Clinical Realities FALL 2005

IMPLANT NEWSLETTER FOR CLINICIANS

From the treatment records of **Paul P. Binon DDS, MSD**

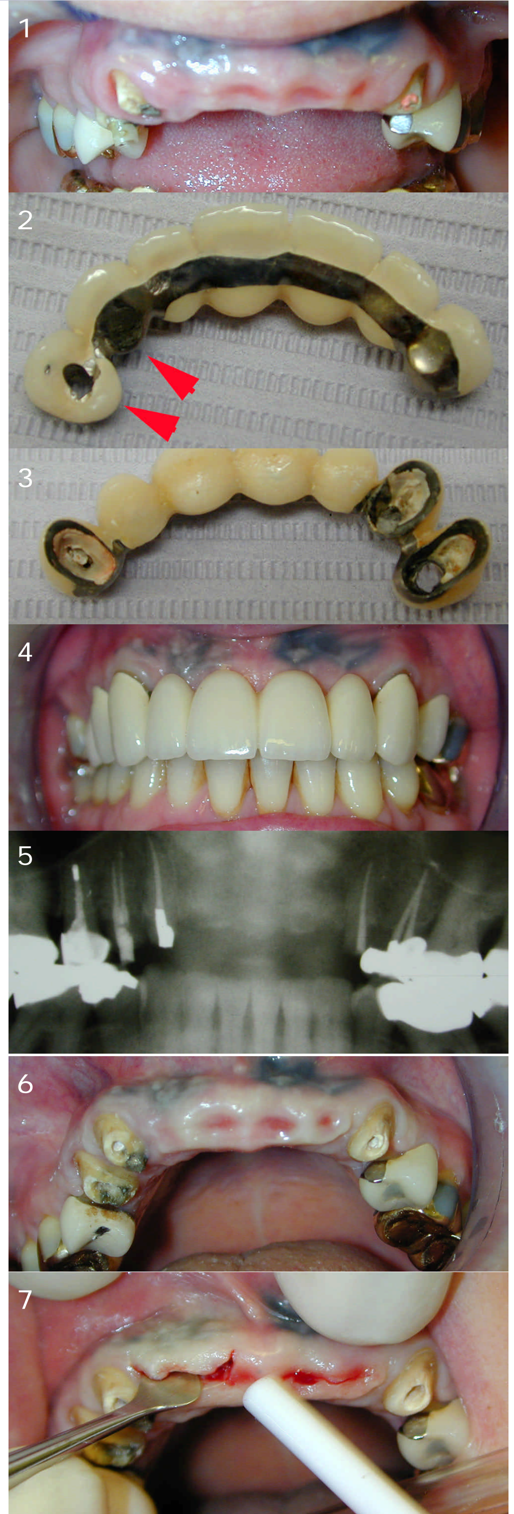
Even the best intentions, an adequate treatment plan and reasonable execution can still head south sometimes. There is a great deal to be said for experience, real experience not just talk. If you are going to talk the talk you had better be able to produce. That covers everything in life including dentistry. Recently had a patient that was "treated with comprehensive dentistry" by a very new graduate. It was a complicated case involving extensive fixed and removable prosthodontics and restorative dentistry. Somewhere along the line, the VD and occlusion were left behind and the patient hammered the anterior segment and fractured multiple teeth in a matter of months. Now what? So why not ask someone with more experience for advise and mentoring or refer them out to someone with experience before the problem?

I recently completed an advanced bone grafting course with Dr. Craig Misch. He is a prosthodontist and Oral Surgeon. I have know both of the Misch brother (Carl is the older) for 15 plus years. Craig is a real innovator in surgery and is responsible for the ramus and chin graft surgical techniques. I sat in awe as I learned the intricacies of these complex surgeries. Even though I have been doing implant site preparation and grafting for quite a few years, I was intimidated by the complexities of these surgeries and will venture into that arena very carefully. Baby steps, as there is so much at risk when it comes to predictable outcomes for the patient. The same is true for prosthetics, both fixed and removable. You can't do a full mouth rehab when you just graduated and have twenty crowns under you belt. Build on your experience. Surgical complications can be far more devastating but prosthodontic missteps are more obvious and don't heal in time. They fester and cause a great deal of grief. Its OK to ask for help sorting out treatment options. Get a mentor or better yet, get two. Different view points are better.

CASE OF THE MONTH

The benefits of endodontics are well know and accepted. However, special care should be exercised when abutment teeth receive RCTx when a large FPD is present. Case in point is the premature failure of a 7 unit FPD from 5 to 11. This patient had sustained trauma to the maxillary incisors and lost the teeth due to external root resorption. The FPD that I had placed some five / six years earlier became problematic when #6 presented with a periapical lesion. RCT was completed and the rather large entry was filled with silver amalgam. Subsequently, # 5 became symptomatic and RCT was initiated. Within a short time after completion of the RCTx, the clinical crowns of all three abutment teeth fractured at the cervical and the bridge failed. This patient lives some distance from Roseville and is maintained by a very good GP in the foothills so I had no indication that two RCT had been completed until she returned to my office with bridge in hand.

Hindsight is easy and although there is no certainty that making the suggested changes would have avoided the failure, the suggestions are worth looking at. I could have double abutted on the left side as I did on the right. I did not because 11 was an excellent strong abutment and adding 12, a spindally hourglass root, would have added little in support. Furthermore, the existing crown was intact. On the right, 5 had to be retreated due to a failing PFM so it was a given to included it in the FPD treatment plan. The endo access on both 5 and 6 was large and I suspect that most of the internal tooth substance of # 5 was removed. Both teeth could have had reinforcement cores placed that were resin bonded with fiber or metal reinforcement rods after the RCT was completed. The tight anterior occlusion and a heavy bite did not help the situation as well and given the weakened condition of the anchor teeth following RCT, it set up a scenario for failure. Prior to placement of the FPD



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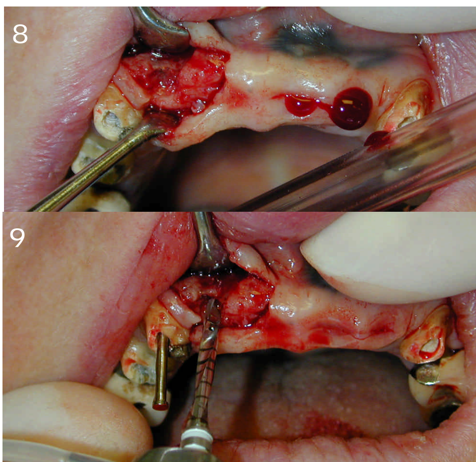
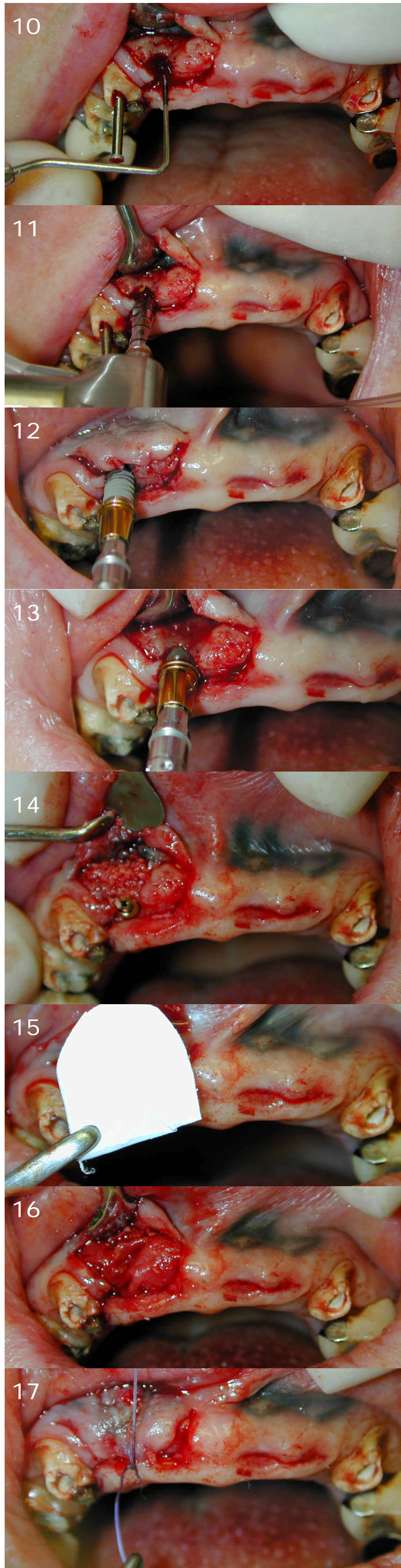
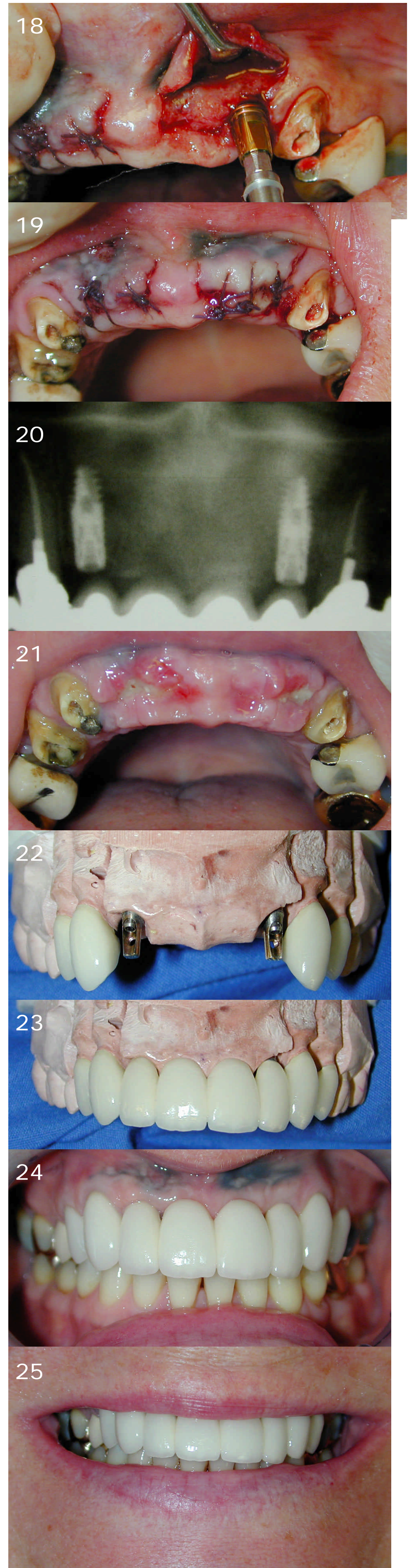
two other treatment plans were discussed with the patient. Since she had been exposed to an implant treatment plan previously, she was motivated to pursue that option rather than a RPD or a new more problematic larger FPD.

A CT scan was taken to verify bone architecture. The treatment plan was to place individual crowns on 5, 6 and 11 and a FPD from 7 to 10 supported by two implants. Two semilunar incisions were made and a full thickness flap was reflected. A large round bur scored the ridge and a pilot drill initiated the osteotomy to full depth. The walls were checked for integrity and the 3.5 mm drill was used to complete the osteotomy. Type 3 bone was present and a bone tap was not used. The implant was introduced into the osteotomy and secured in place with a hand ratchet to full depth. Since the labial plate was thin in one area, the surface was prepared for a BioOss particulate graft. A membrane was placed and the wound was closed. The same protocol was used in the #10 site. Following implant placement, sutures were placed and the old FPD was used as a temporary during the integration period. The tissue side of the FPD was relieved to avoid any pressure on the wound areas and the grafted sites. The post op x-ray indicated ideal placement. Essentially no post op pain or swelling was experienced. Sutures were removed the following week and healing was uneventful. Five months following placement, second stage was initiated and treatment on the definitive prosthesis began in earnest. Five weeks later the implants were loaded with the definitive FPD. The end result was most pleasing to the patient and the long term prognosis with this treatment is excellent. NobelBiocare Replace 3.5mm by 13mm implants were used to restore this patient. This is an excellent example of the use of implants in order to avoid a removable prosthesis and a much more complicated and problematic tooth supported FPD. Surgery was atraumatic and minimally invasive and completed under local anesthesia.

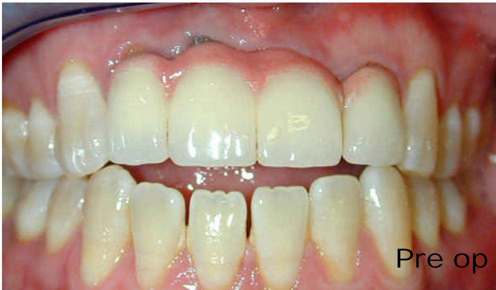


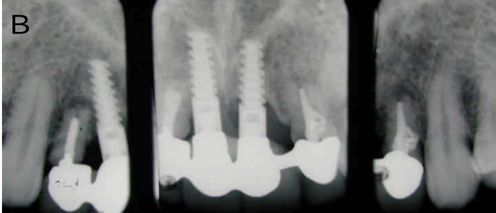




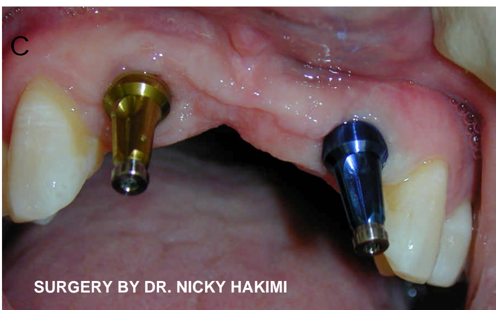
The Power of Pink

When anterior tissues are deficient and it is not surgically practical or possible to rebuild the hard and soft tissue, pink porcelain can be very effective in hiding defects. This interesting case involving two natural teeth and two very old Stryker implants.(B-F) The laterals had separated from the retainers and the

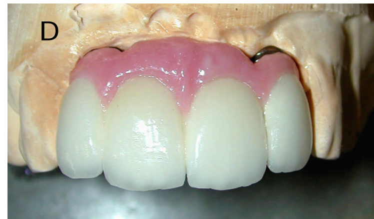




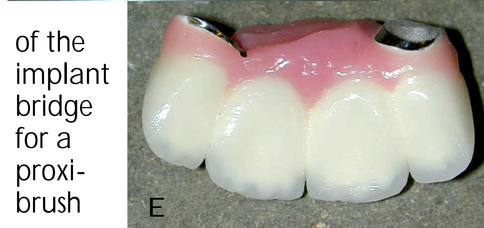
implants demonstrated extensive bone loss and mobility. Treatment consisted of removing the old implants and roots of 7 and 10 and grafting the ridge with autogenous and allograft material. Patient did not want to undergo more extensive bone harvest procedures, hence the ridge augmentation was limited.
After four months, two implants were placed in the 7 and 10 sites. Several trial wax ups were completed to determine the amount of soft tissue reconstruction

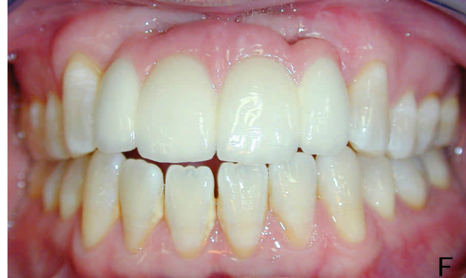


that would be most esthetic and supportive to the lip architecture and prevent air leakage for phonetics. A porcelain to metal FPD was constructed that replicated the trial wax up selected. Photographs and pink porcelain tabs were used to transfer the shade nuances to my technician. Embrasure access for hygiene was provided lingually



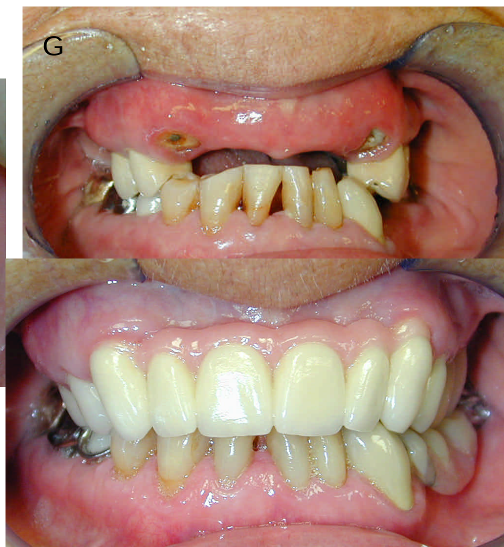
on the mesial aspect of the implant bridge for a proxi-brush



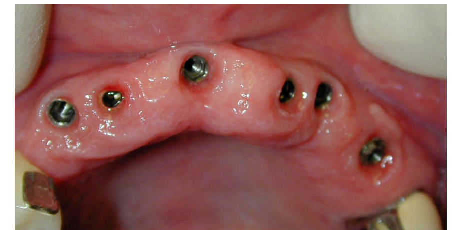


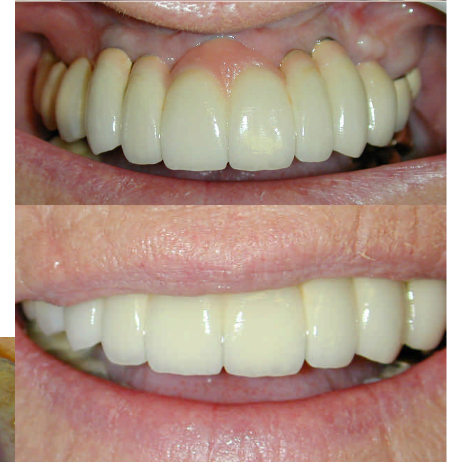
and superfloss. The net result is esthetic and functional. Without the use of pink porcelain, the final result would not have been natural in appearance.

In another case involving natural teeth, the patient had a six unit FPD placed over the last three years that failed. She presented (**G**) with 6 and 11 fractured, over-closed, with out posterior support bilaterally and over erupted incisors. Following crown elongation, and placement of cast posts, a 10 U FPD was constructed.



The remaining upper posteriors were restored with single crowns and a precision lower RPD was inserted. Lip support was insufficient. The cervical area of the pontics had to be built out labially. Pink porcelain was used to build out the deficient ridge. **A**nother example of the benefits of pink porcelain is demonstrated in this patient who originally was to be restored with an implant bar supported over-partial. At second stage she asked for a fixed prosthesis. It was a challenge since a midline implant was present that was high and labially placed. After multiple trial wax ups the design was confirmed and the bridge completed using pink porcelain to hide the interproximally placed implant. Details of the treatment were published in the Journal of Esthetic Dentistry (#4, 1995).





The critical factor in obtaining an excellent cosmetic result is to communicate with your ceramist via photographs and shade tabs. To obtain optimal results, the body of the porcelain has to be pink. Surface stains and pink glaze can mask some problems but the color integrity and vitality is usually very poor. (See the pre op of the first case)

CORE SKILL OF THE PROSTHODONTIST IS DIAGNOSIS

4 th Anniversary of 9-11

TOM BURNETT JR.

As we mark the 4th anniversary of this cowardly attack on our country, lets not forget those who perished as victims and as heroes. United flight 93 was to impact into the Capital. A handful of Americans fought back to prevent a greater tragedy and died. Tom Burnett (38) was one of those heroes. He left behind his wife Deena and three little girls. I knew Tom when he worked at Calcitek in R&D and I was evaluating the Spline implant. He was engaging, had a good sense of humor, straight to the point and very analytical. He had integrity and was a good man. Let us not forget the sacrifices these and countless other brave men and women have made to protect our freedom. Each one of them has made the ultimate sacrifice and deserves to be remembered. Jefferson wrote, "The tree of liberty must be refreshed from time to time with the blood of patriots and tyrants." Let us be grateful for the young patriots who defend our liberties throughout the world and too often, make the ultimate sacrifice.

LET US NEVER FORGET
Thomas E. Burnett Jr.
May '63—September '01

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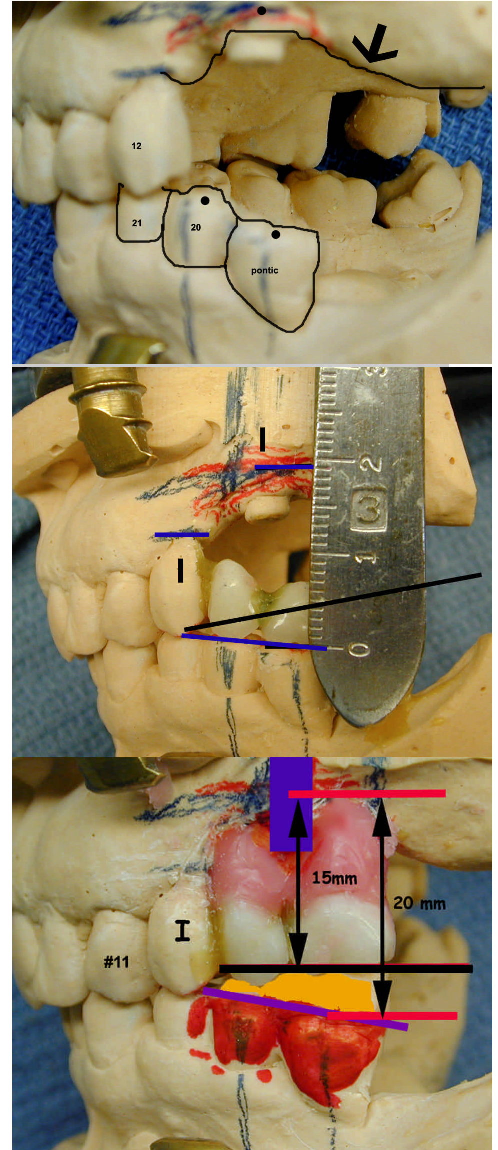
WHAT WERE YOU THINKING DEPARTMENT?

Patient presented with a fractured crown that had been repaired several times. Her previous dentist did not want to replace it even though it was recently placed. The last repair lasted a couple of weeks and she insisted on having a new crown placed. What was interesting is that she occluded on three posterior teeth (3,4,5, and 12). The open posterior bite had developed progressively due to multiple non replaced missing posterior teeth, periodontal involvement and lateral tongue thrust. Replacing the crown was simple. Treatment planning the left posterior segment was not. The occlusal plane on the mandibular arch dropped precipitously distal (**A** &**B**). The interarch space was 20 mm at the 1st molar area. Correcting the occlusal plane would require replacement of the lower 3 unit cantilever bridge (19,20 and 21) and raising the occlusal area at least 5mm (gold area) (**C**).The remaining 15 mm would have to be made up with a maxillary prosthesis. An implant crown was present in site 12 and another implant had been placed in site 13.5 (purple bar). Patient said that she had been treatment planned for a 3 unit FPD from 12 to 14 supported by the two implants. The biomechanics of this led to the **what were you thinking consideration**. Physically, doing that would be the kiss of death in short order for the implants. Sometimes implants are not the answer. Conventional treatment would have served this patient well. Treatment planned is to have a new lower FPD (19-21), a milled tissue bar between implants 12 and 13.5 and an overpartial supported by the implants and the hard palate extending to the right side to make the 2/3 area more functional is planned.



PAUL P. BINON DDS, MSD
PROSTHODONTICS / IMPLANTS
1158 CIRBY WAY ROSEVILLE, CA 95661
916-786-6676