Dr. Shiffman is a graduate of Georgetown University School of Dentistry. He completed a general practice residency at Georgetown University Medical Center with an emphasis on treating medically compromised patients. He completed his certification with the Academy of Laser Dentistry in three types of Laser systems. He was awarded a Fellowship in the Academy of Laser Dentistry. He has performed thousands of Laser procedures in the last 10 years. Dr. Harvey Shiffman's Laser Dental Center is a Boynton Beach, Florida dental practice.

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Laser-Assisted Lateral Sinus Lift with Implant Placement in Stages

Dr Harvey Shiffman

Parameters:

	Soft-tissue flap elevation and reflections	Osseous window access	Sinus floor elevation	Photo-biomodulation
Laser source:	Er:YAG	Er:YAG	Er:YAG	Nd:YAG
Pulse duration:	SSP	MSP	SSP	MSP
Energy:	10 mJ	300 mJ	10 mJ	-
Frequency:	15 Hz	20 Hz	15 Hz	20 Hz
Handpiece:	H14	H14	H14	300 µm fiber
Power	0.15 W	6 W	0.15 W	2 W
Air / Water	0 / 2	4 / 8	0 / 2	-

Treatment procedure:

A Sinus lift is a surgical procedure which aims to increase the amount of bone in the posterior maxilla, in the area of the premolar and molar teeth, by lifting the lower Schneiderian membrane and placing a bone graft. The procedure can be performed using different techniques. An approach with LightWalker's 2 different wavelengths is presented here. Er:YAG was used for osseous and sinus membrane lifting and Nd:YAG for photobiomodulation.

The patient was a 60-year old Caucasian female who came to the office for tooth replacements with implants. Her medical history included use of Synthroid (levothyroxine) for thyroid problems and gabapentin for chronic pain/fibromyalgia. Blood was drawn and spun for PRF membranes.

First a scalpel was used to make a full-thickness flap, and afterwards Er:YAG with the H14 handpiece and chisel tip was used for flap elevation and reflection. In order to perform a lateral sinus lift in the UL area #11-13, an osseous window access was made using the H14 and chisel tip with the above written parameters until the bone looked thin. The osseous window was opened with hand instruments. The sinus floor was then elevated using Er:YAG and hand instruments.

Afterwards, dried and frozen demineralized bone combined with I-PRF liquid ("Sticky Bone") was placed in the window and covered with 2 layers of A-PRF membranes. PGA 4.0 sutures were placed to keep everything in place. The last step was photobiomodulation with Nd:YAG. Bare 300 µm fiber was used for 60 sec in a defocused mode so the spot size at the tissue was 1 cm.

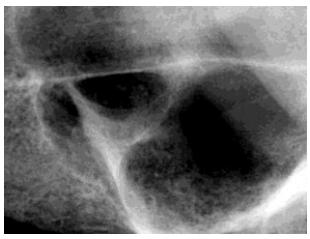
Link to YouTube video: https://youtu.be/g0HM50RuC7w

Open window

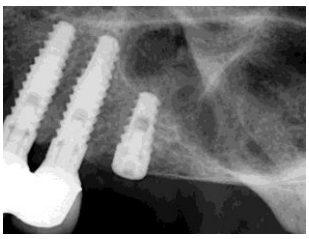
Bone graft

PRF membranes

Pre-op



After sinus lift



Implant