

DOCTOR *of* DENTISTRY

A BUSINESS AND LIFESTYLE MAGAZINE FOR DENTISTS



Dr. Terence Lau

On the Cutting Edge of Dental Implants

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By Debbie L. Sklar

With his quick wit, steady hands and artistic ability, Terence Lau D.D.S., FICOI, FAACP, is considered by fellow dentists to be the Picasso of dental implants.

Dr. Lau, 49, who once considered becoming a medical doctor, found his real calling in dental implantology and is a co-owner of the busy Mid-Valley Dental Care and founder of the referral-based Bio-Aesthetic Implant and Laser Solutions in Northridge, CA. Being one of few general dentists who can boast extensive surgical experience with dental implants since he began in practice in 1988, he is a well-respected lecturer and instructor for the dental implant community. Referrals from restorative dentists and orthodontists come to him from local practices as well as dental practices “over the hill” in places like Beverly Hills, Orange County and Palm Springs, because of his reputation for extraordinary work.

“We are a unique practice because we are ‘prosthetically minded’ restorative dentists who place implants for other doctors and teach them how to place implants themselves,” he said. “We know inherently where to place an implant for the restorative doctor in every situation, in order to result in a successful and cosmetically pleasing implant restoration.”

Dr. Lau also founded Bio-Aesthetic Dental Implant and Laser Solutions to provide more intimate and individualized hands-on training opportunities, lectures, as well as a study club for exchange of information about implant and laser dentistry.

“For our referring doctors, our primary objective is to provide restoratively guided dental implant placement for referring dentists and their patients. Our motto is *‘Implants Aligned by a Restorative Mind,’*” he said.

The institute boasts 26 integrated computers, including three servers loaded with Dentrax Dental Management Software, Schick Digital X-Ray Software and Consult-PRO’s Chairsides Dental Patient Education Software program.

Dr. Lau is in the process of building out the current office to accommodate practice growth and add areas for educating his fellow dentists. “We hope to be teaching by mid-summer, after the renovation and build out of what will be a 2,500-square-foot, nine-operatory office space.”

Every operatory is now fully equipped with Internet-connected computers, TVs and DVD players, so patients have their choice of entertainment or connectivity. Dr. Lau just installed Flexview overhead monitor arms, manufactured by Flexview Systems, to address the problem of overhead light glare and sun washout of dynamic display AAC devices. The Flexview arms with HD LCD monitors glide along an overhead track lighting system, so patients can view the chairside program videos, movies or cartoons while the doctor performs his magic.

ALL IN THE FAMILY

Each member of the staff, highly and specifically trained in providing high-quality and comfortable implant dentistry, also plays a key role in the ever-increasing success of the practice, which began in 1988. “Our staff is so knowledgeable in the field of implant dentistry they assist in the hands-on training of the doctors during the seminars,” Dr. Lau explained.

Dr. Lau’s partner and brother, Casey Lau, D.D.S., a graduate of the UCLA School of Dentistry, assists with the hands-on teaching and mentoring responsibilities of Bio-Aesthetic Dental Implant and Laser

Mid-Valley Dental Care staff (upper row, left to right): Erin, Nora, Maria, Imelda, Pam, Connie, Angela, Ivette, Lynn, Ofelia, (lower row, left to right) Patty, Veronica and Patti. Not shown: Shannon, Naz, Roel, Holly, Luz, Melodi, Becky, Laura, Jennifer and Claudia





Dr. Lau favors the Innova Endopore implant, which is relatively short, for many cases.

Solutions, while also maintaining clinical and management responsibilities at the busy dental implant and laser dentistry practice.

“There’s nothing better or more rewarding than having someone you know, love and trust as a partner,” Dr. Lau said. “Since I am about 15-1/2 years older, it is with almost the pride of a parent to have him as a partner. But he chose to attend UCLA School of Dentistry instead of USC, which is where I went to dental school. I told him, ‘Don’t worry . . . the real learning will start after you finish dental school!’ And that’s exactly what happened. Casey often says, ‘I attended more lectures my two years right out of practice than while I was in dental school.’”

Both Drs. Lau are masters at various cosmetic dental implant placement protocols, employing immediate and delayed techniques and any necessary soft- and hard-tissue grafting, to create a foundation and emergence profile that allows the referring restorative dentist to create a restoration that mimics nature. In addition, they can place dental implants to assist in the orthodontic movement of teeth for referring orthodontists.

“As generalists, we don’t truly have a specialty, but we strongly emphasize the surgical aspect of dental implants. Restoring missing teeth in the cosmetic zone is where we take the most satisfaction, because this is where the patient has the most apprehension about the outcome and is usually the most critical of the cosmetic result. When they get their smile back — and I am not just referring to the color of the crowns — it is definitely the ultimate reward in dentistry,” said Dr. Casey Lau.

He also enjoys working side by side with his older brother and said it is a lot of fun. “We went to rival schools so we definitely needle each other about that,” laughed Dr. Casey. “Working with a relative can always be dangerous to either a family relationship or working relationship, but in our office it works out really well. Having someone in the office with his expertise and experience has definitely shaped and guided my career and my philosophy in dentistry. When you are a young dentist, it helps to have a mentor working in some cases directly by your side. The progressive and cutting-edge thinking really saturated the office when Terry was just getting started. It is a philosophy that I embrace and hopefully expand on to the benefit of our patients.”

Dr. Casey also agreed with his brother that the practice is unique in a number of ways. “There are a lot of generalists who ‘do implants,’ but



Consult-PRO’s Chairside program helps educate the patient on the implant process.

few have done the sheer number of cases that we have. In our office we almost don’t even need to educate the patients about dental implants, they seek us and often ask about them before we have had a chance to go over different treatment options. We come from a prosthetic restorative point of view and it controls and dictates my placement of these implants. This is not a new philosophy, but when you’ve restored implants you get a feel for the problems that can arise from slightly misplaced implants. ‘What does the final restoration look like when compromises have to be made?’ We come from a place where we can answer that question and then avoid having to ask the question in the first place.”

TOPNOTCH TEACHING

Dr. Lau’s teaching credentials speak for themselves: He has conducted a dental implant residency for restorative dentists at Esthetic Professionals since 2001, dental implant residencies for the general dentist featuring the Innova/Sybron Dental Implant System for the Academy of General Dentistry and he has lectured or conducted residencies both locally and nationally, from Northridge and Tarzana to Norwalk, San Francisco, Seattle and New York, among others.

“It has been very rewarding being able to guide hundreds of dentists in the complexities and subtleties of dental implant surgery via lectures, model work and even live patient surgery with direct hands-on mentoring,” he said. “I feel that every restorative dentist should learn how and where and when to place dental implants in order to be able to confidently prescribe and/or personally provide the service.”

“Although I am a general dentist, I had the fortune to obtain training in implant dentistry directly from the ‘Father of Modern Implant Dentistry,’ P.I. Brånemark himself while attending a perio/pros residency at the University of Washington in Seattle. At that time, I realized that unless a doctor participates in hands-on training — just like we experienced in dental school — a doctor will never incorporate the procedure into practice and may even be less likely to recommend it to patients, due to lack of understanding of the benefits and conservatism of the procedure.”

Dr. Lau also conducts closely related hands-on teaching and mentoring for DEKA Laser Technologies. He uses the DEKA Ultra Speed CO₂ soft

tissue laser in every phase of dental implant surgery. The laser is used for sterile initial incisions to laser punch and flapless techniques for implant placement and uncover.

“The laser is immensely useful in the sterilization of the infected bone and ailing implant followed by sterile repair of the site with bone grafting,” he said. “It’s a necessary adjunct to any surgical practice, especially a dental implant practice.”

Since Dr. Lau has been using the DEKA UltraSpeed CO₂ laser, the necessary postoperative follow-up has become very predictable, due to nontraumatism of tissue and accelerated healing time. Patients have commented about the low- and no-pain results after implant surgery. The laser works with all implant systems and the technology has become a major factor in the quality of Dr. Lau’s implant dentistry.

THE INNOVA ENDOPORE IMPLANT — SOMETHING DIFFERENT

While Dr. Lau is familiar with all of the current implant screw-type systems available on the market, he specializes in the placement of dental implants in severely resorbed alveolar ridges with minimal need for the extensive grafting that is normally required in such cases. This is because he has mastered the successful placement and restoration of the shortest, individually restored dental implant available on the market, Sybron’s Innova Endopore dental implant.

“This short little implant allows us to place and individually restore an implant in as little as 3 mm of porous D3 or D4 maxillary bone in the region of the maxillary sinus or 5 mm of mandibular bone above the mandibular canal,” he said. “All of us in implant dentistry are well aware that every titanium implant on the market osseointegrates. And really only subtle changes have been made to the screw over the last 20 years or so — surfaces, coatings, sharper cutting threads, flatter threads, smooth collars, rough collars, micro threads, external connection, internal connection, platform switching, two-stage designs, single-stage designs, one piece designs, etc. But they almost all require one thing for success: a sufficient volume of good bone.”

That’s why, in the early 1990s, he learned how to create that bone through sinus lifting, inlay and onlay bone grafting, nerve repositioning and even distraction osteogenesis.

Dr. Terry Lau, front, and Dr. Casey Lau, back, have found their skills complement each other in serving patients.



PHOTO BY RICH SCHMITT/RICH SCHMITT PHOTOGRAPHY

“I learned very quickly, however, that all this wonderful surgical talent that I acquired was increasing the discomfort level of my patients,” he shared.

So he sought out an implant that would allow him to accomplish the occlusal support that his patients needed without requiring so much surgery and found the Endopore Implant.



PHOTO BY RICH SCHMITT/RICH SCHMITT PHOTOGRAPHY

The DEKA UltraSpeed CO₂ is essential to the success of placing implants at Mid-Valley Dental Care.

“What I found was an implant design that boasted as much long-term clinical research as the original Brånemark implant from the very university that originally introduced that implant to the Western world,” he said. “In fact, it’s the only implant design of its kind with a surface of sintered beads, which creates an environment of ideal sized interconnected pores allowing for three-dimensional in-growth of bone.”

This design increases the bone contact surface area so tremendously that an implant as short as 5 mm can support a molar crown of seemingly unfavorable crown to implant length ratio, he said.

“Contrary to conventional wisdom, this implant design loves porous — D3 and D4 — bone, shorter lengths and individually restored crowns,” he explained.

Assuring his referral dentists of the ability to choose the dental implant that they are comfortable restoring, Dr. Lau says, “Don’t worry, we have an answer for all the implants that you may be familiar with from Astra to ITI, Nobel or Zimmer, but if it is in the best interest for the patient to receive an Endopore, I’ll recommend it.”

ADVANCED TECHNOLOGY

Dr. Lau also relies on other technology to succeed, including the UltraSpeed CO₂ laser by DEKA. He said it is the perfect companion to any implant practice, enabling the clinician to perform sterile incisions, tissue manipulations and alterations in texture and type, flapless implant placement, sterilization of infected bone prior to grafting, treatment of peri-implantitis and sterile implant uncover. It is the perfect tool for sterilization of surgical sites and for use in all soft-tissue procedures. This laser actually can replace the scalpel with speed and accuracy, without bleeding and minimal postoperative discomfort.

“It really is the best way to make incisions and sterilize implants, teeth and bone with a true laser,” he added.

For example, he said a clinician can also perform numerous other soft-and hard-tissue procedures, such as excisions, biopsies, frenectomies, vestibuloplasties, gingivectomies, sulcus sterilization and guided bone regeneration.

He also said Consult-PRO’s Chairsides Dental Education and Informed Consent Program is invaluable in his office. Dr. Lau explained, “This program, loaded with narration and 3-D animated movies, is great for explaining complex surgical procedures and alternatives to the patient in a nonthreatening fashion. It not only covers every aspect of implant dentistry from implant placement and restoration to complex procedures

like sinus lifts and distraction, it also covers every aspect of general and cosmetic dentistry and really puts it into an easy-to-understand format! The program will even keep track of procedures you have discussed with the patient, the dates that you showed the specific education component, and will print out a form listing those dates and presentations with an editable consent statement and a place to sign. It also allows you to print professional brochures, which explain the procedures for the patient to take home. And the combination of the Flexview overhead monitors displaying the Consult-PRO Chairside Program in an unimpeded view of the patient makes for a perfect consultation.”

Consult-PRO (www.consult-pro.com) also includes an Internet-based program, Consult-PRO Web, which is a mini version of the patient education program that links directly to a doctor’s website. “Directing patients to my website to learn about the concepts I will explain in further detail in the office, or allowing them to show family members 3-D animated explanations of what we plan to do for them, is an extremely helpful tool for everyone involved,” said Dr. Lau.

Other cutting-edge products Dr. Lau is utilizing include the Pitt-Easy dental implant by Sybron, which boasts a surface blessed by a biomimetic, nanotechnology surface called Puretex that makes it an ideal candidate for immediate load situations. In addition to the Puretex surface, the Pitt-Easy implant is designed with an implant body that narrows conically, while the outer thread diameter of the cylinder remains the same (thus facilitating immediate stability), a self-tapping expansive function based on initially sharp threads that increase in width from apical to cervical creating osseous compression and an apical cutting notch that prevents rotation.

IMMEDIATE PLACEMENT

“Immediate placement of implants works well with the correct hard- and soft-tissue conditions, proper presurgical planning and cooperation between the surgeon, restorative dentist, dental laboratory and patient,” he said.

Dr. Lau said he can restore an implant himself immediately in the right situation, in as little as eight weeks in good bone, from 15 to 20 weeks in grafted bone and in 20 to 24 weeks in sinus lifted situations. Dr. Lau added, “Thank goodness for the shortened healing times we can now employ. I once replaced two fractured dental implants on a 94-year-old man who wouldn’t consider wearing a removable prosthesis. ‘How long do these things have to heal nowadays?’ he asked. When I told him, he was overjoyed and jokingly replied ‘Good, cause I don’t have a lot of time!’ Last time I saw him in the practice, he was a 100-year-old man needing four more immediate implants to replace some failing teeth!”

Dr. Lau believes that enhancing the ability of other general dentists to do implants makes for a better dentist.

Upper left lateral #10 fractured below gumline



Tooth extracted atraumatically and immediate implant and temporary placed to maintain hard- and soft-tissue contours



Final zirconium abutment and crown (note hard- and soft-tissue maintenance)

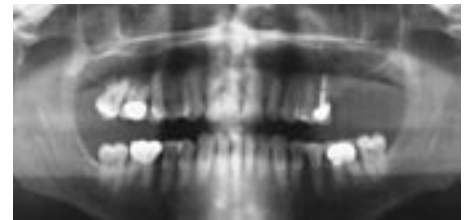


“I feel that dental implants are the ideal standard of care for the replacement of any missing or failing dentition. This has been the point of my lectures to my fellow general dentists for the last eight years and it is finally coming into conventional acceptance throughout the industry. Just look at all the journals and you’ll realize this fact. In teaching dental implantology I don’t feel that I’m creating more competition, just more acceptance, raising the level of the standard of care to where it should be. This will eventually result in higher case acceptance by the patients and more dentistry for all.”

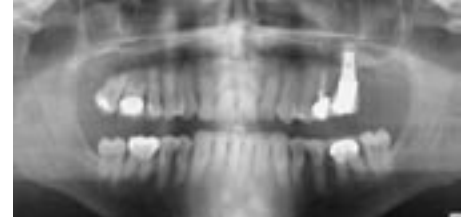
Many implant experts say that the easiest way to earn good results is to preserve what you have, not to try to get it back later, Dr. Lau said.

“It is more often smarter and many times easier to preserve the papillas with immediate implant placement or to preserve the existing bone with immediate socket grafting than to wait for the ravages of resorption and/or soft-tissue collapse in order to graft. I think the preservation of the remaining dentition — without the domino effect of ever increasing bridge lengths — bone preservation, increased comfort due to reduced tissue irritation and prosthetic stability, the added/regained occlusal function and support to an overloaded situation, the ability to restore a patient’s dentition without the need for removable appliances, the ability of the patient to practice normal brushing and flossing techniques, the cosmetic benefits of individual teeth and the psychological effects of regaining one’s dentition are all benefits.

“The only drawbacks to dental implants are the patient’s unsupported fears regarding surgery or the extended treatment duration. But with the use of educational tools like Chairside by Consult-Pro we are able to educate patients about the possibilities of achieving their needs with less surgery using shorter Endopore implants and the added comfort and reduced healing time with the use of the DEKA laser. As a result, patients eagerly climb into our chair due to informed consent, not blind trust. And another thing: Patients set off the metal detectors at the airport,” he laughed.



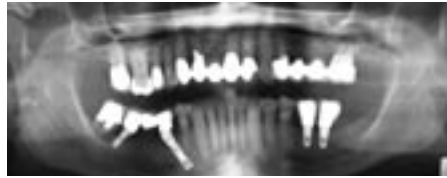
Tooth #14 missing with less than 4 mm of bone below maxillary sinus



Short Innova Endopore implant in lifted sinus restored



Failing lower left tooth #19



Short Innova Endopore implant, replacing teeth #18 and #19



Lower tooth #19 extracted, high mandibular nerve



Bio-integration without extensive grafting

In Dr. Lau's office, he does not perform primarily immediate load implants, but they can perform the procedure when requested, required and evaluate conditions to be ideal for long-term success for the individual. "Immediate load implants can be employed when single or multiple implants are simultaneously placed and restored in dense bone. This technique is made possible with long screw implants, dense bone and meticulous presurgical planning, possibly with the use of CT-guided flapless surgical techniques also available to our patients," he explained.

"Contrary to popular belief, most implant problems — i.e., ailing and failing — are primarily created after osseointegration during the restorative phase when an implant may put into a situation of occlusal overload. The symptoms, often misleading, mimics that of infection," he said.

He has had his fair share of difficult cases but he added that they have also been his most rewarding at times. "The most difficult cases and often the most rewarding involve the aesthetic hard- and soft-tissue recreation of an individual with severe resorption followed by implant placement in a high smile line situation. But cases most surgeons regard as difficult or grafting intensive are made simple and conventional with the Endopore dental implant."

MAN BEHIND THE MASK

Born in Chicago, and after attending the USC School of Dentistry, Dr. Lau was fortunate enough to be accepted to one of the most highly sought-after postdoctoral programs in dentistry at that time: the periodontal prosthodontic residency at the University of Washington in Seattle. It was headed up by an iconic dentist, Dr. Ralph Youdelis, but really taught by a couple of recent graduates from the program, Drs. Frank Spear and John Kois.

There, the residents learned how to surgically treat and prosthetically restore patients with advanced periodontal disease. This was accomplished by employing telescopic copings and removable supra-structures on the patients' few remaining teeth to support an entire arch of restorative crowns.

"At the same time, we were introduced to dental implantology which was still in its infancy. In fact, it was the first year Brånemark would approve the periodontal community to place implants. P.I. Brånemark was there to teach the hands-on program himself and the perio/pros residents slipped in as perio residents," Dr. Lau said. "This was my turning point, because I quickly recognized that dental implants would eradicate the necessity of heroic dentistry with questionable long-term success rates."

Dr. Lau excelled in school and received the OKU award at USC and he was on the dean's list for academic excellence. In his advanced

education, he has obtained multiple advanced training in all phases of surgical and restorative implant dentistry, occlusion, implant-assisted orthodontics, regenerative periodontics and laser dentistry. For the last 20 years, he has emphasized his clinical and educational focus on minimally invasive bio-aesthetic implant surgery, soft- and hard-tissue reconstruction and regeneration, orthodontic implantology and laser dentistry.

In addition to his affiliation with the Academy of General Dentistry, Dr. Lau is a member and Fellow of the International Congress of Oral Implantologists, active member of the Academy of Osseointegration, American

College of Oral Implantology, American Society of Osseointegration, Academy of Osseointegration, American Academy of Implant Dentistry, Dental Organization of Conscious Sedation and the American Academy of Craniofacial Pain.

Ever the student, Dr. Lau makes sure to be always abreast of the most recent advances in dentistry through countless hours of continuing education, seeking out his own mentors and a reviewing plethora of specialty journals. Due to his vast knowledge in implant dentistry he is on the advisory panel of various dental implant companies.

A variety of backgrounds are blended together to create the basis Dr. Lau's dental philosophies. He inherited his artistic talents from a long line of artists who owned and ran an international art school in Hong Kong. His father, once an instructor in the art school, became an internationally renowned structural engineer, giving Dr. Lau his in-depth understanding of the interplay between structure and foundation, stress and fatigue, and function and longevity from an engineering standpoint. His mother is an accomplished educator/administrator for the L.A. School District, which he feels is where he got his penchant for teaching.

Dr. Lau is married to a former hygienist and yoga instructor, Monica, whom he met in the office "She is truly amazing," he glows. "She is such an inspiration, but that's another story," he said, leaving us hanging. They have a daughter, Kayla, 12, and a stepson, Travis, 21. Dr. Lau enjoys spending time with his family when he isn't lecturing or performing procedures at the office.

"Dentistry can be an extremely artistic and creative process where, by manipulating, encouraging and guiding the growth and development of living tissues, one may be able to recreate that which was lost by trauma or disease," he said. "We are now truly able to regenerate, rejuvenate and restore the tissues of the oral cavity like never before! To me, creating a tooth can be a truly beautiful endeavor and with each and every patient it is different. And even though a tooth may be just a tooth to some, having the ability to create it from the bone up is truly amazing!" ■

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