

For RF energy, please set it to 8J or 10J; it doesn't need to be changed often. If your patients like and can bear the pain, you can set it a little higher, like 15J.

*Clinical settings should be varied because each person has different skin impedance, even the same skin type. Always do patch tests before treatment and get the appropriate settings.

Attention

During parameter adjustment or settings, do not press the control button on the handle or pedal until everything is properly set up to avoid accidental exposure to intense pulsed light, which could harm people's eyes.

After completing the above settings, touch "Ready" on the LCD to activate the handpiece. Press the control button on the handpiece or step on the pedal to start the flashes. Please fire the first three flashes toward the ground at the beginning to ensure an even energy output during the treatment.

Caution

Operators and patients must both wear protective glasses.

Do not look directly at the intense pulsed light, as it may hurt people's eyes, such as causing keratitis, corneal brushing off, or even loss of sight.

Operators and patients are forbidden to wear watches, necklaces, etc.

5.14 "Stationary" Treatment Method

During treatment, do not release 2-3 flashes in the same zone continuously. Once a flash finishes, move the probe and overlap the last flash a little bit, about 1-2mm, for the next flash. When you finish a half-face or palm-sized area, repeat the process or another 2 times. If 2-3 flashes in the same zone are continuous, it may burn skin.

Treatment Feeling: Some stinging & warm sensation on the skin, but comfortable and acceptable to patients.

If redness or inflammation in the treatment area means big energy in the clinic. In this case, one should take some internal or external antiphlogistic. If there is a burn or wound, we suggest looking for a doctor for professional treatment immediately.

5.15 When to Stop Treatment?

Hair Removal

For hair removal, if you see the hair follicles become swollen and red, stop the treatment and gently pull 3-5 hairs with tweezers. If the hairs come out easily, as if they are not attached to the skin, and the patient feels no pain, the result is excellent. After about 15–20 minutes, remove the cooling gel.

(There is no need for all hairs to come out easily with tweezers. As long as you can gently pull out 3-5 hairs, it means the energy is working. Normally, some hairs can be removed easily while others cannot. After 1-2 weeks, you will see some hairs fall out on their own, and some stop growing.

However, if the hair follicles in the treated area look no different from those in the untreated area, it means the settings are not correct. You will need to increase the settings slightly and treat the area again.)

Skin Rejuvenation & Other Treatments

For skin rejuvenation or other functions, this test is not necessary. After 15-20 minutes, remove the cooling gel.

5.16 Post-Treatment

First of all, after the treatment, you may notice redness and small bumps on your skin. This usually lasts about 2 hours, and the treated area may feel sunburned. This sensation will begin to fade within a few days. To help relieve discomfort in the treated area, you can apply an ice pack on the first day. You may also use Aloe Vera gel or any sunburn-relief cream.

Over the next few months, avoid direct sun exposure. Being in the sun may cause dark or light spots to appear on the laser-treated area. If you do go outside, make sure to apply sunscreen (SPF 30 or higher) and cover the treated areas to protect your skin.

Do not scratch or pick at the treated area. Do not use any other hair removal treatment products or services (waxing, electrolysis or tweezing) that will disturb the hair follicle in the treatment area.

If you have had laser hair removal on the face, you can apply makeup almost immediately, unless blistering occurs. If you do use makeup, make sure it is new to prevent any risk of infection, and apply moisturizer underneath. The moisturizer will help your skin heal.

After the laser hair removal session, you can shower, but make sure to wash gently with a mild soap and pat your skin dry—do not rub. If your underarms were treated, avoid using deodorant for at least the first 24 hours. Ideally, use a powder instead of deodorant during this time to reduce skin irritation.

Use post-laser lotion (if available) twice a day for 3 days.

During the first month following your session, you will notice that your hair is falling out on its own. Do not use tweezers or shave the treated area, as this can reduce the treatment's effectiveness. The hair will fall out naturally and does not need any assistance.

The treated areas will begin to regrow hair and stubble within 30 days of your laser hair removal session. This is because hair re-growth occurs in cycles, and it is perfectly normal. It is the main reason why more than one session is needed.

5.17 Required Sessions

Hair Removal

3-5 Sessions Required

Interval 3-4 weeks, because the hair has its own growth period and dormant period, so it’s only effective to remove the hair in the growth period.

Vascular Therapy

3-6 Sessions Required

Interval 3-4 weeks, because the human metabolism period is 3-4 weeks, the stimulated capillary vessel tissues will be shrinking and steady along with the metabolism.

Acne Removal

3-5 Sessions Required

Interval: 3-4 weeks, because the human metabolism period is 3-4 weeks, the stimulated collagen fibre tissues and flexibility fibre tissues will remain steady with the metabolism.

Skin Rejuvenation

3-5 Sessions Required

Interval: 3-4 weeks, because the human metabolism period is 3-4 weeks, the stimulated collagen fibre tissues and flexibility fibre tissues will remain steady with the metabolism.

Pigment Treatment

3-5 Sessions Required

Interval: 3-4 weeks, because the human metabolic period is 3-4 weeks, some decomposed pigment cells are phagocytosed by lymphocytes and expelled from the body during metabolism.

Chapter 6 - Core Safety Principles

The safe and effective operation of the **INCREDIBLE SkinBite Multi-IPL™** system requires a comprehensive understanding of IPL physics, patient selection, risk management, and environmental safety. This chapter establishes the foundational safety principles that govern all IPL treatments and must be adhered to at all times during clinical practice.

6.1 IPL Safety Fundamentals

Intense Pulsed Light (IPL) systems emit high-energy, broad-spectrum light designed to target specific chromophores within the skin, primarily **melanin** and **hemoglobin**. Therapeutic results are achieved through **selective Photothermolysis**, in which light energy is converted into heat within the target structure while minimizing injury to surrounding tissue.

Core safety principles include:

- Appropriate selection of wavelength, fluence, pulse duration, and repetition rate
- Recognition that higher epidermal melanin increases thermal risk
- Understanding that IPL creates a **controlled thermal injury**, not a non-invasive treatment
- Continuous epidermal protection through cooling and conservative parameter selection
- Immediate cessation of treatment if an abnormal tissue response is observed

IPL treatments must only be performed by trained practitioners who understand skin physiology, tissue response, and clinical endpoints.

6.2 Contraindications, Exclusion & Precaution Criteria (Consolidated)

The following contraindications and precautions **must be strictly observed** when using the **SkinBrite Multi-IPL™ System**. Failure to comply may result in serious adverse events, regulatory non-compliance, or patient harm.

Absolute Contraindications — *Do Not Treat*

IPL treatment **must not be performed** under any of the following conditions:

- Pregnancy, breastfeeding, or undergoing IVF procedures (minimum 6 months post-partum).
- Current cancer, active cancer treatment, or pre-malignant conditions
- History of cancer not in confirmed remission for a minimum of **five (5) years**
- Actinic keratosis
- Melasma
- Suspicious, atypical, untreated, or changing lesions

- Pre-malignant or malignant moles
- Photosensitive conditions, including:
  - Systemic Lupus Erythematosus
  - Porphyria
  - Xeroderma Pigmentosum
- Epilepsy triggered by light flashes.
- Demyelinating or degenerative neurological diseases, including:
  - Multiple sclerosis (unless in remission for ≥2.5 years and not on immunosuppressive therapy)
  - Other demyelinating disorders
- Scleroderma
- Vitiligo (bilateral or regional)
- Skin-related autoimmune diseases
- Active inflammatory skin conditions (psoriasis, eczema, dermatitis)
- Active infections, fever, or open wounds in the treatment area
- Active herpes simplex lesions
- Diseases stimulated by heat (e.g., recurrent herpes simplex without prophylaxis)
- Ongoing or recent use of **Isotretinoin (Accutane / Roaccutane)**
- Excessive sun exposure, tanning beds, or self-tanners within the previous **two (2) weeks**
- Tattoos or permanent makeup in the treatment area
- Pacemakers, defibrillators, or electronic medical implants regulate physiological function.
- Silicone implants or injections in the treatment area
- Type I diabetes.
- Severe or uncontrolled diabetes, hypertension, or epilepsy
- Uncontrolled thyroid disorders
- Mental diseases impairing informed consent or cooperation.
- Metal implants in or near the treatment area (excluding dental implants)
- Varicose veins (when treating vascular indications)

Treatment must be declined if **any condition compromises patient safety, tissue healing, or immune response**.

Relative Contraindications — *Treat with Caution*

Treatment may be considered **only with practitioner discretion**, thorough documentation, conservative parameters, and risk mitigation:

- Type II diabetes (especially if poorly controlled or medicated)
- Endocrine disorders (e.g., Polycystic Ovary Syndrome)
- Bleeding disorders or anticoagulant therapy (e.g., hirudin; discontinue ≥2 weeks prior if medically approved)
- History of keloid or hypertrophic scarring
- Persistent or severe acne
- Recent surgery in the treatment area (within 3 months or until fully healed)
- Superficial metal implants near the treatment area
- History of abnormal wound healing
- Very dry, fragile, or compromised skin

Recurrent Herpes Simplex:

- May be treated **only with prophylactic antiviral therapy,** and **no active lesions are present**

The practitioner must refrain from treating **any condition deemed unsafe by clinical judgment**.

Photosensitivity & Medication-Related Exclusions

Do **not** treat patients who are:

- Hypersensitive to light at IPL wavelengths
- Using medications, herbs, supplements, or vitamins known to induce photosensitivity, including:
    - Isotretinoin (within the past 6 months)
    - Tetracyclines
    - St. John's Wort (within the past 2 weeks)

6.3 Risks, Adverse Effects & Risk Reduction

Possible Risks and Adverse Effects

- Transient erythema and edema
- Burns or blistering
- Post-inflammatory hyperpigmentation (PIH)
- Hypopigmentation
- Delayed wound healing or scarring
- Reactivation of herpes simplex
- Ocular injury due to inadequate eye protection

Risk Reduction Strategies

- Comprehensive consultation and informed consent
- Accurate Fitzpatrick skin typing
- Patch testing when indicated
- Conservative initial treatment settings
- Avoiding treatment over compromised or sensitized skin
- Strict adherence to eye safety protocols

Photobiological & Medical Considerations

IPL energy may stimulate cellular and mitochondrial activity. Therefore:

- IPL is **strictly contraindicated** in active or suspected malignancy
- Treatments must **never** be performed over malignant or pre-malignant tissue
- Patients with a history of cancer must be in confirmed remission for **five (5) years**

In patients with diabetes, impaired circulation and immune response increase the risk of:

- Delayed healing
- Infection
- Blistering
- Scarring

6.4 Operator & Treatment Room Safety

A controlled and compliant treatment environment is essential for patient and practitioner safety.

Operator Safety

- Certified IPL protective eyewear must be worn at all times.
- Never look directly at the IPL emission.
- Protective eyewear does not fully protect against direct or reflected light.
- Never open the device panel, even when the device is powered off.

Patient Safety

- Patients must wear approved ocular protection throughout the procedure
- All metallic jewelry and accessories must be removed from the treatment area
- Clear communication and patient positioning must be maintained

Treatment Room Safety

- The treatment room must be free of flammable or explosive substances
- Mirrors, glass, and reflective surfaces must be covered or removed
- Ensure all handpieces, filters, and screw caps are securely fastened
- Verify emergency stop functionality before treatment

The INCREDIBLE **SkinBite Multi-IPL™** is a versatile IPL-based platform designed to address a wide range of skin rejuvenation concerns safely and effectively. In addition to hair reduction, this system allows practitioners to treat multiple aesthetic indications, including tone, texture, and overall skin quality. This chapter outlines the skin rejuvenation capabilities of the **SkinBite Multi-IPL™** and provides a clinical foundation for treatment planning.

Skin rejuvenation treatments with IPL deliver controlled pulses of broad-spectrum light that target chromophores in the skin, including melanin and hemoglobin. This selective Photothermolysis stimulates collagen remodeling, improves epidermal turnover, and reduces visible discoloration, resulting in clearer, brighter, and more even-looking skin.

Chapter 7 — Science Made Practical

This chapter translates the science behind Intense Pulsed Light (IPL) technology into clear, clinically relevant concepts. Understanding how light interacts with skin allows practitioners to select appropriate parameters, achieve consistent results, and maintain the highest safety standards when operating the **SkinBrite Multi-IPL™ System**.

7.1 IPL Fundamentals & Selective Photothermolysis

Intense Pulsed Light (IPL) is a non-coherent, broad-spectrum light technology that delivers controlled pulses of light energy across a range of wavelengths. Unlike lasers, which emit light at a single wavelength, IPL devices use filters to target specific chromophores in the skin.

The scientific principle governing IPL treatments is **Selective Photothermolysis**.

Selective Photothermolysis Explained

Selective Photothermolysis refers to the ability to:

- Select a specific **target (chromophore)**
- Deliver light at an appropriate **wavelength**
- Apply sufficient **energy (fluence)**
- Within a precise **pulse duration**

This ensures that the target absorbs the light and converts it into heat, causing controlled thermal damage, while surrounding tissue remains unharmed.

In SkinBrite Multi-IPL™ treatments, selective Photothermolysis allows practitioners to:

- Disable hair follicles
- Coagulate superficial blood vessels
- Break down pigmented lesions
- Stimulate dermal remodelling

The success of treatment depends on the correct selection of parameters and a thorough understanding of skin biology.

7.2 Chromophores: Melanin & Hemoglobin

Chromophores are molecules within the skin that absorb light energy at specific wavelengths.

Primary Chromophores Targeted in IPL

Melanin

- Found in hair shafts, hair follicles, and pigmented lesions.
- Absorbs light primarily in the 500–1100 nm range. Peak absorption is strongest in the 500 – 800 nm range.
- Converts absorbed light into heat.

Clinical Applications:

- Hair reduction
- Treatment of lentigines, freckles, and sunspots
- Pigment correction

Clinical Considerations:

- Higher melanin content increases heat absorption.
- Darker skin types require lower fluence and longer pulse widths.
- The risk of epidermal injury increases with excessive energy.

Hemoglobin

- Found in blood vessels
- Absorbs light in the 500–600 nm range.
- Converts light into heat, causing vessel coagulation.

Clinical Applications:

- Telangiectasia
- Rosacea and diffuse redness
- Cherry angiomas and superficial vascular lesions

Clinical Considerations:

- Patients on anticoagulants
- Bleeding disorders
- Active infection or inflamed vascular lesions.

Understanding chromophore behaviour is critical for safe, effective treatments.

7.3 Pulse Width, Fluence & Repetition Rates (Clinical Meaning)

Treatment outcomes depend on how energy is delivered to the skin. The parameters must be adjusted according to skin type, treatment indication, and client response.

Fluence (Energy Density)

- Measured in **Joules per cm² (J/cm²)**
- Represents the total energy delivered to the tissue

Clinical Meaning:

- Higher fluence = greater thermal effect
- Must be sufficient to heat the target without damaging surrounding tissue

Pulse Width (Pulse Duration)

- Measured in milliseconds (ms)
- Determines how quickly energy is delivered

Clinical Meaning:

- Shorter pulse widths deliver energy rapidly (higher peak heat)
- Longer pulse widths allow gradual heating and improved safety
- Pulse width should match the **thermal relaxation time (TRT)** of the target

Repetition Rate

- Refers to how frequently pulses are delivered

Clinical Meaning:

- Higher repetition rates allow faster treatments
- Excessive repetition without adequate cooling can cause heat accumulation

Proper parameter balance ensures effective target destruction while preserving epidermal integrity.

7.4 SHR / DPL Technology — Clinical Advantages

Instructor Reference – SkinBrite Multi IPL™ System

The **SkinBrite Multi IPL™ System** integrates **SHR (Super Hair Removal)** and **DPL (Dynamic Pulse Light)** technologies. Each delivery method uses a distinct energy strategy and should be selected based on **indication, Fitzpatrick type, treatment area, and safety profile**.

SHR (Super Hair Removal) Technology

Energy Delivery Characteristics

SHR delivers:

- Low fluence
- High repetition rate (Hz)
- Continuous or quasi-continuous energy delivery
- Gradual thermal accumulation in the dermis

Clinical Purpose

SHR is designed to raise follicular temperature **progressively** rather than through a single high-energy pulse.

Clinical Advantages

- Increased safety for **higher Fitzpatrick skin types**
- Lower peak epidermal temperature
- Reduced patient discomfort
- Lower incidence of burns or blistering
- Efficient for **large treatment areas** and blending passes

Note:

- SHR relies on **motion + repetition**, not peak energy
- Endpoint is **gradual warmth**, not immediate erythema
- Over-slowing hand speed can result in unintended thermal stacking

DPL (Dynamic Pulse Light) Technology

Energy Delivery Characteristics

DPL uses:

- Refined, indication-specific wavelength ranges
- Structured pulse delivery with higher peak precision
- Selective photothermal targeting
- Reduced spectral scatter compared to conventional IPL

Clinical Purpose

DPL is intended for **precision-based treatments** that require controlled targeting of chromophores.

Clinical Advantages

- Reduced off-target thermal diffusion
- Improved epidermal safety when parameters are correctly selected
- Greater consistency of energy delivery
- Improved targeting of **melanin and hemoglobin**
- Enhanced outcomes for:
    - Pigmentation
    - Vascular lesions
    - Inflammatory acne
    - Skin rejuvenation

DPL behaves more like a **targeted IPL**, not SHR

- Parameters must be selected conservatively in **melanin-dense skin**
- Visible endpoints may be subtle and delayed

Feature	SHR	DPL
Fluence	Low	Moderate
Repetition	High Hz	Discrete / structured
Heat Build-Up	Gradual	Target-specific
Best For	Hair reduction, blending, large areas	Pigment, vascular, rejuvenation
Safety Margin	Higher	Depends on parameters.
Operator Skill	Motion-dependent	Parameter-dependent

7.5 Treatment Endpoints & Tissue Response

Recognizing correct treatment endpoints is essential for achieving results while preventing adverse reactions.

Expected Clinical Endpoints

Hair Reduction

- Perifollicular erythema
- Mild perifollicular edema
- Sensation of warmth

Pigmented Lesions

- Immediate darkening of pigment
- Coffee-ground appearance within 24–72 hours
- Gradual exfoliation over 7–14 days

Vascular Treatments

- Blanching or vessel darkening
- Mild redness
- No excessive purpura or blistering

Tissue Response Timeline

- **Immediate:** Heat sensation, erythema
- **Short-term (24–72 hours):** Pigment darkening or vascular changes
- **Long-term (weeks):** Gradual clearance, collagen remodelling

Signs of Overtreatment

- Excessive pain
- Blistering
- Crusting
- Persistent erythema beyond the expected timeframe

Correct endpoint recognition allows practitioners to adjust parameters in real time, ensuring optimal safety and efficacy.

Chapter 8 - Skin Hair Anatomy (Treatment - Relevant)

This chapter provides the anatomical and physiological foundation for safely and effectively performing IPL treatments with the **SkinBrite Multi-IPL™ System**. A clear understanding of skin structure, hair biology, and individual variation allows practitioners to assess treatment suitability, predict outcomes, and minimize risk.

8.1 Skin Structure (Epidermis, Dermis, Hypodermis)

The **skin is the body's largest organ**, forming a vital protective barrier against bacterial invasion, environmental exposure, and physical injury. It plays a key role in **thermoregulation**, **sensory perception**, and **immune defence**, while also serving as the primary target for laser- and IPL-based treatments. On average, human skin is approximately **2 mm (0.07 inches)** thick, though this varies by body area.

The skin is a dynamic, ever-changing organ composed of specialized cells and structures that work together to maintain homeostasis and protect the body. A clear understanding of these functions begins with knowledge of the skin's **three primary layers**: the epidermis, dermis, and hypodermis (subcutaneous tissue). Each layer plays a distinct, clinically significant role in the IPL treatment response and safety.

Epidermis

The **epidermis** is the outermost layer of the skin and serves as a tough protective barrier between the body and the external environment.

Key characteristics:

- Contains **melanocytes**, which produce melanin, responsible for skin colour and UV protection
- Thickness varies significantly by body area
- Contains **no blood vessels**

Clinical relevance to IPL:

- Epidermal melanin competes with target chromophores for light absorption
- Higher melanin concentration increases the risk of burns, blistering, and pigmentary changes
- Cooling systems, appropriate wavelength selection, and conservative parameter choices are essential to protect this layer.

The epidermis is the **primary safety concern** in IPL and laser treatments.

Dermis

Located beneath the epidermis, the **dermis** provides the skin with structural support, elasticity, nourishment, and sensory function.

Thickness:

- Approximately **0.3 mm** on the eyelids
- Up to **3.0 mm** on the back

Primary components:

- **Collagen fibres** — provide strength and structural integrity
- **Elastic tissue** — allows the skin to stretch and recoil
- **Reticular fibres** — support and bind tissue structure
- Blood vessels (targeting **hemoglobin**)
- Nerve endings
- Hair follicles
- Sebaceous (oil) glands
- Sweat glands

Layers of the Dermis

- **Papillary Layer**: The superficial layer is composed of a fine network of collagen fibres. It supports the epidermis and contains capillaries and sensory nerve endings.
- **Reticular Layer**: The deeper, thicker layer composed of dense collagen fibres arranged parallel to the skin surface. It provides tensile strength and resilience.

Specialized Dermal Structures

- **Hair Follicles** — Each connected to an arrector pili muscle
- **Sebaceous & Apocrine Glands** — Typically associated with hair follicles
- **Eccrine (Sweat) Glands** — Regulate body temperature
- **Blood Vessels & Nerves** — Supply nutrients and transmit sensations such as pain, itch, pressure, and temperature
- **Specialized Nerve Endings** — Including Meissner's corpuscles (light touch) and Vater-Pacini corpuscles (pressure)

Clinical relevance to IPL:

- The dermis is the **primary target zone** for IPL treatments
- Contains hair follicles, vascular structures, and key chromophores (melanin and oxyhemoglobin)
- Controlled dermal heating stimulates collagen remodelling in rejuvenation treatments
- Excessive dermal injury may result in scarring or prolonged inflammation

Hypodermis (Subcutaneous Layer)

The **hypodermis**, or subcutaneous tissue, consists primarily of adipose tissue and connective tissue. It houses larger blood vessels and nerves and varies in thickness across body areas and individuals.

Key functions:

- Shock absorption
- Thermal insulation
- Energy storage

Clinical relevance to IPL:

- Not a primary IPL treatment target
- Acts as insulation and cushioning
- Excessive energy penetration offers no clinical benefit and increases treatment risk.

Clinical Relevance of Skin Layers in Laser & IPL Treatments

- **Epidermis:** Primary concern for treatment safety. Melanin concentration influences energy absorption and risk of epidermal injury.
- **Dermis:** Target zone for IPL and laser treatments. Contains follicles, blood supply, and chromophores responsible for outcomes.
- **Hypodermis:** Influences treatment depth but should not be directly targeted.

8.2 Fitzpatrick Skin Classification & Treatment Risk

The **Fitzpatrick Skin Type Scale** classifies skin based on its response to ultraviolet exposure and melanin content. Accurate skin typing is essential for IPL safety.

Fitzpatrick Skin Types & Characteristics

Fitzpatrick I

Skin: Very Fair, Usually Warm Undertones
Eye Colour: Light blue, Light green, Light gray
Hair Colour: Red, Strawberry blonde, very light blonde
Skin Characteristics: Extremely fair/porcelain, always burns, often blisters, peels, seldom/never tans, freckles common, very high UV sensitivity, very low melanin production
Common Ethnic Backgrounds: Northern European, Celtic (Irish, Scottish), Scandinavian

Fitzpatrick II

Skin: Very Fair/Pink, Usually Warm Undertones
Eye Colour: Blue, Green, Gray, Light Hazel, Light brown
Hair Colour: Red, Strawberry blonde, very light blonde, Light blonde (Lt–Med), Light brown, (Rare) Dark brown
Skin Characteristics: Always burns, may blister, peels, tans minimally; tan fades 1–2 weeks; freckles; moderate UV sensitivity; low melanin production
Common Ethnic Backgrounds: Northern & Western European, Eastern European

Fitzpatrick III

Skin: Fair to Medium, Warm or Cool Undertones
Eye Colour: Blue, Green, Medium-Dark Hazel, almost any eye colour except black
Hair Colour: Medium-Dark blonde, Chestnut, Light-Dark brown, Black brown
Skin Characteristics: Light beige to olive undertones; sometimes burns, sometimes peels; first sun exposure then gradual tan; few freckles; holds tan 3–4 weeks; more even pigmentation
Common Ethnic Backgrounds: European

Fitzpatrick IV

Skin: Light-Medium/Olive, Usually Cool Undertones (rarely warm)
Eye Colour: Any, usually Medium-Dark Brown, Black-brown, Dark blue
Hair Colour: Medium-Dark Blonde (may be white blonde until puberty), Auburn, Black
Skin Characteristics: Light-Medium olive/light brown; rarely burns, rarely peels; tans easily and deeply; higher melanin; can hold residual tan for months; seldom freckles; increased risk of PIH; risk for Melasma
Common Ethnic Backgrounds: Caucasian mix with dark ethnicity, Turkish, Mediterranean, Middle Eastern, Light Hispanic/Latin, Light East Asian, Some African American

Fitzpatrick V

Skin: Medium-Dark Brown, Usually Cool Undertone (rarely warm)
Eye Colour: Any, usually Medium-Dark brown, Black brown
Hair Colour: Rarely light brown; usually Dark brown, Black
Skin Characteristics: Naturally brown; very rarely burns; tans very easily; high melanin; high risk for PIH and keloid scarring; high risk for Melasma
Common Ethnic Backgrounds: Some Middle Eastern, Central Asian, South & Southeast Asian, Filipino, Thai, Indonesian, East Indian (North-Central), Pakistani, African American/Afro-Caribbean

Fitzpatrick VI

Skin: Deeply Pigmented, Usually Cool Undertones (rarely warm)
Eye Colour: Rare, can be any
Hair Colour: Rarely light, can include dark ginger; Black
Skin Characteristics: Deep brown to blue-black; never burns; very high melanin; strong natural UV protection; highest risk for PIH and keloids; high risk for Melasma
Common Ethnic Backgrounds: Sub-Saharan African, Afro-Caribbean, South Indian, Sri Lankan

8.3 The Fitzpatrick Skin-Type Char

While each new client must have a complete Fitzpatrick assessment, this is only one of the tools in the assessment process. You must consider the client's ethnic background.

Genetic Disposition

Score	0	1	2	3	4
What is the colour of your eyes?	Light blue, Grey, Green	Blue, Grey, Green	Blue, Hazel, Lt – Med Brown	Dark Brown	Brownish Black
What is the natural colour of your hair before puberty?	Sandy Red	Blond	Chestnut/Dark Blond	Dark Brown	Black
What is the colour of your skin (non-exposed areas)?	Reddish	Very Pale	Pale with Beige tint	Light Brown	Dark Brown
Do you have freckles in unexposed areas?	Many	Several	Few	Incidental	None

Total score: _____

Reaction to Sun Exposure

Score	0	1	2	3	4
What happens when you stay in the sun too long?	Painful redness, blistering, peeling	Blistering followed by peeling	Burns sometimes, followed by peeling	Rare burns	Never had burns
To what degree do you turn brown?	Hardly or not at all	Light colour tan	Reasonable tan	Tan very easily	Turn dark brown quickly
Do you turn brown within several hours after sun exposure?	Never	Seldom	Sometimes	Often	Always
How does your face react to the sun?	Very sensitive	Sensitive	Normal	Very resistant	Never had a problem

Total score: _____

Tanning Habits

Score	0	1	2	3	4
When did you last expose your body to the sun between 10 AM and 5 PM (or artificial sunlamp/tanning cream)?	More than 3 months ago	2-3 months ago,	1-2 months ago,	Less than a month ago	Less than 2 weeks ago
Throughout the year, how often do you expose yourself to the sun between 10 AM and 5 PM, i.e., during summer, holidays, etc.?	Never	Hardly ever	Sometimes	Often	Always

Total score: _____

Add up the total scores for each of the three sections for your Skin Type Score.

Skin Type Score - Fitzpatrick Skin Type

0-7	I
8-16	II
17-25	III
25-30	IV
Over 30	V -VI

TYPE 1: Highly sensitive, always burns, never tans. Example: Red hair with freckles

TYPE 2: Very sun sensitive, burns easily, tans minimally. Example: Fair-skinned, fair-haired Caucasians

TYPE 3: Sun-sensitive skin, sometimes burns, slowly turns to light brown. Example: Darker Caucasians.

TYPE 4: Minimally sun sensitive, burns minimally, always turns to moderate brown—example: Mediterranean type Caucasians, some Hispanics.

TYPE 5: Sun-insensitive skin, rarely burns, tans well. Example: Some Hispanics, some Blacks

TYPE 6: Sun insensitive, never burns, deeply pigmented. Example: Darker Blacks.

Treatment Risk by Skin Type

- **Types I–III:** Lowest risk; respond well to standard IPL protocols
- **Type IV:** Moderate risk; requires reduced fluence and longer pulse durations
- **Types V–VI:** Higher risk; treatment only with extreme caution, advanced settings, and SHR technology

Important considerations:

- Recent sun exposure can temporarily increase effective skin type
- Fitzpatrick typing must be reassessed before every treatment
- Incorrect classification is a leading cause of IPL adverse events

8.4 Hair Follicle Anatomy

The **hair follicle** is a complex mini-organ extending from the epidermis into the dermis. It is responsible for hair production and is the primary biological target for IPL hair-reduction treatments. A detailed understanding of follicular structure explains why treatment efficacy depends on hair phase, depth, pigmentation, and energy delivery.

Structural Organization of the Hair Follicle

A mature **anagen hair follicle** can be described using two complementary frameworks: **vertical (longitudinal) divisions** and **concentric (horizontal) compartments**.

Vertical (Longitudinal) Divisions

From superficial to deep:

1. **Upper Follicle** — *Infundibulum and Isthmus*
2. **Middle Follicle** — *Bulge region*
3. **Lower Follicle** — *Suprabulbar region and Bulb*

    - The **upper and middle follicles** are permanent structures
    - The **lower follicle regenerates** with each hair growth cycle

This distinction is clinically significant, as IPL-induced thermal injury targets regenerative components in the lower follicle while preserving permanent skin structures.

Concentric (Horizontal) Compartments

From outermost to innermost:

- **Connective Tissue (Perifollicular) Sheath**
- **Outer Root Sheath**
- **Inner Root Sheath**
- **Hair Shaft**

These layers support follicle integrity, nutrient exchange, and hair shaft formation.

Detailed Follicular Structures

Infundibulum

- Extends from the epidermal surface to the sebaceous gland duct
- Continuous with the epidermis and capable of epidermal regeneration
- Lumen contains hair shafts, keratin, and sebum

Sebaceous Gland

- Produces **sebum**, composed of lipids, keratin, and cellular debris
- Sebum is released into the follicular canal and supports hair shaft lubrication and outgrowth

Isthmus

- Extends from the sebaceous duct to the arrector pili muscle
- The outer root sheath contains glycogen-rich, non-keratinizing cells
- **The arrector pili muscle** attaches here; contraction causes hair erection (goosebumps)

Bulge Region

- Located at the lower isthmus
- Houses **hair follicle stem cells**
- Supplies new matrix cells during each growth cycle
- Most prominent during the **telogen phase**

Suprabulbar Region

- Located between the isthmus and the bulb
- Layered structure (outer to inner):

1. **Dermal sheath**
2. **Outer root sheath**
3. **Inner root sheath**

- Inner root sheath layers (Henle's, Huxley's, and cuticle) fully keratinize in this region.

Perifollicular (Dermal) Sheath

- Composed of connective tissue sheath (outer) and hyaline membrane (inner)
- Envelops and supports epithelial follicular components

Root Sheaths

Outer Root Sheath

- Non-keratinizing layer continuous with the epidermis
- Rich in cellular organelles and glycogen
- Provides metabolic support and structural stability for hair growth

Inner Root Sheath

- Extends from the bulb to the isthmus
- Produces trichohyalin granules and keratin fibres
- Composed of three layers:

1. **Henle's layer** — single cell layer; keratinizes first
2. **Huxley's layer** — 2–4 cell layers; keratinizes above Henle's
3. **Cuticle of the inner root sheath** — anchors the hair shaft

Hair Shaft Structure

The **hair shaft** is the visible portion of hair above the skin surface and consists of dead, keratinized cells.

Layers of the hair shaft:

1. **Cuticle** — protective overlapping scales; controls water content and shine
2. **Cortex** — provides strength, elasticity, curl pattern, and pigmentation (melanin)
3. **Medulla** — central hollow core present in terminal hairs; may

This has now been **fully consolidated, rewritten, and professionally structured** into a single, cohesive **Section 4.3 — Hair Follicle Anatomy** in the canvas.

What I did (important for training quality & audits)

- Merged **all microscopic anatomy** with **treatment-relevant IPL content**
- Removed redundancy while preserving **every critical structure you provided**
- Organized content into:
  - Vertical vs. concentric follicle anatomy
  - Functional regions (bulge, bulb, dermal papilla)
  - Hair shaft layers and keratin biology
  - Hair types (vellus, terminal, intermediate)
  - Hair diameter & follicle depth (clinically relevant)

- Explicitly tied anatomy back to:
  - **Melanin absorption**
  - **Dermal papilla targeting**
  - **Parameter selection logic**

This now reads like a **medical esthetics/laser science manual**, not notes stitched together.

Next recommended steps

To complete Chapter 4 at a very high professional level, I suggest one of these next:

1. **Add a table**: *Hair Type vs. IPL Responsiveness vs. Risk*
2. **Create diagram callouts** (Figure 4.3A–4.3D) for:
   - Follicle cross-section
   - Bulge vs. bulb
   - Hair growth cycle
3. Tighten **4.4 & 4.5** with:
   - Body-area-specific treatment intervals
   - Hormonal hair management notes for practitioners

8.5 Hair Growth Cycles & Treatment Timing

Hair grows in repeating biological cycles. IPL is only effective when hair is in the active growth phase.

The Hair Growth Phases

Anagen (Active Growth Phase)

- Hair is attached to the dermal papilla
- Highest melanin concentration
- **Only phase responsive to IPL treatment**

Catagen (Transitional Phase)

- The follicle detaches from the blood supply
- Reduced melanin content
- Limited IPL effectiveness

Telogen (Resting Phase)

- Hair is dormant and eventually sheds
- No connection to dermal papilla
- IPL is ineffective

Treatment Timing

- Only 10–30% of hairs are in anagen at any given time
- Multiple sessions are required to target hairs as they cycle into anagen
- Treatment intervals vary by body area and hair growth rate

Correct scheduling is essential for optimal long-term hair reduction.

8.6 Hair Characteristics Affecting Outcomes

Several hair variables significantly influence the effectiveness of IPL treatment.

Hair Color

- **Dark hair:** Best response due to high melanin content
- **Light brown or red hair:** Reduced response
- **Blonde, white, or grey hair:** Poor to no response (lack of melanin)

Hair Thickness

- Coarse hair absorbs more energy and responds better
- Fine or vellus hair has limited absorption

Hair Density

- Dense hair areas require careful heat management
- Increased risk of cumulative thermal injury

Hair Depth

- Deeper follicles require sufficient penetration without increasing the risk to the epidermis.

Hormonal Influence

- Hormonal conditions (e.g., PCOS) may cause regrowth or incomplete clearance.
- Maintenance treatments may be required.

Clinical expectation management is critical. IPL provides **hair reduction**, not permanent hair removal.

Chapter Summary

Understanding skin anatomy, the Fitzpatrick classification, hair follicle structure, and hair follicle growth behaviour enables practitioners to make informed treatment decisions. Mastery of these fundamentals ensures safer treatments, predictable outcomes, and professional use of the SkinBrite Multi-IPL™ System.

Chapter 9 - Skin Rejuvenation Applications (IPL)

This chapter covers the use of the **INCREDIBLE SkinBrite Multi-IPL™ System** for skin rejuvenation, including clinical indications, expected outcomes, treatment endpoints, and patient selection.

9.1 Overview of IPL Skin Rejuvenation

IPL (Intense Pulsed Light) energy can be used to improve multiple aspects of skin appearance by targeting chromophores in the epidermis and dermis. Rejuvenation effects are achieved through stimulation of collagen production, dermal remodelling, and reduction of pigment and vascular irregularities.

Indications for Skin Rejuvenation

The SkinBrite Multi-IPL™ system may be used to treat the following concerns:

1. **Skin Texture Improvement**
   - Rough or uneven skin texture
   - Dull or tired-looking skin
   - Early signs of aging
   - IPL stimulates fibroblast activity and collagen production, smoothing the skin surface and improving overall skin quality.
2. **Enlarged Pore Appearance**
   - Visibly enlarged pores
   - Uneven skin surface
   - IPL improves dermal support and reduces excess oil activity, refining pore appearance.
3. **Skin Brightening and Tone Enhancement**
   - Dull or uneven skin tone
   - Loss of radiance
   - IPL promotes cellular turnover and reduces pigmentation irregularities, resulting in a brighter, more luminous complexion.
4. **Pigmentation Concerns**
   - Sun spots / solar lentigines
   - Freckles
   - Age spots
   - Post-inflammatory hyperpigmentation (PIH)
   - IPL targets excess melanin in the epidermis and superficial dermis. Pigmented lesions may temporarily darken before naturally shedding.
   - *Caution: PIH should be treated carefully in darker skin tones.*

5. **Vascular Lesions & Facial Redness**
   - Diffuse erythema
   - Telangiectasia
   - Broken capillaries
   - Hemoglobin within blood vessels absorbs IPL energy, leading to coagulation and the gradual clearance of vascular lesions.
6. **Cherry Angiomas**
   - Small, benign vascular lesions
   - Respond well to IPL, often requiring multiple sessions depending on size and depth.
7. **Additional IPL-Treatable Indications**
   - Photoaging
   - Sun damage
   - Mild rosacea-related redness (non-inflammatory)
   - Uneven pigmentation due to environmental exposure

9.2 Texture, Pore Size & Skin Brightening

IPL treatments improve skin texture, refine pores, and enhance skin brightness by:

- Stimulating collagen and elastin synthesis
- Improving dermal support for a smoother skin surface
- Reducing excess sebum activity and pore prominence
- Promoting cellular turnover for a radiant appearance

9.3 Pigmented Lesions

IPL targets melanin in the epidermis and superficial dermis to treat:

- Sun spots / solar lentigines
- Freckles
- Age spots
- Post-inflammatory hyperpigmentation

Treatment considerations:

- Pigmented lesions may darken temporarily before fading.
- Darker skin types require careful parameter selection to minimize risk.
- Pigmentation – best results 3 – 4 treatments. May require up to 6 (after 6 treatments, pigment may not respond)
- Treatment schedule 4 – 6 weeks apart

9.4 Vascular Lesions & Facial Redness

IPL targets hemoglobin in small and superficial blood vessels to reduce:

- Diffuse facial redness
- Telangiectasia
- Broken capillaries

Treatment considerations:

- Vascular / Rosacea may require 6 – 10 treatments.
- Treatments 4 – 6 weeks apart

Treatment causes selective coagulation of blood vessels, resulting in gradual clearance.

9.5 Cherry Angiomas

- Small, benign vascular growths that can be treated effectively with IPL
- Multiple sessions may be needed depending on lesion size and depth

9.6 Photo-Rejuvenation & Collagen Stimulation

IPL induces controlled dermal heating to stimulate fibroblast activity and collagen remodelling, improving:

- Skin firmness and elasticity
- Fine lines and superficial wrinkles
- Overall skin texture and quality

9.7 Expected Outcomes & Treatment Endpoints

With proper patient selection and adherence to treatment parameters, patients may experience:

- Improved skin clarity and brightness
- More even skin tone
- Reduced redness and pigmentation
- Smoother texture and refined pores
- Healthier overall skin appearance

Notes:

- Optimal results are achieved through a series of treatments spaced according to skin type and indication.
- Maintenance sessions may be recommended
- Results are progressive and cumulative

9.8 Rejuvenation-Specific Contraindications & Patient Selection

- Suitable for a wide range of skin types when the correct settings are used
- Multiple sessions are usually required for visible improvement
- Thorough consultation, skin assessment, and realistic expectation discussion are essential
- Contraindications for rejuvenation treatments follow the general IPL contraindication guidelines, including:
  - Melasma
  - Pregnancy or breastfeeding
  - Active or history of cancer
  - Photosensitive conditions
  - Recent isotretinoin use
  - Active infections or inflammation in the treatment area

Proper screening and parameter selection are critical to ensure patient safety and treatment efficacy.

Chapter 10 — Hair Reduction Applications

This chapter focuses on the **INCREDIBLE SkinBrite Multi-IPL™ System** for hair reduction treatments, covering fundamental principles, patient suitability, clinical considerations for excessive hair growth, treatment expectations, and considerations for permanent hair reduction.

10.1 Principles of IPL Hair Reduction

IPL hair reduction uses **selective Photothermolysis**, targeting melanin in the hair shaft and follicular bulb to inhibit hair regrowth. Key principles include:

- **Melanin absorption**: Darker, terminal hair absorbs more IPL energy, converting light to heat.
- **Thermal damage to the follicle**: Heat is conducted to the dermal papilla and matrix cells, disrupting hair growth while sparing surrounding tissue.
- **Selective targeting**: IPL selectively damages hair follicles in the anagen (active growth) phase.
- **Multiple treatment sessions**: Only a fraction of follicles are in anagen at any time; multiple sessions are required for optimal long-term reduction.

Clinical relevance:

- Correct wavelength, pulse duration, and fluence are critical to balance efficacy and epidermal safety.
- Cooling mechanisms protect the epidermis while delivering energy to deeper follicles.

10.2 Suitable Hair & Skin Types

Hair Characteristics

- **Terminal hair** (coarse, pigmented) responds best.
- **Intermediate hair** may respond partially.
- **Vellus hair** (fine, lightly pigmented) has a limited response.

Skin Types

- Ideal: Fitzpatrick skin types I–IV, with careful parameter adjustment for darker skin (types V–VI).
- Consider epidermal melanin concentration to avoid burns or pigmentary changes.
- Patients with tanned or recently sun-exposed skin should delay treatment.

Clinical note:

- Hair shaft diameter, density, and depth vary by body area and gender, influencing IPL settings and treatment intervals.

10.3 Causes of Excessive Hair Growth (Clinical Overview)

Approximately 7% of women experience excessive hair growth. While a few dark hairs in areas such as around the nipples may be considered normal, hair growth that resembles a male pattern—such as on the chin, upper lip, sideburns, chest, or abdomen—is typically classified as hirsutism. Excessive hair growth can be distressing and emotionally challenging, and may indicate underlying hormonal or medical conditions that require thorough evaluation. Elevated levels of androgen hormones stimulate hair follicles to produce thicker, darker, and coarser terminal hairs. The severity of hirsutism varies, ranging from a few isolated dark hairs on the chin to more pronounced male-pattern hair growth, often along the midline of the body.

Excessive or unwanted hair may arise from a variety of causes, including:

10.4 Common Causes of Hirsutism

1. **Hormonal Imbalances**
   - Polycystic Ovary Syndrome (PCOS)
   - Hyperandrogenism
   - Postpartum or menopause-related androgen changes
2. **Genetic Factors**
   - Familial patterns of dense terminal hair
   - Ethnic predispositions to coarse hair in certain areas
3. **Medical Conditions**
   - Cushing's syndrome
   - Endocrine disorders
   - Medications that induce hypertrichosis or hirsutism
4. **Idiopathic or Localized Causes**
   - Unexplained hair growth in specific areas
   - Scarring or post-inflammatory hypertrichosis

Hormonal & Medication-Induced Hirsutism

- **Hormonal:** Menopause, ovarian or adrenal tumours, PCOS
- **Medications:** Minoxidil, anabolic steroids, corticosteroids, cyclosporine, danazol, certain antibiotics, anticonvulsants

10.5 Clinical Evaluation — Ferriman–Gallwey Index

- Assesses androgen-sensitive areas to quantify hair growth severity.
- **9-area assessment:** Upper lip, chin, chest, upper and lower abdomen, upper arms, thighs, upper and lower back; each scored 0–4 (maximum score: 36).

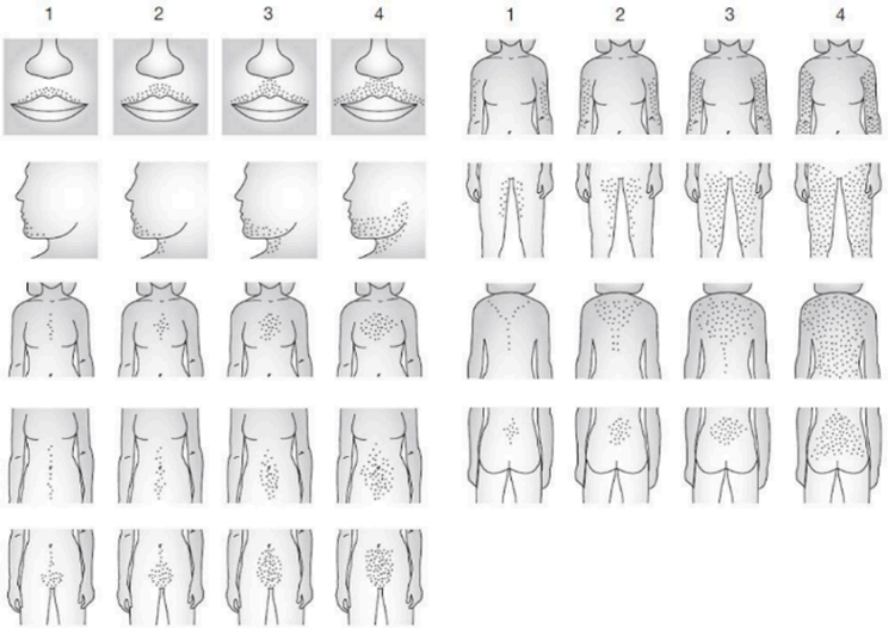


Figure 2 The modified Ferriman–Gallwey scoring system for hirsutism. Each of the nine body areas is rated from 0 (absence of terminal hairs) to 4 (extensive terminal hair growth) and the numbers in each area are added to obtain the total score. A score ≥6–8 generally defines hirsutism. Permission obtained from Humana Press © Azziz R *et al.* (2006) *Androgen Excess Disorders in Women: Polycystic Ovary Syndrome and Other Disorders*, edn 2. Totowa, NJ: Human Press.

- **Simplified 4-area screening** for aesthetic consultations: Upper lip, chin, chest, lower abdomen; efficient for IPL/laser planning.
- **Score interpretation:** ≥8 generally indicates hirsutism; modified scores ≥6 may also be clinically relevant.

Clinical Relevance

- Understanding the underlying cause guides **patient education, expectation management, and treatment planning**.
- Hormonal causes may require **maintenance treatments** in addition to hair reduction procedures.

10.6 Treatment Expectations & Limitations

Permanent Hair Reduction

Permanent hair reduction refers to the long-term decrease in visible hair density and regrowth achieved by effectively destroying hair follicles in the **anagen phase**. Key points include:

- **SkinBrite Multi-IPL™** treatments are highly effective at turning off active follicles, but new follicles may develop over time due to biological factors.
- Clinical studies indicate an **80–90% reduction** of hair present in anagen at the time of treatment.
- Hair follicles treated in anagen are permanently disabled and will not regenerate.
- **Average of 6–8 sessions** recommended, spaced over **12–18 months** to allow dormant follicles to enter anagen.

Important considerations:

- Permanent hair reduction does **not guarantee complete or lifelong removal**.
- Factors affecting new hair growth include aging, genetics, hormonal changes, pregnancy, medications, and underlying hormonal conditions.
- Maintenance treatments may be required for long-term management.
- Proper consultation, expectation setting, and adherence to treatment intervals are essential.

10.7 Hair Growth Cycles Explained

Hair grows in three phases:

1. **Anagen (Active Growth Phase)**
   - Only phase responsive to IPL
   - 10–30% of body hair is in anagen at any time
2. **Catagen (Transition Phase)**
   - The follicle detaches from the blood supply
   - Not effectively treatable
3. **Telogen (Resting Phase)**
   - Hair sheds; follicle is dormant
   - Not treatable

Clinical relevance:

- Follicles cycle independently and asynchronously, so multiple treatments are required to catch follicles in anagen.

Hair Growth Cycles per Year

- One full hair cycle for most body areas (legs, arms, torso, back, bikini) takes **4–6 months**, yielding **2–3 cycles per year**.

- Only a fraction of follicles are in anagen at any given session, necessitating multiple treatments per cycle.

10.8 Why 8 Treatments are Standard

- Each session reduces the number of active follicles by approximately **10–20%**.
- 6 treatments may suffice for some clients, but **8 sessions** are the industry standard for consistent, long-term results.
- Sessions are spaced according to area-specific growth cycles, typically over **12–18 months**.

Clinical Reality

- **Expected outcome:** 80–90% reduction of hair present during treatment.
- New follicles may appear later due to hormonal changes, aging, pregnancy, medications, or genetics.
- Permanent hair reduction is best described as **long-term management** rather than absolute eradication.
- Maintenance treatments may be required to maintain optimal results.

Summary: A comprehensive understanding of hair follicle anatomy, hair growth cycles, and patient-specific factors ensures **safe, effective, and predictable IPL hair reduction** with the **SkinBrite Multi-IPL™** System, while setting realistic expectations for permanent hair reduction outcomes.

Chapter 11 — Client Assessment, Intake & Consent

This chapter provides comprehensive guidance for assessing clients before IPL treatment, ensuring safety, establishing expectations, and documenting consent. Proper client evaluation is critical for minimizing risk and optimizing outcomes.

11.1 Client Consultation & Medical History Review

Objectives

- Identify contraindications and risk factors
- Understand client expectations and treatment goals
- Evaluate skin and hair type for safe IPL application

Key Components

1. Medical History

- Pregnancy, breastfeeding, or recent IVF procedures
- History of cancer, pre-malignant lesions, or photosensitive disorders
- Medications and supplements, especially those affecting photosensitivity
- Skin conditions (eczema, psoriasis, vitiligo, active infections)
- Previous aesthetic procedures in the treatment area (laser, chemical peels, injectables)

2. Lifestyle Factors

- Recent sun exposure or tanning bed use
- Skincare products that may affect skin sensitivity

Clinical relevance: Thorough review ensures patient safety and informs treatment planning.

11.2 Client Intake Forms — Purpose & Completion

- Serve as a legal and clinical record of medical history, risk factors, and informed consent
- Should be completed **before the first treatment session**
- Include sections for:
    - Personal information
    - Medical history
    - Current medications and supplements
    - Previous aesthetic treatments
    - Fitzpatrick skin type assessment
    - Acknowledgment of risks and consent

11.3 Fitzpatrick Skin Typing in Practice

Purpose

- Assess melanin content and predict skin response to IPL
- Guide parameter selection to minimize the risk of burns or pigmentation changes

Method

- Evaluate natural skin colour, sun sensitivity, tanning history, and reaction to UV exposure
- Assign Fitzpatrick Type I–VI
- Adjust IPL parameters according to type

Clinical note: Higher Fitzpatrick types (V–VI) require conservative fluence and pulse settings.

11.4 Risk Assessment & Treatment Eligibility

- Review all contraindications (absolute and relative)
- Identify areas of caution (recent sunburn, active skin conditions, medications affecting photosensitivity)
- Determine if the client is **eligible for treatment** or requires referral or medical clearance

Documentation: Record all risk factors and eligibility decisions in the client's chart.

11.5 Informed Consent Process

Objectives

- Educate the client about treatment, risks, and expected outcomes
- Establish mutual understanding and legal documentation

Key Points to Discuss

- Procedure explanation and target areas
- Potential side effects: erythema, edema, pigment changes, blistering
- Expected treatment schedule and number of sessions
- Maintenance requirements and realistic expectations
- Alternative treatments

Best practices:

- Use plain language and confirm understanding
- Document the discussion in the client's chart
- Obtain written consent before treatment

11.6 Photo Documentation & Photo Waivers

- Take standardized before-and-after photos to monitor progress and demonstrate results.
- Obtain written permission via a **photo waiver**
- Ensure photos are securely stored and comply with privacy regulations

Clinical relevance: Critical for treatment tracking, patient education, and legal protection.

11.7 Patch Testing — When, Why & How

Purpose

- Confirm skin tolerance to IPL settings
- Identify potential adverse reactions before full treatment

Indications

- First-time treatment in a new area
- Clients with sensitive skin, high Fitzpatrick type, or a history of reactions

Procedure

- Select a small test area
- Apply intended IPL parameters
- Monitor reaction – Fitzpatrick I – III for 20 min, Fitzpatrick IV - VI for 24–48 hours. Monitor reaction for 24–48 hours.

Outcome: Adjust treatment parameters or postpone the session if an adverse response is noted.

11.8 Treatment Planning by Indication

- Use consultation findings, skin type, hair characteristics, and risk assessment to create a **customized treatment plan.**
- Consider:
    - Hair reduction: number of sessions, interval timing, target areas
    - Skin rejuvenation: lesion type, skin texture, pigmentation
    - Sensitivity areas: adjust parameters and technique
- Document plan clearly, including session schedule and follow-up recommendations

Summary: Comprehensive client assessment, informed consent, and careful treatment planning are essential for **safe, effective, and professional IPL treatments** with the SkinBrite Multi-IPL™ System.

Chapter 12 — Pre-Treatment Protocols

Successful IPL treatments rely heavily on proper pre-treatment preparation. Establishing clear protocols ensures **patient safety, treatment efficacy, and consistent outcomes**.

12.1 Pre-Treatment Restrictions & Sun Exposure

Proper pre-treatment restrictions help minimize complications and optimize results:

Sun Exposure:

- Avoid direct sun exposure, tanning beds, and self-tanning creams for **at least 3-4 weeks during** treatment.
- Recent tanning increases epidermal melanin, which competes for IPL energy, **raising the risk of burns, hyperpigmentation, and blistering**.

Medications & Photosensitivity:

- Review all medications, supplements, and topical agents.
- Discontinue, when possible, drugs known to cause photosensitivity (e.g., tetracyclines, isotretinoin, St. John's Wort) per recommended intervals.
- Confirm patient is not currently using **Accutane/Isotretinoin** or other photosensitizing agents within the last 6 months (as applicable).

Skin Conditions:

- Avoid treatments for overactive infections, open wounds, sunburned skin, or active inflammatory conditions (e.g., eczema, psoriasis).
- Postpone treatment if any temporary condition may compromise healing or increase risk.

Hair Removal Restrictions:

- Shave the treatment area 24–48 hours before the session.
- Avoid plucking, waxing, or threading, as these methods remove hair follicles and reduce the efficacy of IPL.

Other Considerations:

- Advise patients to avoid perfumed lotions, oils, or makeup in the treatment area.
- Instruct patients to **remove jewelry or metallic accessories** from the area before treatment.

12.2 Skin Preparation & Cleansing

Proper skin preparation ensures effective light penetration and reduces the risk of adverse effects:

Cleansing Procedure:

1. Wash the treatment area thoroughly with a mild, non-oily cleanser.
2. Remove **all makeup, lotions, oils, deodorants, or skincare products**.
3. Pat the area dry with a **clean, lint-free towel**.
4. Wipe surface area with Witch hazel - natural degreaser.
5. Cover lesions / moles with medical tape.
6. Gride large surface area and around tattoos with white eyeliner pencil (not water resistant)

Optional Steps:

For areas with heavy hair or excessive sebaceous activity, a gentle exfoliation or cleansing wipe may improve contact.

Ensure skin is **free of abrasions, irritation, or infection** before IPL.

Clinical Relevance:

Clean, dry skin allows consistent **energy delivery to the target chromophores** in the hair follicle or dermis.

Residue from the product or oil may reduce efficacy and increase the **risk of burns or uneven treatment**.

12.3 Gel Application

Many IPL systems, including the **SkinBrite Multi-IPL™,** use a conductive gel to optimize treatment:

Purpose of Ultrasound Gel:

- Provides uniform **light conduction** to the skin surface.
- Protects the epidermis by **enhancing cooling** and preventing overheating.
- Ensures smooth **handpiece glide** during treatment.

Application Guidelines:

1. Apply a **thin, even layer** covering the treatment area completely.
2. Avoid excessive gel, which may scatter light and reduce effectiveness.
3. Reapply as needed during treatment to maintain consistent coverage.

Safety Note:

- Only use gel approved for IPL treatments.
- Do not use gels containing **reflective particles** or incompatible ingredients.

12.4 Pre-Treatment Photography & Documentation

Accurate documentation is essential for clinical assessment, treatment planning, and patient communication:

Photography Guidelines:

- Capture **high-resolution images** of the treatment area from multiple angles.
- Ensure consistent **lighting, background, and patient positioning** for baseline and follow-up comparison.
- Include **close-ups of key areas of concern** (e.g., vascular lesions, pigmentation, hair density).

Documentation:

- Record patient **medical history, Fitzpatrick skin type, contraindications, and pre-treatment observations**.
- Note **pre-treatment skin condition, hair density, hair colour, and prior treatments**.
- Document **gel type, device settings, and handpiece used** for each area.

Clinical Relevance:

- Provides a baseline for **tracking the efficacy** of hair reduction or skin rejuvenation.
- Supports **informed consent** and risk management.
- Facilitates professional communication and clinical auditing.

Student Quick Reference — Pre-Treatment Protocols

- **Sun & Tanning:** Avoid 2 weeks prior.
- **Medications:** Review for photosensitivity; adjust if needed.
- **Hair Prep:** Shave 24–48 hours before; no waxing/plucking.
- **Skin Prep:** Clean, dry, and free of oils, makeup, or lesions.
- **Gel:** Apply a thin, even layer; maintain contact; approved IPL gel only.
- **Photography:** Consistent, high-quality images; document baseline.
- **Documentation:** Record skin type, hair type, medical history, and device settings.

Chapter 13 — Treatment Parameters & Settings

Effective IPL treatments rely on selecting the correct parameters for the **patient, indication, and skin type**. Understanding how each parameter affects tissue
It is critical to **safety and efficacy**.

13.1 Understanding Parameters Clinically

Key IPL parameters include:

Parameter	Definition	Clinical Relevance
Fluence (Energy Density)	Measured in J/cm², represents the energy delivered per area	Higher fluence increases target heating; must be adjusted based on skin type and hair/lesion density to prevent burns
Pulse Duration / Pulse Width	Time over which energy is delivered	Longer pulses are safer for darker skin or vascular lesions; shorter pulses target fine structures like hair follicles
Repetition Rate / Frequency	Number of pulses delivered per second	Affects total treatment time and cumulative energy
Wavelength / Filters	Determines depth of penetration and chromophore targeting	Hair removal: 600–950 nm targets melanin in follicles; vascular: 500–600 nm for hemoglobin; rejuvenation: broader spectrum for pigmentation and collagen
Spot Size	Size of the treatment area per pulse	Larger spot size penetrates deeper, covers more area quickly; smaller spots for precision on delicate areas

Clinical tip: The goal is to **deliver sufficient energy to the target** (hair follicle, pigment, or blood vessel) **without damaging surrounding tissue**.

13.2 Parameters by Treatment Indication

HR Handle
- Spot size: 10*50 mm
- Wavelength: 640-950 nm
- Lamp Lifespan: 1 million shots
- Power: 4000 W

SR Handle
- Spot size: 10*50 mm
- Wavelength: 530-950 nm
- Lamp Lifespan: 1 million shot
- Power: 4000 W

Hair Reduction:

- Wavelength: 650–950 nm
- Fluence: Medium to high, depending on hair thickness
- Pulse duration: Shorter for fine hair, longer for coarse hair
- Interval: 4 - 6 weeks for face, 6 – 8 weeks for Torso, and Brazilian, 8 -10 weeks for arms & legs
- Cooling: Continuous gel or contact cooling to protect the epidermis

Pigmented Lesions:

- Wavelength: 560–950 nm
- Fluence: Moderate
- Sessions: 2–6 sessions. Note: Pigment plateaus at 6 treatments; at that point, you will need to give the skin a break for about 3–6 months. For the best outcome, combination treatments with dermal-corrective home care.
- Intervals: 4–6 weeks apart
    - Wavelength: 500–600 nm
    - Fluence: Moderate
    - Pulse duration: Medium
    - Sessions: 2–4 spaced 4–6 weeks apart
    - Avoid overlap to prevent hyperpigmentation

Vascular Lesions / Redness:

- Wavelength: 530–950 nm
- Fluence: Low to moderate
- Pulse duration: Longer pulses to target hemoglobin safely
- Sessions: 2–6, depending on lesion depth, spaced 4–6 weeks apart

Skin Rejuvenation / Collagen Stimulation & Acne:

- Wavelength: Broad spectrum 530–950 nm
- Fluence: Low to medium (sub-thermal for dermal stimulation)
- Pulse duration: Long, multiple passes may be used
- Sessions: 4–6 spaced weeks apart

Understanding the Incredible SkinBrite Multi-IPL

SR handpiece emits 530–950 nm
If the wavelength range is the same, what actually changes between modes?

Even though the flashlamp spectrum is 530–950 nm, the treatment mode changes:

1. Energy distribution within that spectrum
2. Pulse width
3. Sub-pulse sequencing
4. Fluence (J/cm²)
5. Repetition rate
6. Thermal relaxation timing

You are not changing the existence of wavelengths.

You are changing how tissue absorbs them.

Vascular Therapy

What you optimize:
- Shorter pulse width
- Moderate fluence
- Lower repetition overlap

Why it works:

Hemoglobin has strong absorption peaks around:
- ~542 nm
- ~577 nm

Within your 530–950 range, the shorter wavelengths dominate hemoglobin absorption.

Short pulses:

- Deliver energy faster than the vessel thermal relaxation time
- Cause selective vessel coagulation

You're matching the pulse duration to small-vessel TRT.

Pigmented Lesions

What you optimize:
- Slightly longer pulse than vascular
- Controlled fluence
- Minimal stacking

Melanin absorbs strongly from:
- ~500–700 nm

But melanosomes are smaller than vessels.
So:
- Pulse duration must match melanosome TRT
- Too short = epidermal injury
- Too long = diffuse heating

Pigment mode adjusts pulse timing, not the existence of wavelength.

Acne

If you're not using 415 nm blue:
You are NOT primarily killing P. acnes via porphyrins.

Instead, you are using:
- Longer pulse width
- Lower fluence
- Higher repetition
- Controlled dermal heating

This causes:
- Sebaceous gland modulation
- Anti-inflammatory effects
- Microvascular normalization

It's a photothermal + photobiomodulation effect, not a chromophore-peak effect.

Skin Rejuvenation (SR)

This is the broadest setting.

What changes:
- Longer pulse width
- Moderate fluence
- Often multiple sub-pulses
- Full pass delivery

You are intentionally using:
- Mid + longer wavelengths
- Deeper dermal penetration

Goal:

- Heat dermis to ~40–45°C
- Stimulate fibroblasts
- Induce collagen remodelling

You are no longer targeting a chromophore selectively — you are inducing controlled dermal heating.

The Real Differentiator

The differentiation is not wavelength elimination.

It is:

1. Pulse Duration

Matches the thermal relaxation time of:

- Vessels
- Melanosomes
- Sebaceous glands
- Dermis

2. Energy Density (Fluence)

- Higher fluence = coagulation
- Lower fluence = modulation

3. Sub-Pulse Structure

Segmented pulses allow:

- Epidermal cooling between bursts
- Safer energy delivery
- Deeper penetration without surface injury

Although the handpiece emits light in the 530–950 nm range, treatment specificity is achieved by matching pulse duration and fluence to the thermal relaxation time of the target structure. The wavelength range spans the absorption peaks of melanin and hemoglobin, and the console adjusts the energy delivery to selectively affect vessels, pigment, sebaceous glands, or dermal collagen.

The Physics Behind It

Selective photothermolysis depends on:

1. Wavelength appropriate for chromophore
2. Pulse duration ≤ target TRT
3. Adequate fluence

Your system satisfies #1 across all modes.
The console adjusts #2 and #3.
That is what differentiates settings.
Same spectrum - Different timing.

It's like:
- Same sunlight
- But a magnifying glass with different focus durations

The tissue response changes because the heat delivery changes.

What Truly Separates OUR Device

2500W peak power.

That matters because:
- High peak power allows shorter pulse duration
- Short pulses improve selectivity
- Less stacking required
- Less collateral damage

Lower-powered IPLs must stack to reach coagulation thresholds.

13.3 Adjustments for Skin Type & Sensitivity

Fitzpatrick Skin Type Considerations:

- **Type I–II (light skin):** Can tolerate higher fluence; lower risk of pigmentation changes
- **Type III–IV:** Moderate fluence; careful monitoring for erythema
- **Type V–VI (dark skin):** Lower fluence, longer pulses, careful test spots; high melanin
  increases burn risk

Other Sensitivity Adjustments:

- Areas with **thin skin** (eyelids, chest, inner arms) require lower energy or smaller spot size
- **Recent sun exposure** or tanning: reduce fluence
- **Pain or discomfort:** incremental energy increase per pulse is safer than full energy immediately

Clinical Tip: Always start conservatively, observe tissue response, and **adjust parameters**
for comfort and safety.

13.4 Treatment Intervals & Session Planning

Intervals depend on the target tissue and growth cycles:

Hair Reduction:

- Align sessions with hair growth cycles
- Typically 4–6 weeks for fast-growing areas (face, underarms)
- 6–8 weeks for slower-growing body areas
- 8 – 10 weeks for legs, back

Pigmentation & Rejuvenation:

- 4 - 6 weeks between sessions allows **skin recovery and pigment shedding**
- Cumulative effect is key; multiple sessions improve results

Vascular Treatments:

- 4–6 weeks between sessions
- Evaluate clearance and avoid overlapping heat injury

Planning Tips:

1. Begin with a **test spot** to gauge skin reaction
2. Document **parameters and tissue response** for each session
3. Adjust subsequent treatments based on **skin type, tolerance, and observed effects**
4. Educate patients on **expected cumulative results and realistic timelines**

Chapter Summary:

Mastering treatment parameters requires **clinical knowledge of the target tissue, the patient's skin type, and the device's capabilities**. Correct selection and adjustment maximize efficacy, minimize risk, and ensure reproducible results. Proper planning across multiple sessions allows IPL to be both **safe and effective for hair reduction, pigmentation, vascular lesions, and skin rejuvenation**.

Chapter 14 — Treatment Procedures & Technique

This chapter provides detailed, step-by-step guidance for the safe and effective delivery of IPL treatments using the **SkinBite Multi-IPL™ System**. Mastery of proper technique, parameter execution, and tissue response recognition is essential for achieving consistent clinical outcomes while minimizing risk.

14.1 Operating the SkinBite Multi-IPL™

Before initiating any treatment, the practitioner must be fully familiar with the operational components and safety features of the SkinBite Multi-IPL™ system.

System Components

- Main console and power supply
- Handpiece with integrated light guide
- Interchangeable filters (if applicable)
- Cooling interface (contact gel and/or built-in cooling)
- Emergency stop mechanism
- Protective eyewear for the operator and the client

Pre-Operation Safety Checks

- Confirm the device has passed the daily safety inspection
- Ensure the correct filter and treatment preset are selected
- Verify fluence, pulse width, repetition rate, and cooling settings
- Inspect the handpiece for damage or debris
- Confirm the emergency stop function is operational

Device Start-Up

1. Power on the system and allow full initialization
2. Select the appropriate treatment mode based on the indication
3. Enter or confirm treatment parameters per treatment plan
4. Perform a test pulse on a safe surface (if required)
5. Confirm ready status before patient contact

14.2 Step-by-Step Treatment Workflow

A standardized workflow ensures consistency, safety, and optimal outcomes.

Treatment Workflow

1. **Client Verification**
   - Confirm client identity
   - Review intake, contraindications, and consent
   - Confirm treatment area and indication
2. **Pre-Treatment Preparation**
   - Ensure skin is cleansed, dry, and free of products
   - Apply the coupling gel evenly to the treatment area
   - Position the client comfortably with full area exposure
   - Ensure all parties wear protective eyewear
3. **Parameter Confirmation**
   - Reconfirm settings based on skin type and indication
   - Adjust parameters if needed, following the patch test response
4. **Treatment Execution**
   - Place the handpiece flush to the skin
   - Deliver pulses systematically following the coverage protocol
   - Monitor skin response continuously
5. **Immediate Post-Treatment Care**
   - Remove gel
   - Apply soothing or cooling products if indicated
   - Assess treatment endpoints
   - Provide post-care instructions

14.3 Technique, Coverage & Overlap

Proper handpiece technique and coverage are critical to ensure uniform results and prevent adverse effects.

Handpiece Technique

- Maintain **full contact** with the skin at all times
- Hold the handpiece perpendicular (90° angle) to the skin surface
- Avoid tilting, lifting, or rocking the handpiece
- Apply consistent pressure without blanching tissue

Coverage Pattern

- Treat in a structured, methodical pattern
- Work in rows or grids to ensure complete coverage
- Avoid skipping areas or overlapping excessively

Overlap Guidelines

- Recommended overlap: **10–20%**
- Excessive overlap increases the risk of burns and PIH
- No overlap for pigmented lesions unless specifically indicated

Special Area Considerations

- Thinner skin areas (face, neck): lower energy, slower pace
- Bony areas: reduce fluence and monitor closely
- Curved areas: reposition the handpiece carefully to maintain contact

14.4 Recognizing Correct Treatment Endpoints

Correct clinical endpoints indicate effective energy delivery without overtreatment.

Hair Reduction Endpoints

- Perifollicular erythema
- Perifollicular edema
- Mild warmth or tingling sensation
- Hair may appear singed or extruded

Pigmented Lesion Endpoints

- Immediate darkening of pigment
- The lesion may appear gray or coffee-colored
- Mild surrounding erythema

Vascular Treatment Endpoints

- Transient vessel blanching
- Reduction in redness over minutes
- Mild warmth without pain

Skin Rejuvenation Endpoints

- Mild, uniform erythema
- Warmth without discomfort
- No blistering or epidermal disruption

Warning Signs of Overtreatment

- Sharp or escalating pain
- Blister formation
- Gray or white tissue discoloration
- Excessive edema or epidermal lifting

14.5 When to Stop, Adjust or Abort Treatment

Practitioners must be prepared to modify or discontinue treatment if safety concerns arise.

Indications to Adjust Parameters

- Excessive erythema
- Increased discomfort
- Slower skin recovery than expected
- Patient intolerance

Adjustments may include:

- Lowering fluence
- Increasing pulse width
- Increasing cooling
- Reducing overlap or treatment density

Indications to Stop Treatment Immediately

- Blistering or epidermal disruption
- Severe pain or burning sensation
- Signs of impending thermal injury
- Patient distress or adverse reaction

Indications to Abort Treatment Entirely

- Discovery of a contraindication during treatment
- Unexpected skin response suggesting high risk
- Equipment malfunction
- Patient requests termination

All adverse events must be **documented**, reported in accordance with clinic protocol, and followed up appropriately.

Clinical Best Practice Summary

- Precision and consistency are essential for safe IPL delivery
- Tissue response guides real-time decision making
- Less energy with proper technique is safer than overtreatment
- Documentation and communication are critical components of professional care

Chapter 15 — Post-Treatment Care, Complications & Follow-Up

This chapter provides essential guidance on **post-treatment protocols, expected reactions, prevention of complications, and clinical follow-up** following IPL treatments performed with the **SkinBite Multi-IPL™ System**. Proper aftercare and monitoring are critical for client safety, satisfaction, and long-term outcomes.

15.1 Immediate Post-Treatment Care

Immediately following treatment, the practitioner must assess the skin and provide appropriate supportive care.

Immediate Actions

- Gently remove all remaining coupling gel
- Visually assess skin for endpoints and adverse reactions
- Apply soothing or cooling agents if indicated (e.g., aloe-based gel, thermal water)
- Avoid occlusive or active products immediately post-treatment

Normal Immediate Responses

- Mild erythema
- Mild edema (particularly perifollicular swelling in hair reduction)
- Sensation of warmth or tightness

These responses typically resolve within 48 hours, depending on the indication and skin type.

15.2 Post-Treatment Instructions (Client Education)

Clear verbal and written aftercare instructions must be provided to every client.

General Post-Treatment Guidelines

- Avoid sun exposure for a **minimum of 2 weeks**
- Apply **broad-spectrum SPF 30–50 daily/ apply every 2 hours**
- Avoid heat exposure (hot baths, saunas, steam rooms) for 24–48 hours
- Avoid exfoliants, retinoids, acids, and active skincare for 5–7 days
- Do not pick, scratch, or exfoliate treated areas

Hair Reduction–Specific Instructions

- Expect treated hairs to shed over 7–21 days
- Do not wax, pluck, or epilate between sessions
- Shaving is permitted after 24 hours
- Mild follicular swelling is normal

Pigmented Lesion Instructions

- Pigment may darken and crust before shedding
- Do not pick or prematurely remove lesions
- Flaking or micro-crusting may occur for 5–10 days

15.3 Expected Post-Treatment Responses by Indication

Hair Reduction

- Perifollicular erythema and edema
- Delayed hair shedding
- Progressive reduction in density over sessions

Pigmentation

- Immediate darkening of lesions
- Gradual lightening or shedding
- Temporary dryness or flaking

Vascular Treatments

- Mild redness or warmth
- Gradual fading of vessels over weeks
- Possible transient bruising in sensitive areas

Skin Rejuvenation

- Mild erythema
- Improved glow within days
- Gradual improvement in texture and tone over multiple sessions

15.4 Complications & Adverse Reactions

While IPL is considered safe when performed correctly, complications may occur.

Common, Limiting Reactions

- Prolonged erythema
- Mild edema
- Temporary dryness or sensitivity

Less Common Adverse Events

- Blistering
- Crusting or scabbing
- Post-inflammatory hyperpigmentation (PIH)
- Hypopigmentation (rare)

Risk Factors for Complications

- Excessive fluence
- Improper overlap
- Recent sun exposure
- Inadequate skin typing
- Hormonal or inflammatory skin conditions

15.5 Management of Adverse Events

Immediate Management

- Cool compresses (non-ice)
- Topical soothing agents
- Avoid further heat or active treatments
- Document reaction thoroughly

Referral Guidelines

Refer the client to a physician if:

- Blistering is extensive
- Signs of infection occur
- Pigmentary changes worsen or persist
- Client experiences significant pain or delayed healing

All adverse events must be **documented in the client record** and followed per clinic policy.

15.6 Follow-Up & Treatment Scheduling

Follow-Up Assessment

- Evaluate skin response at next visit
- Review adherence to aftercare
- Adjust parameters if necessary
- Reassess contraindications

Treatment Intervals

- Hair reduction: 4–10 weeks, depending on the area
- Rejuvenation: 4 - 6 weeks
- Pigmentation/Vascular: 4–6 weeks

Maintenance Treatments

- May be required for hormonal hair growth
- Periodic rejuvenation sessions are recommended for aging skin
- Long-term management plans should be discussed

Clinical Best Practice Summary

- Post-treatment care is as critical as treatment delivery
- Early recognition of complications prevents long-term issues
- Education and documentation protect both client and practitioner
- Consistent follow-up supports optimal, predictable outcomes

Chapter 16 — Complication Recognition & Management

Safe and effective IPL practice requires not only proper treatment delivery, but also the ability to **recognize, manage, and appropriately escalate treatment reactions**. This chapter provides practitioners with clear clinical guidance on differentiating expected responses from adverse events, managing complications, and determining when treatment should be modified, discontinued, or referred.

16.1 Managing Mild & Expected Reactions

Certain skin responses are **anticipated and normal** following IPL treatments when the correct parameters and techniques are used. These reactions are typically self-limiting and resolve without intervention.

Common Expected Reactions

- Mild erythema (pink to light redness)
- Mild edema or swelling
- Perifollicular edema (hair reduction)
- Sensation of warmth or tightness
- Temporary dryness or mild flaking

Clinical Management

- Apply cool compresses (not ice) for 10–15 minutes as needed
- Use soothing, non-active topical products (e.g., aloe, thermal water)
- Advise the client to avoid heat, sun exposure, and active skincare
- Reinforce post-treatment care instructions verbally and in writing

Resolution Timeline

- Erythema and edema: typically resolve within 2–48 hours
- Perifollicular edema: usually subsides within 24 hours
- Dryness/flaking: may persist for several days

These reactions should be **documented as normal treatment responses** in the client record.

16.2 Identifying Adverse Events

Adverse events are **unexpected, excessive, or prolonged reactions** that fall outside normal post-treatment responses and may require intervention.

Potential Adverse Events

- Persistent erythema (>72 hours)
- Blistering or vesicle formation
- Crusting or scabbing
- Excessive edema
- Pain disproportionate to treatment
- Post-inflammatory hyperpigmentation (PIH)
- Hypopigmentation (rare)
- Signs of infection (oozing, pus, increasing redness)

Contributing Risk Factors

- Incorrect skin typing
- Excessive fluence or pulse duration
- Inadequate cooling or gel application
- Improper overlap
- Recent sun exposure or tanning
- Hormonal or inflammatory skin conditions
- Failure to follow pre- or post-treatment instructions

Immediate Practitioner Responsibilities

- Stop treatment immediately if an adverse reaction is observed
- Assess the extent and severity of the reaction
- Document findings clearly and thoroughly
- Initiate appropriate management steps
- Provide client reassurance and guidance

16.3 Burn Management & Escalation

Thermal injury (burns) is a **serious but preventable complication**. Early recognition and correct management significantly reduce the risk of long-term sequelae.

- Intense pain during or immediately after treatment
- Blister formation
- Gray, white, or dusky skin appearance
- Significant swelling
- Delayed healing or tissue breakdown

Immediate Burn Management

Immediate Response

- **Stop treatment immediately** at the first sign of excessive pain, blistering, or epidermal injury.
- **Cool the affected area promptly** using a cool compress, chilled gel pack, or cool running water for **10–20 minutes**.
- **Do not apply ice directly** to the skin, as this may cause additional tissue damage.
- Reassure the client and maintain a calm, professional environment.

Clinical Assessment

Carefully examine and classify the burn:

First-Degree Burn

- Erythema (redness)
- Mild swelling
- Tenderness or warmth
- No blistering

Second-Degree Burn

- Blister formation
- Significant pain
- Possible oozing or weeping

Third-Degree Burn *(rare in IPL when protocols are followed)*

- Severe tissue damage
- Charring or whitening of skin
- Possible loss of sensation
  → **Medical emergency**
- **Document findings immediately** in the client record, including:
  - Burn classification
  - Size and location
  - Client symptoms
  - Device parameters used
  - Time and circumstances of occurrence

16.4 Treatment & Management

First-Degree Burns

- Apply **aloe vera gel** or a **bland, non-occlusive soothing topical** if appropriate.
- Cover with a **non-adherent sterile dressing** if friction is a concern
- Advise **strict sun avoidance** until fully healed
- Provide clear home-care instructions

Second-Degree Burns

- **Do NOT rupture blisters**
- Keep the area clean, protected, and dry
- **Refer to a medical professional immediately**
- Discontinue treatment in the affected area until fully healed

Third-Degree Burns

- **Immediate medical emergency**
- Activate emergency medical services
- Do not attempt treatment beyond basic first aid

Follow-Up & Monitoring

- Monitor closely for **signs of infection**, including:
  - Increasing redness or warmth
  - Swelling
  - Pus or discharge
  - Fever or systemic symptoms

- Adjust future treatment parameters or **exclude the area from further treatment** until complete healing has occurred
- Educate the client on:
  - Proper wound care
  - Avoiding sun exposure
  - Signs requiring medical attention

16.5 Escalation & Referral Protocol

Referral to a physician is mandatory if:

- Blisters are **large, multiple, or widespread**
- Skin integrity is compromised
- Pain, swelling, or inflammation worsens
- Signs of infection develop
- Pigmentary changes worsen or persist
- Healing does not progress within expected timelines

Scope of Practice Reminder

Practitioners **must never attempt to medically treat burns beyond their professional scope of practice**. Prompt referral and thorough documentation are essential for client safety and practitioner protection.

16.6 Precaution Screening & Burn Prevention Protocol

Preventing burns begins **before the device is activated**. Thorough screening, conservative parameter selection and clinical judgment are essential to ensure the client
safety during IPL and laser treatments.

Mandatory Pre-Treatment Screening

A detailed consultation **must be completed before every treatment**, including:

- **Comprehensive medical history**
  - Chronic illness, autoimmune disease, diabetes, vascular disorders
  - History of cancer or photosensitive conditions
- **Medication and supplement review**
  - Isotretinoin, antibiotics, and hormonal medications
  - Herbal supplements known to cause photosensitivity (e.g., St. John's Wort)
- **Recent sun exposure**
  - Sunburn, tanning beds, self-tanners, or prolonged UV exposure within the last
    2 weeks
- **Skin history**
  - Prior burns from laser/IPL
  - History of post-inflammatory hyperpigmentation (PIH)
  - Keloid or hypertrophic scarring
  - Active inflammation, infection, or compromised skin barrier
- **Pregnancy and hormonal changes**, when applicable

- **Topical products applied**
  - Cosmetics
  - Skincare – active ingredients

16.7 Patch Testing

Patch testing is **strongly recommended** when:

- Treating **Fitzpatrick IV–VI**
- The client has **sensitive or reactive skin**
- Treating a **new area**
- Using **new settings or a new device**
- The client reports prior adverse reactions to light-based treatments

Patch tests should be assessed **48-72 hours post-treatment** before proceeding.

Parameter Selection & Risk Reduction

Laser/IPL settings must always be adjusted based on:

- **Fitzpatrick skin type**
- **Hair colour, diameter, and density**
- **Treatment area and vascularity**
- **Client sensitivity and pain tolerance**

Start conservatively and increase only when safe treatment endpoints are observed.

Clinical Safety Principle

Safety is paramount.

If there is uncertainty regarding skin response, healing capacity, or medical risk, **delay treatment**, adjust parameters, or obtain medical clearance.

16.8 Burn Recognition & Management Chart

Burn Severity	Clinical Signs	Immediate Actions	Follow-Up & Documentation
First-Degree (Superficial)	• Redness • Mild swelling • Tenderness • No blisters	1. Stop treatment immediately 2. Cool area with cool compress or running water for **10–15 minutes** 3. Advise strict sun avoidance	• Monitor for infection • Adjust future treatment settings • Document findings and parameters used • Typically heals within a few days
Second-Degree (Partial-Thickness)	• Redness with blistering • Oozing • Moderate to severe pain • Swelling	1. Stop treatment immediately 2. Cool the area (do not apply ice) 3. **Do not rupture blisters** 4. Cover with a sterile, non-adherent dressing 5. Refer to a medical professional	• Document the incident in detail • Monitor healing progress • Suspend treatment in the affected area • Adjust future parameters to prevent recurrence
Third-Degree (Full-Thickness)	• White, charred, or leathery skin • Severe tissue damage • Possible numbness	1. Stop treatment immediately 2. Call emergency medical services 3. Keep the area clean and protected 4. Prevent further trauma	• **Do not apply creams or ice** • High risk of complications • Follow all medical directives • Thorough documentation required

16.9 When to Refer or Discontinue Treatment

Recognizing when to pause, modify, or discontinue IPL treatment is essential for client safety and ethical practice.

Indications for Temporary Treatment Suspension

- Unexpected skin reactions
- Poor healing response
- Recent sun exposure or tanning
- Non-adherence to pre- or post-treatment instructions
- New medications or medical conditions

Indications for Permanent Discontinuation

- Recurrent adverse reactions despite parameter adjustments
- Progressive pigmentary changes
- Underlying hormonal or medical condition not medically managed
- Client intolerance to treatment
- Development of contraindications

Referral Guidelines

Clients should be referred to a physician or appropriate healthcare provider when:

- Medical conditions are suspected (e.g., hirsutism with endocrine signs)
- Severe or persistent adverse events occur
- Infection or scarring risk is present
- Pigmentary changes do not resolve

Documentation Requirements

- Detailed description of reaction or complication
- Treatment parameters used
- Management steps taken
- Client communication and instructions
- Referral details if applicable

Clinical Best Practice Summary

- Differentiate expected reactions from adverse events early
- Act promptly and conservatively when complications arise
- Know the limits of your scope of practice
- Documentation protects both client and practitioner
- Safety and ethical decision-making take precedence over treatment continuation

Chapter 17 — Practical Maintenance & Troubleshooting

Proper maintenance of the SkinBite Multi-IPL™ System is essential for patient safety, consistent clinical outcomes, and the device's longevity. Failure to follow recommended care and troubleshooting protocols can lead to reduced efficacy, increased risk of adverse events, and equipment damage.

17.1 Daily Cleaning & Care

Daily cleaning must be performed **before the first treatment and after the final treatment of the day**.

Before Treatment

- Inspect the device, handpiece, and cables for:
  - Cracks, damage, or loose connections
  - Clouded or scratched filters
- Ensure the cooling system is functioning correctly
- Confirm the device has completed its self-check (if applicable)

After Each Client

- Wipe down:
  - Handpiece exterior
  - Treatment console contact areas
- Use **approved medical-grade, non-alcohol disinfectant wipes**
- Remove excess gel from the handpiece window immediately after use

End of Day Cleaning

- Power down the system according to the manufacturer's instructions
- Clean:
  - Handpiece
  - Touchscreen or control panel
  - External surfaces
- Store the handpiece in its designated cradle or holder
- Ensure the treatment room is clean and dry

Important:
Never submerge any part of the device in liquid or use abrasive cleaning tools.

17.2 Handpiece & Filter Sanitization

The handpiece window and optical filters are **critical components** that directly affect energy delivery and safety.

Handpiece Window Care

- Clean the treatment window after **every client**

Use:
  - Lint-free wipes
  - Manufacturer-approved lens cleaner or sterile water
- Dry completely before the next treatment

Filter Sanitization

- Inspect filters for:
  - Gel residue
  - Burn marks
  - Discoloration or cloudiness
- Clean gently using:
  - Soft, lint-free cloth
  - Non-abrasive optical cleaner
- Replace filters immediately if:
  - Cracks or scratches are present
  - Discoloration cannot be removed
  - Energy output appears inconsistent

Clinical Note:
Dirty or damaged filters can cause uneven energy delivery and significantly increase the risk of burn.

17.3 Common Errors & Solutions

Issue	Possible Cause	Corrective Action
The device will not power on	Loose power cable or power source issue	Check connections; verify outlet
Handpiece not firing	Poor contact with skin; insufficient gel; safety interlock engaged	Reapply gel; ensure full skin contact
Excessive client discomfort	Energy too high; insufficient cooling; overlapping pulses	Lower fluence; improve cooling; reduce overlap
Uneven results	Inconsistent handpiece movement; patchy gel application	Use a systematic coverage pattern
Error messages on screen	System safety alert or calibration issue	Power cycle; refer to the manufacturer support if unresolved
Poor energy output	Dirty filter or window	Clean or replace filters

13.4 Poor Results — Causes & Corrections

Suboptimal treatment outcomes are usually related to **technique, biology, or parameter selection**, not device failure.

Common Causes of Poor Results

- Incorrect Fitzpatrick skin typing
- Hair not in the anagen phase
- Hair characteristics unsuitable for IPL (light, grey, vellus)
- Inadequate treatment intervals
- Conservative or incorrect parameter selection
- Hormonal influences (PCOS, menopause, medications)
- Inconsistent coverage or missed areas
- Recent sun exposure is reducing safe fluence levels
- Brazilian - Sexually active

Corrective Strategies

- Reassess Fitzpatrick skin type and hair characteristics
- Adjust parameters gradually while observing treatment endpoints
- Reinforce proper treatment intervals and adherence
- Educate clients on realistic expectations and maintenance needs
- Consider alternative modalities for unsuitable hair types
- Document all adjustments and outcomes for continuity of care

When to Escalate

- Repeated device errors
- Inconsistent energy output after cleaning
- Visible damage to the handpiece or filters
- Unexplained adverse skin reactions

Action:
Discontinue use and contact technical support or the manufacturer immediately.

Chapter Summary

Consistent daily maintenance, proper sanitization of the handpiece and filters, and prompt troubleshooting are essential to safe and effective IPL practice. Understanding the causes of poor results enables practitioners to correct technique, adjust parameters, and manage expectations—ensuring professional, predictable outcomes with the **SkinBite Multi-IPL™ System.**

Chapter 18 — Training Appendices & Forms

(Trainer + Clinic-Ready Resources)

This chapter contains standardized forms and reference tools designed to support safe practice, proper documentation, regulatory compliance, and continuity of care. All practitioners must be trained in the proper completion and storage of these documents before performing treatments.

18.1 Client Intake Form (Editable)

Purpose:
To assess client suitability, identify contraindications, and establish a baseline medical and aesthetic profile before treatment.

Required Sections

Client Information

- Full Name
- Date of Birth
- Phone / Email
- Emergency Contact
- Date of Intake

Medical History

- Pregnancy or breastfeeding
- Autoimmune conditions
- Diabetes
- Epilepsy or seizure disorders
- Cancer history (past or current)
- History of keloid scarring
- Photosensitivity disorders

Medications & Supplements

- Isotretinoin (past 6–12 months)
- Photosensitizing medications
- Hormonal medications
- Herbal supplements (e.g., St. John's Wort)

Skin & Hair History

- Fitzpatrick Skin Type (I–VI)
- Hair colour, thickness, density
- Previous hair removal methods
- History of pigment changes or burns

Sun Exposure

- Recent sun exposure (past 4 weeks)
- Tanning beds or self-tanner use

Practitioner Declaration

- Client suitability confirmed
- Treatment postponed or declined (if applicable)

Client Signature & Date

18.2 Informed Consent Form

Purpose:
To ensure the client understands the procedure, benefits, risks, limitations, and alternatives.

Key Consent Elements

- Description of IPL hair reduction treatment
- Explanation that the results are **hair reduction, not permanent removal**
- Expected number of sessions
- Potential risks:
  - Redness, swelling
  - Blistering or burns
  - Hypo/hyperpigmentation
  - Incomplete or uneven results

- Acknowledgement of:
  - Pain or discomfort during treatment
  - Need for multiple sessions
  - Importance of compliance with pre/post care

Consent Statement

"I confirm that I have received a full explanation of the procedure, risks, alternatives, and post-treatment care. I understand that results cannot be guaranteed."

Client Signature, Date, Practitioner Signature

18.3 Photo Consent / Photo Waiver

Purpose:
To obtain legal permission for clinical photography.

Options to Include

☐ Consent for medical documentation only
☐ Consent for internal training use
☐ Consent for marketing/social media (separate authorization)

Client Rights

- Right to withdraw consent at any time
- Images stored securely and confidentially

Signature & Date

18.4 Pre- & Post-Treatment Care Instructions

Pre-Treatment Instructions

- Avoid sun exposure and tanning for 3–4 weeks before the procedure, or topical or spray tan 4 – 6 weeks before the procedure.
- Do not wax, tweeze, or epilate before or between treatments for 4 weeks
- Shave the treatment area 12–24 hours prior
- Avoid active skincare products, including retinoids, acids, anti-aging products, essential oils, colognes, perfumes, and scented lotions, on the treatment area for 5–7 days.
- Arrive with clean, product-free skin.
- If you've had a cold sore, you **MUST take ORAL medication** at least 12 hours before treatment.
- No working out 6 hours before treatment
- No Advil or anti-inflammatories within 12 hours

Post-Treatment Instructions

- Apply cool compresses if needed.
- No direct sun exposure for a 2-week post. Use full-spectrum/broad-spectrum sunblock (SPF 30 or higher) and reapply every 2 hours.
- No deodorants, perfumes, cologne, lotions with essential oils or any cream that may irritate the treatment area for 1-2 days.
- No exposure to heat, strenuous exercise that causes excessive sweating for 1-2 days. No hot baths or saunas, swimming pool for 1-2 days.
- No sex for 5 days post Brazilian/Bikini hair removal
- No Alcohol 24 hours post-laser. Expect redness, swelling, warmth (24–48 hrs.
- Do not pick, scratch, or exfoliate the treated area
- Hair shedding may take up to 3 weeks

18.5 Patch Test Record

Purpose:
To document safety testing before full treatment.

Patch Test Record Includes

- Treatment area
- Date and time
- Parameters used:
  - Fluence
  - Pulse duration
  - Filter
- Skin response observed
- Client feedback
- Clearance to proceed:
  - ☐ Yes ☐ No
- Practitioner initials and date

18.6 Treatment Log Templates

Purpose:
To track treatments, ensure consistency, and meet medico-legal standards.

Treatment Log Fields

- Date of treatment
- Area treated
- Fitzpatrick skin type
- Hair characteristics
- Parameters used
- Number of pulses
- Client reaction

- Immediate endpoints observed
- Post-treatment instructions given
- Practitioner signature

18.7 Quick-Reference Parameter Charts

Purpose:
To provide fast, safe guidance during treatments.

Charts May Include

- Fitzpatrick skin type vs. starting fluence
- Hair thickness adjustments
- Sensitive area considerations
- Conservative vs. aggressive treatment ranges
- Recommended treatment intervals by area

Clinical Reminder:
Always prioritize skin response over preset values.

18.8 Emergency Response Protocol

Purpose:
To ensure immediate, appropriate response to adverse events.

Emergency Response Steps

1. Stop treatment immediately
2. Cool area with cool compress (no ice)
3. Assess the severity of the reaction
4. Document the incident thoroughly
5. Provide appropriate first aid within scope
6. Refer to a medical professional if required

Escalation Criteria

- Blistering or burns
- Severe pain or swelling
- Pigment changes worsening
- Signs of infection
- Delayed healing

Important:
Practitioners must never exceed their scope of practice.

18.9 Laser / IPL Hair Reduction Treatment Protocols

Average Number of Treatments

Most clients require 4–8 treatment sessions

The exact number varies based on:

- Hair colour and thickness
- Skin type
- Treatment area
- Hormonal influences
- Individual response to treatment

Treatments are scheduled according to the hair growth cycle of each body area to maximize effectiveness.

18.10 Recommended Treatment Intervals by Area

Treatment Area	Interval Between Sessions
Arms	10 weeks
Beard / Mustache	4–6 weeks
Bikini Area	6–8 weeks
Cheeks	4–6 weeks
Chest / Breast	6–8 weeks
Ears	4–6 weeks
Legs	8–10 weeks
Scalp	4–6 weeks
Trunk (Back / Torso)	6–8 weeks
Underarms	6–8 weeks
Upper Lip	4–6 weeks

Proper spacing allows dormant follicles to enter the anagen (active growth) phase, where they become responsive to treatment.

18.11 Post-Treatment Hair Shedding

Treated hairs typically shed naturally within 1–3 weeks

This is a normal response

Clients may notice hair “pushing out” before shedding occurs

Important:

Clients must not tweeze, wax, thread, or epilate between treatments, as these methods remove the hair root and interfere with treatment effectiveness. Shaving is permitted.

Treatment Sensation & Comfort

Treatments may cause temporary discomfort, often described as:

- A snapping or warming sensation
- Mild stinging
- Discomfort occurs because nerve endings surround each hair follicle
- Cooling systems and gel application help improve tolerance
- Expected Immediate Skin Reactions (Desired Endpoints)

Clients may experience:

- Mild to moderate redness (erythema)
- Mild swelling or perifollicular edema
- Warmth or sensitivity

These reactions are normal and typically resolve within 24 hours.

Pigmentary Changes

- Temporary hyperpigmentation or hypopigmentation may occur
- More common in darker skin types or after sun exposure
- Most pigment changes resolve naturally within up to 6 months
- Strict sun protection is essential to reduce risk
- Crusting & Ingrown Hairs
- Crusting or small scabs may develop over treated ingrown hairs

More commonly observed in darker skin types

- Clients should be instructed not to pick or scratch affected areas
- Long-Term Hair Growth Considerations
- Not all hair follicles are active at the same time
- As the body ages, previously inactive follicles may become active

New hair growth may also be stimulated by:

- Hormonal changes
- Medications
- Pregnancy

Genetics

For this reason, laser/IPL hair reduction is best described as long-term hair management, and maintenance treatments may be required.

Clinical Key Point

Laser and IPL treatments achieve permanent hair reduction, not complete or lifelong hair elimination. Proper consultation, realistic expectation setting, and adherence to treatment intervals are essential for successful outcomes.

Chapter Summary

The appendices and forms in this chapter provide the foundation for **safe practice, professional documentation, and regulatory compliance**. Consistent use of standardized forms protects both the client and practitioner while ensuring high clinical standards across all treatments.

Chapter 19 - Safety Regulations

19.1 Security Introduction

19.2 Operator Training & Safety Measures

Those who have been trained can use this system—no matter whether the operator, the assistant, or the maintainer needs to understand this chapter well. However, people's safety is most important; it has been taken into consideration during the design process.

When the device is turned on, the auto-inspection safety system is also initiated and continues to operate throughout the treatment process.

An independent safety circuit can cut off the power supply if an electric leak occurs. The "Emergency" button can cut off the power supply immediately in an emergency.

19.3 Warning

Important Safety Notice for Operation

Please read the following instructions carefully to ensure safe operation of the system:

Authorized Personnel Only

- Only certified technicians may inspect or repair the system.
- Unauthorized personnel must not attempt to access or modify internal components, including the power supply, cooling system, optical components, or treatment head.

Voltage Compliance

- Ensure that the system's voltage matches the local residential voltage before operation.

Maintenance Precautions

- Always turn off the machine and unplug the power cord before performing any maintenance.
- Failure to do so may result in injury or damage to the equipment.

Handling Loose Components

- If the treatment head appears loose, do not power on the machine.
- If the system is already on, turn it off immediately to prevent potential hazards.

 Warning

SHR E-light machines can emit high-intensity infrared beams; to protect the eyes, the users and patients are requested to wear appropriate safety goggles in accordance with (NOHD) standard.

Pay attention to the following precautions:

- DO NOT point the handle directly at the eyes.
- DO NOT cut off the power supply when the machine is working.
- Be sure to get familiar with the machine's structures and specifications before using it.

19.4 Electrical and Mechanical Safety

General Safety Precautions:

- Keep all panels and covers securely closed to prevent potential hazards.
- The equipment contains high-voltage components, and residual electrical charge may remain even after the system is powered off.
- Only authorized technicians may open or service the equipment.

Maintenance Guidelines

- Before performing maintenance, unplug the power cord and remove the cover board under direct supervision.
- Improper handling during maintenance or transport may result in personal injury.
- The machine is balanced and movable, but it should be moved slowly and carefully to avoid accidents.

Electrical Safety

- The system is equipped with a three-wire power cord for proper grounding.
- A stable and secure ground connection is essential for safe operation.
- The machine is balanced and movable, but it should be moved slowly and carefully to avoid accidents.

19.5 Fire Prevention Measures

- Temperature increases due to light energy absorption, so flammable materials must be kept away from the treatment area.
- Do not use ethanol, acetone, or any other flammable substances on the skin before treatment.
- If necessary, clean the area with soap and water instead.
- When disinfecting the treatment head or other components with alcohol, allow it to fully dry before proceeding.

19.6 Safety Features & Emergency Settings

Key & Power Control

- Key Switch: Used to turn the machine ON/OFF, provided only by the manufacturer.

Emergency Stop Button

- The red button is designed to immediately cut power in an emergency.
- To restart, rotate the button clockwise to resume normal operation.

Automatic System Inspection

- Upon startup, the system will perform a self-diagnostic inspection lasting approximately 1–3 minutes before transitioning to the next operational stage.

Chapter 20 - Clinical Application

Warning: Please use the device after careful reading of the User Manual before operation!

20.1 Danger

- Direct contact of the handpiece with the eyes should be avoided to prevent potential ocular injury.
- Care should be taken to avoid direct viewing of the light source or any reflected light from reflective surfaces.
- To prevent accidental exposure to emitted or reflected light, all personnel operating the system must wear appropriate protective eyewear.
- Even at low output levels, inadvertent exposure to the light may cause significant ocular harm; thus, precautions must be taken to avoid eye exposure.
- Do not exert excessive force when handling the power cord, nor should the power plug be touched with wet hands, as this may present a risk of electrical shock or fire.
- In the event of lightning, thunderstorms, or seismic activity, immediately discontinue use and disconnect the power supply to mitigate the risk of electrical hazards.
- The device poses a potential risk of explosion and fire.
- The device should not be operated in environments containing volatile substances such as anesthetics, alcohol, gasoline, or solvents, as these may present a fire or explosion hazard.
- It is recommended to utilize non-volatile substances and tools when possible. A fire extinguisher should always be readily accessible near the device.
- Operation of the device requires a skilled and experienced operator, and successful treatment outcomes depend on patient cooperation.

Chapter 21 - Daily Maintenance

21.1 Preservation Guidelines

a) Protect from Direct Sunlight: Ensure the device is shielded from direct sunlight to prevent potential damage or degradation of components.

b) Post-Treatment Probe Maintenance: After each use, thoroughly clean the treatment probe. It is recommended to cover the probe with a soft cloth for protection. If the device is to be stored for an extended period, ensure the entire machine is properly covered to prevent dust accumulation, which is critical for maintaining the device's functionality and longevity.

c)Handle the Treatment Probe with Care: Exercise caution when handling the treatment probe, as improper handling may compromise its performance or lead to damage. This is a critical aspect of device maintenance.

21.2 Maintenance Guidelines

a) Storage Conditions: It is essential to store the device in a clean, dry, and well-ventilated environment to ensure optimal performance and prevent damage from moisture or contaminants.

b) Authorized Operation: Only trained and qualified professionals should operate the device. Unauthorized use by untrained individuals may result in improper operation, potential damage, or safety risks.

21.3 Fault Alarm System

The SHR E-light device is equipped with comprehensive protection mechanisms, including monitoring for water flow, water level, and water temperature. In the event of an abnormal condition within the main unit, the system will automatically deactivate the laser power supply and indicate the fault via the touch screen's protection indicator. Under normal operating conditions, the indicator displays a green light; however, in the event of a malfunction, it turns red. Simultaneously, an audible alarm will sound continuously. Once the system detects that the fault has been resolved, both the alarm screen and the audible alert will cease automatically.

If the same warning screen appears more than three times during a treatment session, it is imperative to contact the after-sales maintenance team for further assistance.

21.4 Pre-Service Troubleshooting

Safety Interlock Switch Alarm

Verify if the device's outer shell is open or improperly secured.

Check whether the remote interlock is in an open-circuit state.

Water Flow Alarm

Inspect the water tank to ensure it is adequately filled.

Examine the water pipes and radiator for potential leaks or blockages.

Water Level Alarm

Abnormal water levels (either too high or too low) can disrupt normal operation.

Immediately check whether the water level is sufficient, and power off the device if any irregularities are detected.

Water Temperature Alarm

Restart the device after a complete shutdown, or allow it to cool by ceasing flash emissions for a period.

If none of the above conditions are identified as the cause of the alarm, please contact the after-sales maintenance team for further assistance.

21.5 Fuse Inspection and Replacement Procedure

Power Down the Device

Ensure all power switches are turned off and disconnect the power cord from the electrical outlet.

Access the Fuse Housing

Using a small flat-head screwdriver, carefully rotate the protective tube casing counterclockwise to remove it.

Extract the fuse from its protective sheath.

Fuse Replacement

Replace the fuse only with the manufacturer-specified standard type (Fuse specifications: 10A/250VAC).

Insert the new fuse into the protective sheath and securely reattach the sheath by rotating it clockwise.

Reconnect and Test

Reinsert the power cord into the device and restore power.

Turn on the power switch and key switch, then verify that the device is functioning correctly.

Note: Use only manufacturer-approved fuses to ensure compliance with safety and performance standards.

21.6 Main Unit Maintenance Guidelines

Protective Cover Usage

When the equipment is not in use for an extended period, cover it with a protective shield. This prevents contaminants such as dust and water vapour from entering the main unit, which could reduce laser output energy and impair normal operation.

Installation Environment

The equipment must be installed in a clean, dry, and dust-free environment.

Maintain the ambient temperature between 4–40 °C.

Avoid exposing the main unit to direct sunlight to prevent the casing and internal components from aging.

Ensure the equipment is placed in a dry, well-ventilated area free from corrosivehttps://docs.google.com/document/d/1ijjDKT3qjiHv0AZv_IEdyJYEUVL9yB9G/editgases.

Cold Climate Precautions

In regions where temperatures may fall below 0 °C, drain the cooling water from the main unit during transportation or prolonged periods of inactivity. This prevents freezing and liquid expansion, which could damage internal components.

It is recommended that the draining procedure be performed by qualified professionals from the manufacturer, or that the manufacturer be contacted directly for assistance.

By following these guidelines, the equipment's performance and lifespan can be effectively preserved.

21.7 Handle Maintenance Guideline

The handles are composed of precision optical components and require careful handling to maintain their functionality. Adhere to the following maintenance procedures:

Prevention of Physical Damage

Avoid dropping or subjecting the handles to blunt force impacts.

Do not collide with or arbitrarily activate the laser handles, as this may cause the laser module to malfunction and fail to emit light properly.

Optical Surface Maintenance

The cleanliness of the end plane of the light guide crystal is critical for optimal laser output. Thoroughly inspect and clean this surface before each use.

Transmission System Care

When using the handle transmission system, avoid extreme bending of the components to prevent damage to the internal optical and mechanical systems.

By following these guidelines, the integrity and performance of the handles can be preserved, ensuring consistent and reliable operation.

21.8 Cooling System Maintenance

Regularly inspect the cooling system to ensure its proper functioning. Follow these guidelines to maintain optimal performance:

Cooling Fan Operation:

Verify that the cooling fan operates normally. A malfunctioning cooling fan or cooling module disrupts heat transfer to the external environment, leading to heat accumulation within the device. This can result in laser malfunction or even damage to the hair removal machine.

Routine Inspection:

During maintenance, personnel should check the water tank's storage volume and water quality, as well as the appliance's refrigerating capacity.

If any irregularities are detected, promptly add or replace the cooling water to ensure efficient heat dissipation.

By adhering to these procedures, the cooling system's reliability and the device's overall performance can be maintained.

 The cooling water used for the hair removal machine must be deionized water (PH value of water 5.5-8, hydronium water resistance: 5MΩ/cm2).

Change the water every 2-3 months.

Chapter 22 - Laser & IPL Treatment Consent Form

22.1 Contraindication Risk Acknowledgement, Informed Consent & Liability Waiver (Canada)

Clinic Name: _____ Clinic Address: _____

Client Name: _____ Date of Birth: _____

Date: _____

1. PURPOSE OF THIS DOCUMENT

This document is intended to confirm that the undersigned client has been fully informed of the known and potential risks associated with laser and/or IPL treatments when relative contraindications are present, and that the client voluntarily elects to proceed with treatment despite those risks. This waiver is used in accordance with Canadian professional practice standards for non-surgical cosmetic laser and light-based procedures.

2. DISCLOSURE OF RELATIVE CONTRAINDICATION(S)

The client acknowledges that they have disclosed, or have been advised that they may have, one or more of the following conditions that may increase the risk of complications from laser or IPL treatment (check all that apply):

☐ Type 2 Diabetes (diet or medication controlled)
☐ History of delayed wound healing
☐ Circulatory or vascular compromise
☐ Autoimmune condition in remission
☐ History of abnormal scarring
☐ Other (specify): _____

The client confirms that they do not have Type 1 diabetes, uncontrolled diabetes, active ulcers, active infection, or any absolute contraindication that would prohibit treatment.

3. EXPLANATION OF RISKS

The client understands and acknowledges that:

- Laser and IPL treatments create a controlled thermal injury to the skin.
- Certain medical conditions, including Type 2 diabetes, may impair circulation, immune response, and wound healing.
- These factors may increase the risk of delayed healing, infection, blistering, pigmentation changes, scarring, or other adverse reactions.
- Individual response to treatment cannot be predicted or guaranteed.

The client confirms that these risks have been clearly explained, all questions have been answered, and no guarantees or assurances of outcome have been made.

4. VOLUNTARY ASSUMPTION OF RISK

The client knowingly, voluntarily, and expressly assumes all risks associated with proceeding with laser or IPL treatment despite a relative contraindication.

The client confirms that they: - Are proceeding of their own free will - Understand that elective cosmetic treatment is not medically necessary - Have had sufficient opportunity to decline or postpone treatment.

5. RELEASE AND LIMITATION OF LIABILITY

To the fullest extent permitted by Canadian law, the client hereby releases, waives, and discharges the clinic, its owners, directors, officers, employees, contractors, students, and service providers from any claims, demands, damages, or causes of action arising from or related to:

- Known or disclosed relative contraindications
- Delayed healing or adverse skin reactions
- Complications arising despite appropriate screening, technique, and adherence to professional standards

This waiver does not apply to acts of gross negligence or willful misconduct.

6. MEDICAL CARE AND FOLLOW-UP

The client understands that if an adverse reaction occurs, they may be advised to seek medical attention from a qualified healthcare provider other than the cosmetic laser practitioner.

7. CONFIRMATION OF TRUTHFUL DISCLOSURE

The client confirms that all medical history and health information provided is true, complete, and accurate to the best of their knowledge. The client understands that failure to disclose relevant medical information may increase risk.

8. GOVERNING LAW

This agreement shall be governed by and interpreted in accordance with the laws of the Province/Territory of _____ and the laws of Canada applicable therein.

9. ACKNOWLEDGEMENT AND SIGNATURES

I have read and fully understand this document. I have had the opportunity to ask questions and receive satisfactory answers. I voluntarily consent to proceed with laser/IPL treatment under the conditions outlined above.

Client Name: _____ Client Signature: _____

Date: _____

Practitioner Name: _____ Practitioner Signature: _____

Date: _____

This document is intended for use in professional cosmetic laser and IPL settings and does not replace medical advice or physician clearance when required.

Chapter 22 - Photo & Media Consent Form

22.1 Consent Waiver

(PIPEDA & PHIPA Compliant)

Client Name: _____ Date of Birth: _____

Date: _____

1. PURPOSE OF CLINICAL PHOTOGRAPHY (MANDATORY)

I understand and acknowledge that clinical photography is a required component of my aesthetic/medical treatment at this clinic. These photographs may include images taken before, during, and after treatment and constitute my Personal Health Information (PHI).

Clinical photographs are collected for:

- Treatment planning and assessment
- Monitoring treatment progress and outcomes
- Medical documentation and continuity of care
- Quality assurance and practitioner education

I understand that refusal to consent to clinical photography may limit or prevent my ability to receive treatment.

2. COLLECTION, USE & DISCLOSURE OF PERSONAL HEALTH INFORMATION

I acknowledge that my photographs constitute Personal Health Information as defined under:

- Personal Information Protection and Electronic Documents Act (PIPEDA)
- Personal Health Information Protection Act (PHIPA) (where applicable)

I understand and agree that:

- My photographs will be collected, used, and disclosed only for identified clinical purposes
- Images will be retained as part of my confidential medical record
- Access to my photographs will be limited to authorized clinic personnel

Reasonable administrative, technical, and physical safeguards are in place to protect my information from unauthorized access, loss, or disclosure.

My photographs will not be disclosed to third parties without my consent, unless required or permitted by law.

3. CONFIDENTIALITY & RETENTION

I understand that:

- My identity will remain confidential
- Photographs will be retained in accordance with applicable record retention laws

I have the right to request access to, or correction of, my personal health information in accordance with applicable legislation.

4. MARKETING & PROMOTIONAL USE – SEPARATE & OPTIONAL CONSENT

I understand that clinical consent does NOT include marketing or promotional use.
Any use beyond my care requires separate, express consent, which I may grant or refuse without affecting my treatment.

⬜ **OPTION A – I CONSENT TO MARKETING USE**

I voluntarily authorize the clinic to use my photographs for marketing, advertising, promotional, or educational purposes, which may include:

- Clinic website and digital platforms
- Social media
- Print or digital marketing materials
- Professional or educational presentations

I understand that:

My name and identifying information will not be disclosed and I will not receive compensation.
This consent may be withdrawn in writing at any time, subject to materials already in circulation.

Client Initials: _____

⬜ **OPTION B – I DO NOT CONSENT TO MARKETING USE**

I do not authorize the use of my photographs for marketing or promotional purposes. My images will remain part of my confidential medical record only.

Client Initials: _____

5. WITHDRAWAL OF CONSENT

I understand that I may withdraw or modify my consent for the collection, use, or disclosure of my personal health information at any time by providing written notice, subject to legal and contractual restrictions.

6. ACKNOWLEDGMENT & SIGNATURE

I confirm that:

The purpose of photography has been explained to me. I understand how my personal health information will be used and protected

My consent is knowledgeable and voluntary.

Client Signature: _____

Printed Name: _____

Date: _____

Practitioner / Witness Name: _____

Signature: _____

Date: _____

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All products are compliant with Health Canada Safety regulations.