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The challenge of this publication is to provide an overview of denturism, nationally and internationally, and a forum for thought and discussion. Any person who has opinions, stories, photographs, drawings, ideas, research or other information to support this goal is requested to contact the Editor to have the material considered for publication. Statements of opinion and supposed fact published herein do not necessarily express the views of the Publisher, its Officers, Directors or members of the Editorial Board and do not imply endorsement of any product or service. The Editorial Board reserves the right to edit all copy submitted for publication.

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This magazine is printed with vegetable oil-based inks and consists of recycled paper provided by a Forest Stewardship Council (FSC) certified supplier. Please do your part for the environment by reusing and recycling.
As Denturists we know the value of completing a case for a patient and stepping back and observing what we have accomplished. The basic principles that have followed us from the start of our profession to where we are today have been somewhat of a constant.

We have all followed the principles of esthetics, phonetics and function as the basis for how we complete the standard denture case to the most complex implant retained case.

Many have suggested that esthetics may be the major factor in the final prosthesis, but without phonetics and function our case will fail on esthetics alone.

In the attempt to restore natural tooth position, in the edentulous arch, esthetics does play a significant role. By having the correct mould, shade and position of teeth, we have started the reconstructive process.

These esthetic requirements now must interact with the phonetics, which allows the patient to enunciate clearly and able to function during mastication. The esthetics and phonetics will only be in harmony if the functional efficiency of the case is correct, meaning the occlusion must be correct and properly balanced. These factors in harmony contribute to a successful case not only for the patient but for the Denturist.

In May, we had the opportunity to meet in Whistler, for the DAC Annual Meeting. We were joined by the regulators, educators, presidents and delegates from all provinces to review and comment on our new accreditation document. As with completing a successful case, involving esthetics, phonetics, function and some personal attributes of the patient we too in this accreditation process had to do our due diligence. We were mindful that there was harmonization between the regulators, educators and the profession.

As with denture construction, accreditation requires relationships with each of the partners. Accreditation has a different meaning to each of the stakeholders. The educators are able to provide assurances to their students that their chosen profession meets a standard of competencies which are recognized by the profession and the regulators, within their province and across the country.

The regulators are concerned about critical knowledge, core competencies, occupational standards and skills and the overall health and safety of the public.

The profession looks to accreditation as a means to monitor and evaluate the education that is provided to the new members of each provincial association. The associations look to accreditation as a process where they can introduce and enhance the standards of practice for their members and the public.

We had the opportunity to review the accreditation documents with the regulators, educators, and associations present. As with any process, as in our denture case, we must have a symbiotic and harmonious relationship with all partners so that the end result meets and exceeds the needs of all stakeholders.

The accreditation process is a living document which will be ongoing. We must continue to indulge the expertise of all the regulators and educators to continue to enhance our standards of practice.

All of our specialities must come together and fit like a fine mosaic, whereby we will have a profession with an understandable guideline to the accreditation process that benefits all.

As we come to terms with our issues we will have developed all the requirements that all stakeholders will be comfortable with and that will in turn guide the profession to the future.

The International Federation of Denturists will be meeting in Helsinki, Finland September 15 to 18, 2010. This IFD meeting will be hosted by the Finland Denturist Association and will include tours of different European dental manufacturers and supply companies who provide support for Denturists. It is always a pleasure to meet with colleagues from around the world to share ideas. The scopes of practice in many countries differ immensely with what we have in Canada. We, as a leader in the Denturism movement throughout the world, should be proud of what has been accomplished in Canada and continue to do our part in the promotion of our profession.
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Nous, denturologistes, savons qu’il est intéressant, après avoir résolu le cas d’un client, de prendre du recul afin d’observer ce que nous avons accompli. Les principes de base qui nous ont suivis depuis les débuts de notre profession jusqu’à aujourd’hui ont été plutôt constants.

Les principes d’esthétique, de phonétique et de fonctionnalité nous ont tous servi de base pour traiter les cas standards comme les plus complexes comportant des implants.

Bon nombre de personnes ont avancé l’idée que l’esthétique constitue sans doute le facteur principal de toute prothèse, considérée comme produit final, mais sans la prise en compte de la phonétique ou de la fonctionnalité, c’est-à-dire si on ne s’appuyait que sur l’esthétique, ce serait un échec.

Afin de restaurer la position des dents naturelles dans une arcade édentée, l’esthétique joue effectivement un rôle important. En utilisant le bon moule, la bonne teinte et la bonne position des dents, on entreprend le processus de reconstruction sur la bonne voie.

Ces préoccupations esthétiques doivent maintenant interagir avec la phonétique, afin que le patient puisse parler clairement, et avec la fonctionnalité, pour qu’il puisse bien mastiquer. L’esthétique et la phonétique ne seront en harmonie que si l’efficacité fonctionnelle est adéquate, autrement dit que l’occlusion est correcte et que tout est bien équilibré. L’harmonie de ces facteurs contribue à la réussite, non seulement pour le patient, mais pour le denturologue.

En mai dernier, nous avons eu l’occasion de nous réunir à Whistler, pour l’assemblée générale annuelle de l’ADC. Des représentants d’organismes de réglementation, des formateurs, des présidents et des délégués de toutes les provinces se sont joints à nous afin de commenter notre nouveau document d’accréditation. Tout comme il faut faire intervenir l’esthétique, la phonétique, la fonctionnalité et certaines particularités du patient pour bien résoudre un cas, nous avons dû apporter à ce processus d’accréditation la diligence nécessaire. Nous étions conscients qu’il fallait harmoniser les points de vue des organismes de réglementation, des formateurs et des défenseurs de la profession.

Tout comme la fabrication d’une prothèse dentaire, l’accréditation exige des liens avec tous les partenaires. L’accréditation évoque différentes réalités pour chacune des parties prenantes. Elle permet aux formateurs de rassurer leurs étudiants, puisque la profession qu’ils ont choisie répond à des normes de compétence reconnues par la profession et par les organismes de réglementation, dans leur province et dans l’ensemble du pays.

Quant aux organismes de réglementation, ils se préoccupent des connaissances essentielles, des compétences fondamentales, des normes et qualités professionnelles ainsi que de la santé et de la sécurité du public de manière générale.

La profession voit en l’accréditation un moyen de surveiller et d’évaluer la formation fournie aux nouveaux membres de chaque association provinciale. Pour leur part, ces associations considèrent l’accréditation comme un processus dans lequel ils peuvent présenter des normes.
d’exercice au bénéfice de
leurs membres et du public,
puis améliorer ces normes par la suite.

Nous avons eu l’occasion d’étudier
les documents d’accréditation avec les
organismes de réglementation, formateurs
et associations présents. Comme c’est
le cas pour tout processus, à l’instar du
cas d’un patient, nous devons établir une
relation harmonieuse, en symbiose avec
tous les partenaires afin que le résultat
final réponde aux besoins de tous, voire
les dépasse.

Le processus d’accréditation est un
document vivant, qui continuera d’évoluer.
Nous devons continuer de puiser à
même l’expertise de tous les organismes
de réglementation et formateurs
pour continuer d’enrichir nos normes
d’exercice.

Toutes
nos spécialités
doivent s’arrimer
et ainsi constituer une
mosaïque délicate et précise.
Notre profession disposera alors
d’une orientation compréhensible pour
le processus d’accréditation qui sera
bénéfique pour tous.

À mesure que nous aplanissons
les difficultés, nous tendons vers un
résultat qui tiendra compte de toutes les
exigences, à la satisfaction de toutes les
parties prenantes, et qui, par la suite,
guidera la profession.

L’International Federation of Denturists
se réunira à Helsinki, en Finlande, du 15 au
18 septembre 2010. C’est l’Association
des denturologistes de Finlande qui
en est l’hôte; au programme, visite de
divers fabricants européens de produits
et fournitures dentaires qui intéressent
les denturologistes. C’est toujours un
plaisir de rencontrer des collègues
du monde entier afin d’échanger des
idées. Les champs de pratique diffèrent
considérablement dans d’autres pays
par rapport à ce que nous vivons ici
au Canada. À titre de leaders dans le
domaine de la denturologie dans le
monde, nous devrions être fiers de ce
que nous avons accompli au Canada
et continuer de faire notre part pour
promouvoir notre profession.

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Removable prosthetics number one despite stem cell research

Many of you will recall the groundbreaking news in 2002 about scientists having successfully used tissue engineering techniques to grow almost fully formed teeth that would eventually lead to a biological tooth substitute to replace human teeth. Back then, researchers in the US and England made a suspension of individual cells from a young tooth reorganize into a tooth crown containing both enamel and dentin.

They predicted that within five years, we would know whether dental stem cells could be manipulated to bioengineer teeth and then went on to predict that it would take an additional five to 10 years to generate a human tooth. The Journal of Dental Research described how they used enzymes to isolate immature tooth cells from six-month-old pigs and then seeded cells obtained from the immature teeth of the animals on to sponge-like biodegradable polymer scaffolds and placed them inside the animals to develop.

Within 30 weeks, small, recognizable tooth crowns had formed, containing dentin; odontoblasts; a well-defined pulp chamber; cementoblasts; and enamel.

Really what this study demonstrated was that the outcome for biologic repair in dental disease, using the new tools of tissue engineering, is a real possibility.

The ability to identify, isolate and propagate dental stem cells to use in biological replacement tooth therapy is still very real but a long way off for humans.

Well, eight years later, the latest research from both Australian and European scientists continues to successfully use stem cells to grow new tissue around teeth in animals.

The next step still remains to be proven using stem cells taken from a patient’s baby or wisdom teeth. These live teeth would be implanted into empty gum sockets, replacing the current method of inserting artificial teeth on implants.

The harvesting of stem cells is from the layer of dental pulp between the tooth’s dentin and the cementum from a person’s wisdom and baby teeth (which contain stem cells), similar to the way umbilical cord blood is stored, so they could use these stem cells should they be required later in life.

Even though scientists and researchers are really close to treating (human) periodontal disease with (stem cell) regeneration, growing human teeth may still be yet another five to 10 years away. Many obstacles still remain in using stem cells to treat human periodontitis, let alone growing new teeth, mainly because not all the findings from animal research can be extrapolated to humans.

Also, adult stem cells from dental pulp cannot re-create enamel, so embryonic stem cells, which have the potential to regrow any organ in the body, would need to be involved and the process is still extremely expensive at this stage.

So, even though current implants do not move naturally in the jaw as a person’s occlusion changes with age, and that the restorations do not wear as well as biological teeth, implants and removable dentures will most likely remain the number one form of tooth replacement for quite some time.
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Which mistakes are often made in an estate plan?

It is no one’s favourite pastime considering their mortality, while pre-planning the most efficient manner of leaving their hard earned assets to heirs. There are many reasons to plan ahead. Avoid the following mistakes:

The testamentary trust (the will) is not updated. There are many phases in life, and each brings change that can definitely necessitate a change in a will. For example, many people get divorced, some separated for years without divorce, yet still their ex-spouse is named as the principal beneficiary in their will. Without an updated will, deceased heirs may be named, or monies in trust may conflict with your current situation. Make sure your will is updated. If there is no will, the government will decide who gets what and the estate will be subject to probate fees. Your estate will be deemed intestate, and your provincial government will appoint trustees who will then divide the estate according to legislation, not your wishes.

If there are young children, and no will, who will take care of the children if the parents die? It is very important that a directive in the will establish who will be the children’s pre-arranged guardian.

Specific assets for the heirs are not articulated. Even in a simple estate, it may be unwise to generalize, such as “I leave all my household items to my children” – not selecting specific heirs for certain assets. In this case a dominant child-executor may rummage alone through the house pre-selecting, removing and even selling heirlooms other siblings may be attached to.

Proper beneficiaries have not been named. You will also need to assure that your beneficiaries are updated on your various investment accounts (such as segregated funds) to allow passing these assets directly to named beneficiaries. Life insurance can also state specific beneficiaries and in turn help to achieve estate equalization. The tax-free proceeds can be divided proportionately as you chose. Beneficiaries may need to be changed over time, especially as life events such as divorce occur. Make sure that the beneficiaries of your assets coincide with your wishes.

The estate is not equalized. In situations where one child inherits the family cottage or business, consider leaving equivalent cash assets to other siblings. If there will not be enough cash to accomplish this (from bank accounts or investments) life insurance can be purchased to create new tax-free money to divvy up among these siblings (those not inheriting a significant family asset).
Allowing the estate to be eroded by taxation and debt. Where there is a surviving spouse, RRSPs/RRIFs can roll over tax-free. If not, registered money will be taxed as income in the final tax return of your estate. If one is relying on the registered monies (RRSPs/RRIFs) to flow out free of taxation, as a bequest, the near-50 per cent taxation may skew the equalization of assets being passed to heirs. Here is where life insurance can once again, replace the amount diminished by taxation.

This is also true where taxation on capital gains will erode other large bequeathed assets such as a cottage, home, or business shares left to children. Such assets are deemed to be disposed of at death, in most cases creating taxable capital gains on the difference of the current asset value minus the purchase price.

Many people miss covering off personal and business debts with life insurance. Thus they can saddle their heirs with the debt if there is a lien on business or personal assets, if the heirs consent to inherit such assets collateralizing debt.

The immediate family’s provision was unaccounted for. Some people never chose to provide a nest egg (upon their decease) from which the family can invest to create an income for: a spouse, children, and/or aging parents who may need long-term care. In these cases there may be no savings set aside for a rainy day – for emergency or retirement. This may force a mother who prefers to raise her children at home, to need to take on a job even when the children are young. She may need to hire a babysitter, to be paid from her income. The home may need to be sold. Consider the financial strain, if the breadwinner dies and there are outstanding balances on credit cards and loans, and there is no life insurance money. Again, life insurance may be the easiest solution to this problem.
Are you giving away your profit?

This has been a hot topic since time immemorial. While fee guides exist, there is often pressure to discount based on other low-ballers in the neighbourhood and also pressure from the patients themselves.

**Dartboard approach to fee setting**
While provincial fee guides may not be perfect, they are far better than using a dartboard to determine fees and/or discounts. Provincial fee guides are based on economic studies done by outside accounting firms who consider cost of materials, time involved and responsibility of the denturist. These factors are then used to determine what the appropriate fees should be for dentures in your province. Once the study is completed, most associations increase the prices according to cost of living index.

In other words, the fees are not completely arbitrary. They are fair prices for value for the services provided. This approach is used for all the healthcare professions. So stick to the fee guide or you are automatically giving a discount.

**Confidence and competence**
Discounts arise when the practitioner is not totally confident in his work. The practices charging top fees are often led by a confident and technically competent individual. So if you are not the best that you can be, take some continuing education courses to improve your skills and confidence. We have run into denturists unable to make a fully equilibrated denture. They either never learned how or have forgotten what they learned years ago. The first thing is to become confident and competent.

**Quality care = quality fees**
You are probably providing good quality care and service and using materials appropriate for the quality of denture that the patient is purchasing. If this is not true, then this is the first area that needs to be improved.

While there are some patients who want the cheapest, they are typically also the most difficult to please. You want to attract patients who want the best and are willing to pay for it. Some of the most productive offices have discounters next door working their fingers to the bone making dentures for peanuts, while our clients are producing a top-of-the-line product and charging fair fees, thus reaping the true rewards of being a good denturist – pride in work well done and appropriate remuneration.

**Undercutting yourself**
Often, denturists offer discounts without even being asked and then fail to tell the patient that they are giving a discount. This eliminates any possible public relations value as the patient doesn’t even know that they are getting a discount and creates an impression that your practice is cheap or the cheapest in town. Neither of these images are what you want.

**Create a discount-free practice**
The following is an outline of what needs to be done to eliminate or significantly reduce discounts in your practice.

1. Eliminate all references to discounts in office policy, patient handouts, advertising, signs, etc.
2. Clearly state that you follow the fee guide issued by your association. This includes conversations with patients as well as any written material.
3. Never offer a discount. The most common is a discount for seniors. The bulk of the wealth in Canada resides in the hands of seniors, so this offers a discount to those who need it least. This is not to say that you shouldn’t do some charity work for those who truly cannot afford it. Charity work can be done, but be sure that the candidate really does qualify and keep the amount of charity work within reason as you need to earn a living too.
4. When asked for a discount, tell the patient that you only use the highest quality materials and that you do not use any shortcuts in making dentures. Politely ask the patient if they want you to reduce the quality of material or if they want you to use shortcuts. Explain the fee for a high quality denture.
5. Should the patient persist, it’s best to tell them that they may have to seek out someone else. Don’t be afraid to turn a patient away, especially if they want a discount or want it done their way. These are usually early signs of problems to come.
6. Train your staff to be able to deal with patients concerning this matter. Answer any questions from your staff that they run into and then role-play them through handling the various situations. Do this until they are completely at ease. The role-playing
will most likely need to be done more than once.

7. When transitioning away from discounts, existing patients of the practice will often remember that they got a discount the last time they were in for service. Let them know that in order to keep your fees reasonable despite rising costs of quality materials, you have had to eliminate discounts. Tell them that you are sure that they want the best and that you are doing everything possible to provide it to them.

In some instances, you may wish to continue the discount policy with a FEW long-term patients who are very good. This should only be a few and you should let them know that this is a very special arrangement for them. Make sure that they know that this will not be offered to anyone that they refer although you will definitely provide their friends with the best possible care and service. You can also obligate them to send in some of their friends by saying that since you are continuing to offer them the special discount, you would really appreciate it if they send some of their friends to you.

**The choice is yours**
You can make a good living by doing everything right or you can subsist and spend your life in your lab making lower end dentures for discounted prices. Don’t make your financial life harder by giving away your profit.

---

Janice Wheeler is the President and co-owner of The Art of Management Inc., a practice management company dedicated to helping denturists and other healthcare practitioners reach their full potential. For more information call 416-466-6217 or 800-563-3994, e-mail info@amican.com, www.amican.com

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Are you discouraged by a lack of success with lower dentures? Are your patients suffering and having to use toxic dental adhesive? You would like them to get standard implants but their high cost is a major problem.

Have you heard of dental mini-implants? This quick and affordable alternative is usually done in about one hour, without surgery, and can be a miraculous solution that increases your business.

The many clinical applications, impressive long-term results, and affordability make this technique your best choice needing for stabilizing a denture and returning chewing ability and comfort for your patients.

Most dentists are interested in placing the mini-implants but do not want to do the prosthesis. This is where you can bring your expertise. CMI institute can help you find a dentist or surgeon interested to work with you. By working with a general dentist or a surgeon who will place the mini-implants for you, you could make a winning team for the benefit of all.

If you want to give your patients an affordable life-saving alternative, you cannot miss the chance to learn more about mini-implants. With the best 16 hours of hands-on basic training, you will learn everything you need to know about this revolutionary technique. You will learn how it can help from full to partial stabilization and how it can improve cosmetics with clasp-retained partials.

Do not miss your chance to be one of the first denturists to offer this technique and serve more patients.

For list of course descriptions, locations, and registration, please visit [www.getmini.ca](http://www.getmini.ca)

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Abstract
Since the turn of the century, mini-implants appeared on the market as an alternative for standard implants. First to stabilize dental prosthesis while the standard implants were healing, and afterwards to stabilize full prosthesis for those who could not afford standard implants. However, their use quickly spread to stabilization of upper prosthesis, upper and lower partials and fixed replacement of single and multiple teeth. Even orthodontists are interested in mini-implants for their anchoring possibilities.

Do the long-term results meet our expectations? This article reviews seven years of clinical use of mini-implants in different situations with over 300 cases, and will make a conclusion about the long-term prognosis and the best use for mini implants.

History
Implantology did not start yesterday. We either talk about standard implants of 3.75 mm to 5 mm in average or mini-implants varying from 1.8 mm to 3.0 mm. We can trace the appearance of mini-implants in Europe with the work of Dr. Cherchève in 1963 (picture 1). After that, it seems that their use was limited to temporary situations as a stabilizer and support for prosthesis while standard implants were healing. Due to their short-term success, some dentists decided to test their limits by manufacturing them with the same material as the standard implants and start using them for longer-term anchorage. This is how they have been used since the end of the ‘90s for long-term use; mainly to stabilize dentures, becoming a less expensive alternative to standard implants. However, their use spread slowly to stabilization of partials and in some cases, fixed teeth.
This new implant has only one part (radicular and coronal), contrary to the standard implants, which increase the resistance to fatigue and strength.

Concept

The idea of using a smaller implant (1.8 mm to 3.0 mm) is very interesting for some clinical cases where the buccolingual and mesio-distal space is limited as for an anterior-inferior tooth. The most interesting aspect is that, because of its smaller diameter, the insertion protocol is much easier and simpler compared to the standard implants. Due to the elastic property of the jaw bone and their smaller diameter, it is not necessary for mini-implants to go through a surgical phase of bone trepanation and having to wait months for the bone to heal.

After a simple perforation of the cortical through the gum, the implant is screwed into the bone very slowly. This new implant has only one part (radicular and coronal), contrary to the standard implants, which increase the resistance to fatigue and strength. They show many advantages:
- Reduction of chair time
- No healing time
- Less risk of infection
- Less pain post-op
- More affordable for the patient and less costly for the dentist

The principle of mini-implants is based on three basic criteria essential to reach long-term success. First, we need primary stability. This is assured by:
- Good bone quality (D1 or D2 preferably)
- Good choice of implant (smaller diameter in harder bone and larger diameter in softer bone)
- A maximum length of the implant (10 mm, 11.5 mm, 13 mm, 15 mm and 18 mm) to anchor in cortical bone as much as possible
- An implant surface treated for best osteointegration (Ossean surface of Calcium Phosphate with Intra-Lock implants)
- The anchorage in cortical bone as much as possible

Second, we need to make sure that the implant is immobile (max 28 microns). This is assured by:
- Primary stability
- A good insertion technique (10 RPM-35 Newton/cm)
- A good restoration technique
- A perfect ideal group function occlusion
- A maximum quantity of implants to reduce the load on each (minimum six on the lower jaw and eight on the upper jaw for full prosthesis stabilization)

Third, we need to make sure that the prosthesis is also supported by the soft tissue to reduce the stress on the mini-implants.

These are the three essential basic criteria that will determine if mini-implants will be an alternative for a long-term or just temporary use. Every time there is a failure of a mini-implant, it is because one of these criteria has not been respected.

Applications

One of the principal and most encouraging applications of the mini-implants is for the stabilization of lower complete prosthesis no matter the amount of bone resorption (see pictures 2 and 3). Due to the quality of the bone of the lower jaw between the two mental nerves, the success rate, when performed in accordance to the basic principles, is exceptional. However, with time their use spread to other purposes, such as:
- Upper complete prosthesis stabilization (picture 4)
- Upper and lower partial stabilization (picture 5)
- Single and multiple fixed tooth replacement (pictures 6a, 6b)
- Orthodontic anchorage
- Temporary stabilization during the standard implant phase (picture 7)
- Maxillofacial prosthesis stabilization

Also, some clinical situations are particularly favourable for the use of mini-implants:
- Cases where the bone thickness is insufficient for the use of a standard implant without bone grafting
- Limited space between two teeth as on the lower anterior jaw
- Medically compromised patients
- Patients who cannot afford standard implants
• Patients who cannot or do not want to wait several months for healing
• Patients who do not want to use dental adhesive anymore
• Patients who cannot wear their upper denture due to gag reflex

Longevity
What does long-term success really mean: one year, five years, or a lifetime? There is unfortunately no exact answer, and it depends on each dentist to decide what they consider as long-term and discuss it with their patients.

The standard implants are for sure considered as a long-term application, but does that mean that they will last for the life of the patient? Absolutely not, and there is no guarantee whatsoever and the results may vary from one patient to another, and in different areas on the same patient. It also depends on a lot of uncontrolled factors for the dentist, such as the hygiene of the patients, their parafunctional habits, systemic disease (i.e. diabetes), osteoporosis and other factors.

It is the same for mini-implants. Mini-implant use does not date from the ’70s like standard implants, but mostly from the beginning of the 2000s, so we have barely 10 years of background on them. Another factor, which makes it difficult to evaluate mini-implants, is that the success is so closely related with the dentist. For example, it is not rare to see a dentist starting the practice of mini-implants and stopping after only couple of months because of too many failures. Conversely, other dentists have been practicing the technique for years with unbelievable success.

The problem is that there is not enough training available for mini-implants and that some dentists start practicing the technique with only a few hours of basic training. The results can be disastrous (picture 8).

Unfortunately, the result was the message that mini-implants do not work.
on a long-term basis, and this is not necessarily the truth. Mini-implants are not as lucrative as standard implants, and this may be a factor in their low popularity with certain dentists. Once again, this does not reflect reality if you consider the chair time and the lower cost of the material itself, which leaves the dentist with much more benefit at the end per hour of work (average $2500 to $3000/hour).

Clinical results
After practicing the mini-implant technique since 2001 as an alternative for my patients who cannot afford standard implants, I can say that I have seen almost every situation possible. At first I was not sure about the technique and if it would be a long-term alternative for stabilization of complete prosthesis. I needed concrete proof. My first case was my own mother, when I stabilized her upper and lower prosthesis.

When I saw her one year later (picture 9) I was very surprised at the stability of the prosthesis. I started offering mini-implants to more patients as an alternative for stabilization of full prosthesis. However, as the results and demand were so high, I started diversifying my use of mini-implants to partial stabilization and for some cases of single tooth replacement. Just going through the bank of patients who couldn’t afford my first treatment plan with standard implants and offering them another alternative booked my schedule for weeks.

As for my first case with my mother, I did a bi-annual follow-up. As of November 2009 (eight years later) the results are unchanged (pictures 10-13).

Following is a summary of the results of my first seven years of practicing mini-implants (See table on page 23).

From the results board, we can conclude that the results differ between the lower and the upper jaw but not too much if we compare their use for full stabilization or partial stabilization. The difference between the quality of the bone of the lower and the upper jaw plays a very important role in the success or failure of mini-implants.

Also impressive is the success I achieved using mini-implants for single or multiple fixed teeth with fixed restorations. We can also conclude that doing a surgery (alveoloplasty) does not affect the long-term success (contrary) and that for the upper jaw, pulling the teeth and preparing the sockets with bone grafts just help the final long-term results probably by improving the quality of the bone (79.1% versus 70.3%). This confirms the conclusion that the upper jaw is not as dense as the lower jaw and that it plays a role in the long-term success. This is also the same with the standard implants.

Finally, we can conclude that for the lower jaw, no matter the technique, we reach an average success rate of 97.6%; for the upper jaw the average is 74.7%, lower partials 95.1%, upper partials 86%, fixed single units 93.3%, and multiple fixed units 93.2%.

We also need to address the fracture of implants. There have been 24 cases of fractures on 1,735 implants placed which is 1.38%. The only fracture during the insertion happened on the lower jaw and the only fractures after the insertion happened on the upper jaw mainly. Since 2007, a new generation of implants has
surfaced by Intra-lock and the technique for insertion for the upper prosthesis has changed, which should reduce the risk of fracture during and after the insertion. This is where it becomes important to get a full complete training that will focus on these aspects before starting to practice the technique of mini-implants.

Failure

It is important when addressing failures to remember the three basic principles for success: primary stability, minimum mobility, and the support by soft tissue of the prosthesis. This will allow a full long-term osteointegration of the mini-implant. The initial placement technique (manual versus the slow motor at 10 rpm) may also affect the stability and mobility of the implant. The electric motor assures a more true vertical movement with less lateral movements and a better control on the angulation of the implants. This pure vertical movement will preserve the tightness of the cortical around the collar of the mini-implant assuring a better primary stability and less micro movement. For this purpose Intra-lock has created a special unique contra-angle to place the implants, which they call a “drive lock system” (picture 14). This tool reduces the amount of manipulation of the implants reducing the risk of contamination during the placement and resulting in much tighter and straighter implants.

It is important to understand that when using a system other than the drive lock system, and using only our fingers, it is critical to avoid any lateral movements and keep as much force possible on the long axis of the implants to avoid stretching the cortical bone.

The failure is not always caused by the initial placement technique, but can also be caused by the final prosthesis seated over the implants. For example, a wrong occlusion or a lack of soft tissue support can easily cause the loss of some implants. Wrong angulation, positioning, or choice of force can create bad pressure on the mini-implants and cause their failure. This is why the occlusion has to be properly adjusted as well as having a good impression technique and a well-made denture.

Failure on the upper jaw

As we saw on the results board, the failures are more important at the upper jaw, and this is true even if we used a larger mini-implant (2.4mm and 2.5mm) with larger threads and as long as possible, and even grafting the socket after the extractions with allograft and waiting 12 months. The reasons are:

- Quality of bone (only D3 or D4)
- Proximity of sinus limiting the amount of implants we can use as well as the length which increase the charge applied to each implant
- Angle occlusal force on the upper anterior implants
- Too much reduction of the acrylic covering the palate creating too much load on the implants

To help reduce the failure on the upper jaw, a new implant was created, a 3.0 mm (MILO) to help with D3 or D4 density bone, and to help reduce fracturing of the upper implants. They were not available when the first 300 cases were performed. The use of this new implant should increase the success rate for future cases.

It may also be safe to plan a sinus lift to be able to get posterior support and to be able to use more implants on the upper jaw (picture 15). It is preferable not to reduce too much of the acrylic on the palate to keep as much soft tissue support as possible and reduce the charge on each mini-implant.

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<th>Number of implants placed</th>
<th>Number of implants lost</th>
<th>Number of implants broken at insertion</th>
<th>Number of implants broken after insertion</th>
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<td>Full lower – no surgery</td>
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<td>8</td>
<td>3</td>
<td>0</td>
<td>97.5%</td>
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<td>Full lower – with surgery</td>
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<td>7</td>
<td>2</td>
<td>1</td>
<td>97.8%</td>
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<tr>
<td>Full upper – no surgery</td>
<td>43</td>
<td>343</td>
<td>87</td>
<td>0</td>
<td>15</td>
<td>70.3%</td>
</tr>
<tr>
<td>Full upper – extractions and bone grafts</td>
<td>18</td>
<td>129</td>
<td>27</td>
<td>0</td>
<td>0</td>
<td>79.1%</td>
</tr>
<tr>
<td>Upper partial</td>
<td>26</td>
<td>129</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>86%</td>
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<td>Lower partial</td>
<td>36</td>
<td>162</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>95.1%</td>
</tr>
<tr>
<td>Fixed single</td>
<td>15</td>
<td>15</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>93.3%</td>
</tr>
<tr>
<td>Fixed multiple</td>
<td>19</td>
<td>59</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>93.2%</td>
</tr>
</tbody>
</table>
Failure on the lower jaw

Failures on the lower jaw are very low, especially when the implants were placed between the two mental nerves. The ones that failed were mainly placed posterior to the mental foramen. This is due to:

- Lack of anchorage in cortical apical bone
- Not as good quality of bone at that area (D3)
- More difficult to place implants in the posterior (especially with the finger technique)

The bone is a visco-elastic substance and will compact and adapt to the threads of the mini-implant. The elasticity will depend on the bone density. It is obvious that the bone density is important for the clinical success of the mini-implants. However, this can also play against us in certain cases of lower placement. Not only does the bone density vary from one patient to another, it can also vary from one site to another on the same jaw.

The more dense the bone, the more time we need to place the implants to take advantage of the visco-elasticity of the bone. We will also have to modify the first preparation of the pilot hole in a D1 bone because there will be much less elasticity in a D2 or D3 bone. Being too aggressive and quick during the placement of the implant can cause a thermal traumatism and strip the bone and cause failure or fracture.

For the lower jaw, avoid cases where there is no posterior ridge because it is difficult to get a stable prosthesis which can cause too much pressure on the lower implants and cause their failure.

My experience with extreme resorption cases with no posterior ridges of the lower ridge, I have achieved the same success (around 98%) compared with the cases with posterior ridges. Hence, my results proved the theory wrong. It is surely due to the fact that those cases show a D1 bone giving a good primary stability and low mobility of the mini-implants. As long as the denture is relined more often to make sure there is still a good support by the posterior soft tissue, I see no difference in long-term success. Another explanation of my high success rate in severe resorption cases is that I always use at least six mini-implants instead of four. This lowers the stress load on each implant and helps stability and reduces the mobility of the denture.

New generation of mini implants

Even though the results of the first seven years are impressive and encouraging when limiting the cases to D1 and D2 bone, there is always room for improvement. The most important improvement is the calcium phosphate impregnated surface of the mini-implants called “Ossean” surface (introduced by Intra-Lock) compared to the first generation of mini-implants that were only sandblasted. This innovation will probably help to improve the long-term success by reducing the catabolic phase after placement and improving the osteo integration with their highly hydrophilic surface (picture 15).

Also, the new MILO 3.0 mm mini-implants will open a new window of treatment for single tooth replacement and help increase the long-term success in D2
Dr Lemay got his doctorate in dentistry at the University Laval in Quebec city in 1990 and practiced in the north of Quebec for eight years before going back to UCLA in 1998. In 2000 he started practicing in Palm Springs California. Dr Lemay is also the owner of CMI Institute. The Canadian mini-implants institute started in 2008 and concentrates on teaching mini-implants to dentists and denturists all over Canada. For the last 10 years, Dr Lemay has practiced the technique which he considerably improved to reach exceptional results. He has been a guest speaker at the DAC Annual Meeting in Whistler last May, as well as a guest speaker at the CDA dental convention in Montreal last May.

**Conclusion**

It is clear that if we lived in a perfect world where time and money do not limit our dental treatment, we would rebuild every patient’s mouth with standard implants and fixed prosthesis. However, our patients have limited financial resources which limit what we can do to solve their dental problems.

Even with a removable prosthesis adapted to four standard implants with a bar, the price and time involved limit the amount of patients accepting that treatment plan.

This is where mini-implants become an important alternative. Many patients are in need of more affordable solutions.

In no instance should mini-implants be considered as a full replacement to standard implants, but they should be considered as another means to help edentulous patients regain masticatory function.

With the experience I have gained over the last 10 years with mini-implants, I am convinced that mini-implants are a viable long-term alternative for stabilization of prostheses when performed following strict rules and principles and when the cases are chosen carefully.

With the brand new generation of mini implants on the market and more comprehensive and serious training available, there should be a nice future for mini-implants. They will bring more excitement and a resurgence of energy in dental offices facing the recession, and help more edentulous patients who will be able to afford stabilizing their dentures and start enjoying eating again.

The secret to success is diagnosing and choosing the right cases, learning the principles, techniques and tricks with proper training, and using the best product available on the market.

For list of courses and dates, location and cost please refer to [WWW.GETMINI.CA](http://WWW.GETMINI.CA)
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Code: 0511new2
Education information and further details to be announced.
2011 Preliminary Schedule

Monday May 23
8:30 a.m. CFDR Canadian Federation Denturist Regulators Meeting

Tuesday May 24
8:30 a.m. CFDR Canadian Federation Denturist Regulators Meeting

Wednesday May 25
8:00 - 8:30 a.m. Breakfast
8:30 a.m. Curriculum Advisory Board Meeting
12 noon Lunch
1:00 - 4:30 p.m. DAC Executive Meeting
6:00 - 9:00 p.m. President’s Cocktail (by invitation)

Thursday May 26
8:00 - 8:30 a.m. Breakfast
8:30 a.m. DAC General Meeting
11:00 a.m. Golf Tournament (limited space) sponsored by Nobel Biocare
5:30 -10:30 p.m. Meet and Greet Bar-B-Que (golf prizes)

Friday May 27
8:00 - 8:30 a.m. Breakfast
8:30 a.m. DAC AGM Meeting (all day) 3 I and Pro-Tech Continuing Education
12 noon Lunch
1:00 - 4:30 p.m. Peter Ford Pharm. D. sponsored by Glaxo Smith Kline Roxanne O’Neil-Gionet RNBN-CDE Continuing Education
6 - 7 p.m. Cocktails
7 - close “Cailigh” Evening & Buffet (Entertainment TBA)

Saturday May 28
8:00 - 8:30 a.m. Breakfast
8:30 -12 noon Dr. Nash Daniel BSC, MSC, DMD, FRCD & Dr. Samer Abi Nadir Continuing Education
1:00 - 3:00 p.m. N.B.D.S. General Annual Meeting
5:00 - 7:00 p.m. Wrap-up Cocktails

*This schedule is subject to change
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The use of titanium and titanium alloys in medical and dental applications has increased dramatically over the past few decades. It all started in the 1960s when Per Branemark discovered the biocompatibility between titanium and bone and applied them to implant design and placement. Today, strides in titanium processing have made this metal a valuable addition to our armamentarium in dental prosthetics.

According to the fairly extensive overview on the ADA website, while abundant in the earth’s crust, titanium has really only been produced commercially for roughly 60 years. Titanium also can be alloyed with other metals, such as aluminum, vanadium or iron, to modify its mechanical properties. Its physical properties (high strength and rigidity; low density and light weight; and low thermal conductivity) have made it a favourite in the aerospace, aeronautical and other high-tech industries. Titanium is a highly reactive metal that readily forms a tenacious and stable protective oxide layer, which accounts for its high corrosion resistance. This oxide layer also provides a highly biocompatible surface and a corrosion resistance similar to that of noble metals. In addition, the oxide layer allows for bonding of fused porcelains, adhesive polymers or, in the case of endosseous implants, plasma-sprayed or surface-nucleated apatite coatings.

Over the past 40 years or so, the development of processing methods such as lost-wax casting and computer-aided machining have expanded titanium’s useful range of applications in biomedical devices. The first attempt at fabricating dental prostheses from titanium was made in the United States in the 1970s using industrial titanium-casting equipment. Subsequently, pioneering studies of titanium casting in Japan were carried out in a casting unit used for conventional dental alloys. Today, titanium and titanium...
Alloys are used for the fabrication of prosthetic joints, surgical splints, stents and fasteners. In dentistry, the additional properties of neutral taste and biocompatibility have made it of great interest in producing implants, crowns and cast partial frameworks.

The high strength and rigidity of titanium are comparable with other noble or high noble dental alloys yet its low density allows for feather-light substructures (over 35% lighter than chrome castings and more than four times lighter than gold alloys). A pure metal with excellent corrosion resistance, titanium has long been recognized because of its excellent biocompatibility (no allergic reactions). With its lack of metallic taste and low thermal conductivity, patients can eat hot and cold food and drink without the risk of temperature shock. The metal’s modulus of elasticity allows clasp designs that engage deeper undercuts resulting in a more esthetic restoration.

You will find that the same key considerations that apply to cast partials in general apply to titanium as well. Accurate impressions and models are every bit as important to an excellent end result. Let’s take a moment to review a few basic tips:

- Impressions
- Ensure that a full mouth impression is taken with all teeth and anatomical landmarks reproduced.
- Impression must be fully extended.
- If for an upper cast partial, make sure that the palate is included in the impression.
- If for a lower cast partial, ensure full extension of the impression including the retromolar pads.

Models
Die stone mixed with water (NO hardener) is recommended in a very thick, smooth mix. A thick mix will flow under vibration but does not run like a thin mix. Thickly mixed, the model is harder with less chance of air bubbles.

Indication of correct thickness of mixed stone: the mix does not drip or fall off when the spatula is inverted.

IMPORTANT: After the impression is poured, DO NOT invert the tray onto a stone paddy. Inverting can cause error. The unset stone will try to sag away from the impression. The degree of sag (if it occurs)
will not be visible to the eye, but is sufficient to cause poor fit of the framework.

Instead, mound the thick stone on top of the tray and allow it to set. Before pouring the model, place Play-Doh (or children's modelling clay) in the tongue area of the lower tray to keep the stone from locking over the lingual flange.

Generally, titanium is no more difficult to handle than other cast partial metal. However, adjustments need to be made with a properly dedicated carbide bur specifically made for titanium (most bur companies offer a titanium-specific bur). Remember to leave a minimum 1.5 mm thickness of metal. If necessary, adjust opposing tooth structure. The need for clasp adjustment is rare. However, when necessary, use the Aurum Clasp Adjuster between the clasp and the minor connector. DO NOT twist the instrument and DO NOT use pliers. Gradually adjust the clasp step-by-step until the retention is adequate.

Working as a team, clear communication between dental laboratory and denturist has always been one of the keys to designing and producing successful cast partial restorations. This is particularly true with titanium. As with any cast partial, our mutual goal is to create a prosthesis with maximum patient function, comfort and aesthetics. In our last article, we mentioned Aurum Ceramic's exclusive Computerized Cast Partial Design system. As with other cast partial systems, each titanium partial design is completely customized to meet the individual case situation and your own personal preferences. Full colour plots are either sent to you as hard copies or emailed for you to print out on your own colour printer. Clearly indicating agreed upon case design, etc., the plots also make an excellent patient education tool. In addition, every titanium framework is X-rayed for imperfections as part of our extensive quality control systems. In fact, the actual X-ray is sent back to you along with your case.

Certainly, titanium is often viewed as a “premium product” by the dental professional. Yet, for the patient suffering from allergic reactions to other metals or uncomfortable with the weight and/or thermal conductivity of standard options in cast partial fabrication, this is a choice that you may well find is a popular – and profitable – addition to your array of cast partial alternatives.

Gary Wakelam began his career as a dental technician in 1980, achieving R.D.T. status in 1988. He holds certificates from Swisssedent, Nobel Biocare – IMZ, Dentsply and a variety of other implant and dental companies. Gary is a Registered BPS Technician and is a graduate of the Las Vegas Institute for Advanced Dental Studies (LVI) courses on Denture Construction, Advanced Cosmetics and Occlusion. He also attended the University of Western Ontario’s Continuing Education program on removable Partial Dentures. A Past President of the Alberta Association of Dental Technicians, Gary has been the manager of Aurum Ceramic/Classic’s Calgary removable laboratory since 1988.
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Compensating curves are actually different to how we have interpreted them throughout dentistry. Compensating curves are dynamic. They change their relationship with each other at whatever vertical dimension the patient is operating at. For dental appliances, this has particular significance with respect to occlusal splints, and dentures; especially full/full dentures and full arch implant retained prostheses. To give you an understanding of these dynamic changes the compensating curves go through, I have tried to illustrate these in Fig 1. To interpret the diagram’s meaning, you must accept that each line represents a cross-sectional view of each compensating curve (one for the left side and the other for the right). Figures 2, 3, and 4 demonstrate how the lines relate to natural wear.

Using the middle one as the average person at their correct vertical dimension, you will notice, there are dramatic alterations in the over opening of the bite, to the reversing of the curves when the patient is over closed. The significance of this, when we put it into context, is quite staggering. Since the late 19th century we have accepted a set of basic rules, like the curves of Spee and Wilson, and the Bonwill triangle as being correct. We have manufactured all dental equipment around these ideals and even in more recently with the most up-to-date, state-of-the-art CADCAM systems, that also operate around the curves of Spee and Wilson. Articulators also can only operate around the curves of Spee and Wilson, regardless of the vertical dimension you are working with. Denture teeth also come into question as these are manufactured with cusps that are a mirror image of each other on each side of the mouth which also assist us in replicating the curves of Spee and Wilson during denture set-up.

Wear is Good
The wear that takes place with acrylic teeth prostheses eventually corrects the discrepancies we create when making appliances with the curves of Spee and Wilson. Eventually the patient will grind their teeth into an occlusal scheme that suits them. In natural dentition, and this is based on the anthropological model of prehistoric man (Fig 5), where they had a much harder diet than modern man, they wore their cusps flatter and into the compensating curves described in Fig 1. Their vertical dimension remained constant throughout.
the growth of bone in the jaws and over eruption of the teeth, so as to compensate for the loss of vertical dimension by occlusal tooth wear.

Previous studies trying to decide on which occlusal posterior forms were best suited for function and comfort of the patient, usually state that zero-degree posterior teeth were generally found to be less successful than anatomic and lingualised setups and teeth. However, if you put in the patient’s individual compensating curves to the required vertical dimension, then the efficiency of the prostheses and muscle function is greatly increased. More so than any other occlusal scheme and this is increasingly being supported by ongoing research by Loughborough University, United Kingdom.

**HOW CAN WE RECORD THESE NATURAL COMPENSATING CURVES?**

Certainly with full arch work it is relatively simple, as I have devised a system of making acrylic occlusal plates and they are adjusted until the patient’s individual compensating curves are recorded. In my opinion, in full/full arch patients, you have the purest form of occlusion, as there are no cuspal interferences, no proprioception and the jaw moves unhindered. In effect, what you have recorded is the patient’s posterior position of the condyles during occlusion and this is the occlusal movement created by the TMJ, something which present-day articulators cannot reproduce. They can reproduce fairly well anterior occlusion (the influence of the contacting surfaces of teeth on mandibular movement) but articulators cannot reproduce the movement of the jaws when they are in function. This begs the next question, what problems are we creating in our full reconstruction work, with crowns and bridges and implant retained full arch sub-structures? (The same question can also be asked of single crowns and partial dentures, but it is easier to explain on full arch appliances.) I have seen many pictures of beautifully created works of art, with wonderfully formed cuspal forms and a variety of estimated curves of Spee and Wilson and I ask myself constantly: are we building a problem with our work from the beginning? I think we are, especially on full arch implant retained prostheses where there is no proprioception taking place with the patient.

**SO WHAT EVIDENCE DO WE HAVE?**

The easiest piece of evidence to find is if you get the opportunity to observe the wear patterns of a full/full denture wearer, especially someone who has had softer posterior teeth put on. At once you can observe that the curves of Spee and Wilson are nowhere to be seen (Figures 2, 3, and 4) and with the aid of the compensating curves chart, you can see which curve relates to the level of wear the patient has attained. The more reversing of the curves indicates the extent of the degree of over closure that has occurred.
Be a copy cat

last issue I wrote about **self-efficacy** which is our belief in our ability to achieve what we set out to accomplish. I wrote about how it is the biggest part of achievement, and that we acquire a sense of self-efficacy in four ways: personal experience, observation of others, a positive mental attitude, and from the encouragement of others. This time I’d like to expand on how observing other people achieve motivates us to accomplish more.

Some of our goals require us to reach a mental threshold; some are more physical; while others are a combination of the two. One of my favorite forms of exercise and recreation is mountain biking. I get out once a week and hit the trails. Some of the trails have obstacle course-like obstructions called technical features; they are basically log and rock piles you ride over for an additional skill challenge. One trail has several advanced features including a seesaw. I rode past this particular challenge for weeks; wanting to do it, but frankly too scared to try.

Then one day I encountered another rider who rode across it. He went up to the center; it tipped and he rode down the other side. It looked easy enough, and so I asked him about it. He told me there was one trick to it. You needed to brake slightly when you hit the center, so that your
weight would cause the “up” end to tip down. If you didn’t, it would function like a big ramp and you would fly off the end five feet off the ground. Good advice, because that was definitely what I didn’t want to do.

Having seen someone do it; I was ready to tackle it. I rode across perfectly on the very first try. All I needed was to see it done.

We do this all the time – sometimes consciously and sometimes unconsciously.

Last summer I was shopping at Dick’s Sporting Goods in Atlanta where they have a three-story in-door climbing wall. My nine-year-old son was with me and asked to climb it. I bought him a ticket and the rock wall staff strapped him into the safety ropes. He went up about 12 feet and said he couldn’t go any further. I was surprised because he is very athletic and picks up most sports immediately and effortlessly. I tried all sorts of encouragement, but he had made up his mind. The staff lowered him to the ground.

Then he asked me to climb it. I looked up and grimaced; it was not what I wanted to do that day, but I had done it once before with my older son, so I paid my way and started to climb. I climbed to the top and rang the bell, then enjoyed the real fun of rappelling back down. Once I was down, my son wanted to try it again. I was skeptical and didn’t want to waste another two bucks. But, I gave in, and this time he scrambled like a lizard all the way to the top and rang the bell. Just like me and the bicycle seesaw, all he needed was to see that it could be done. Then he was on his way. Of course I’m totally refusing to acknowledge the unstated thought in his mind: “Hey, if my wimpy Daddy can do it – it’s gotta be easy!”

Think of the occasions where you found a role model to show you how it’s done.

I remember the night I decided to become a professional speaker. I was serving as a counselor to a group of teenagers attending a Hugh O’Brian Youth Foundation leadership seminar. Patty Kitching was the dinner keynote speaker. She was warm and funny and told wonderful stories to illustrate her points. Most of all, she looked like she was having the time of her life. I turned to my wife and said, “I could do that. I want to do that!” Three years later, I was.

Go out and find someone who is already doing what you want to do. Watch them, talk to them, then get started.

Robert Evans Wilson, Jr. is a motivational speaker and humorist. He works with companies that want to be more competitive and with people who want to think like innovators. For more information on Robert’s programs please visit www.jumpstartyourmeeting.com.
Soft tissue supported overdentures retained by implants are NOT supposed to “rock.” By its very definition, the support for a soft tissue supported overdenture is designed to come entirely from the soft tissue, not from the implants. The function of the implant is to prevent vertical dislocation of the denture and prevent the denture from moving laterally. An overdenture that “rocks” on an implant means that the implant is taking all the vertical loading. One, two, three, or four implants retaining an overdenture are not designed to take such load. If “rocking” is not corrected, cervical bone loss and eventual failure of the implant will result.

To date, every attachment designed to retain soft tissue supported overdentures, whether it is an ERA, Locator, Magnet, CVA ball or Zest ball, has the potential to rock. All these designs have an absolute clearance distance between the base of the attachment and the top of the abutment (Fig 1). Whether through poor positioning of the attachment in the denture, resorption of the alveolar ridge, thickening of the mucosa or excessive loading of the denture by the patient; once the denture settles beyond this predetermined distance, the base of the attachment will contact the top of the abutment (Fig 4). The denture now becomes implant supported as opposed to soft tissue supported.

Although rubber O rings are a better designed to absorb stresses in there is an inherent resiliency with the rubber ring, they still have an absolute predetermined distance (Fig 2) measured from the bottom of the rubber ring to the top of the hex portion of the abutment. When compressed the rubber ring compresses but eventually allows full loading on the implant (Fig 5). The rubber reduces the load but does not eliminate it if the denture settles significantly.

The new Toadstool ™ Mini Implants (Fig 10) and abutments (Fig 3) virtually eliminate all vertical loading. This design incorporates a rubber O ring into the denture base for resiliency as well as provides an elongated abutment neck to allow the rubber ring to move apically with the denture without loading the implant (Fig 6). Support is always maintained by the soft tissue and not the implant.

Many have been made recently about the vertical profile of an overdenture attachment. The Locator attachment and abutment measures 3.17 mm (0.124”) from the mucosa to the top of the Locator attachment (Fig 7). The O ring abutment averages about 3.5 mm (0.140”) from the mucosa to the top of the ball (Fig 8).

By redesigning the attachment portion, the Toadstool™ abutment (Fig 9) has the

---

**Fig 1:** Drawing of Locator attachment showing gap between attachment and top of the abutment;  
**Fig 2:** Drawing of O ring attachment showing O ring in ideal position below rounded ball;  
**Fig 3:** Drawing of Toadstool abutment showing O ring in ideal position below flattened Toadstool;  
**Fig 4:** Locator attachment showing attachment seated on the top of the abutment resulting in rock.

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lowest profile for soft tissue supported overdenture abutments on the market today measuring 2.5 mm (0.097”) from the mucosa to the top of the Locator attachment. This represents .5 mm greater clearance than the Locator attachment.

Platform switching
The literature is replete with articles praising the advantages of platform switching. Recent scientific articles are showing that platform switching refers to the fact that if:

The diameter of the emerging cover screw, abutment, etc. is smaller in diameter than the diameter of the implant.

The top of the implant is buried below the crest of the ridge at time of placement.

The bone will grow over the top of the implant and around the cover screw/abutment forming a bony biological seal to prevent epithelial migration down the neck of the implant/abutment. Platform switching needs to have both the above criteria to be successful. By extending the narrow neck down to the top of the bone engagement portion of the implant, the Toadstool ™ Mini Implants and abutments all have a platform switching feature (Fig 6). This feature encourages bone to grow over the top of the fixture portion of the implant.

Microgroove collars
Grooves or threads 100 microns in depth and width have been shown to prevent epithelial migration down the neck of an implant system. Simpler Implants introduced the patented Tissue Guidance Collar™ over 20 years ago and still incorporates the feature in many of its traditional sized implants. The feature originally was shown to prevent epithelial migration down the neck of the implant. Today, many implant companies recognize that this feature prevents bone loss around the implant and are incorporating the feature into their implant design.

Hydroxylapatite coating
It has been well documented over the past 20-plus years that HA coating on an implant induces a quicker and stronger bone bond (osseointegration) around an implant than a non-HA coating. It has also been well documented that the vertical bone loss around an HA coated implant is less than found with uncoated ones. This feature is especially important when immediately loading an implant which occurs after placing a narrow diameter implant. Immediate loading of any implant decreases the chances of short-term and long-term success. Any feature which increases the chance for success should be employed. Simpler is the only implant company that offers narrow diameter implants both HA coated and uncoated.

The features of lower profile, platform switching, tissue guidance and

Fig 7: Drawing of Locator attachment showing overall height of 0.107”; Fig 8: Drawing of O ring attachment showing overall height of 0.140”; Fig 9: Drawing of Toadstool abutment showing an overall height of 0.097”.

Fig 10: Drawing of Toadstool ND Implant.
HA coating cannot be found with any other narrow diameter implant. When combined together, the Toadstool™ Narrow Diameter Implant (Fig 10) offers the best chance of successful short- and long-term osseointegration with the least amount of potential crestal bone loss.

The feature of virtual elimination of vertical loading on the implant is unique amongst all implants. The Toadstool™ narrow diameter implant. When combined together, the Toadstool™ Narrow Diameter Implant and abutments are the culmination and combination of many proven, patented features, and are the next generation of attachment for soft tissue supported overdentures.

For more information, please contact Dr. Bergman at 404-1023 Wolfe Ave. Vancouver, BC, Canada, V6H 1V6, haroldbergman@yahoo.com.

References
19. FDA approved drawings for Simpler Toadstool Implants.
20. website for Locator wwwlocator.com/.../news_11_LOCATOR%20Attachments%20AD%20OCT%202003.pdf -
21. website for Preat www.preat.com/loccomp.htm
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Dental Ventures of America, Inc. has announced the introduction of Acryl-Marvel, the most unique and innovative polishing technique to the dental market. Acryl-Marvel has the ability to quickly complete many tasks that in the past were messy, time consuming, and expensive. This product will allow the polishing of flexible partials; such as Valplast® Flexite®, and TCS® to be high shined far beyond the industry standard; all in a fraction of the time previously expended. Acryl-Marvel also provides a huge benefit to the full-denture technicians, in that it removes finishing scratches and high shines acrylic in one simultaneous operation without the use of pumice or pumice substitute. All of these operations are accomplished in a totally dry environment, at one’s normal sit-down work station. Acryl-Marvel has also been extremely effective in the polishing of Acetal Resin, Long-term Temporaries, Chrome Cobalt, Gold, and GC’s Gradia Gum®. Acryl-Marvel is available in both 200-gram and 500-gram lab-size bars. A Repair Bit Kit is also available, which is designed to simplify all cross-contamination procedures on repair cases.

For more information about this breakthrough product please contact DVA, Inc. directly by calling toll-free at 800-228-6696.

Have a new product you’d like to see featured in Industry News?

Contact Chad Morrison
chad@kelman.ca

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CLINICS FOR SALE

Leading-edge and progressive clinic!
Located an hour from Toronto, this business boasts an excellent reputation in a high-end luxury setting. We attract a high number of implant patients in the region, and together with partnerships across most health professions, are extremely reputable and well-known for quality. Exponential growth based heavily on referrals and word of mouth with a savvy business model, this opportunity is not to be missed! Current owner willing to stay for a few months to ensure seamless transition. For more information, please leave your name/number at 905-481-3211.

Well established denturist office and laboratory for sale along the coast of Southern Maine, licensed denturist and owner retiring. Contact: Steven Ellis, LD, Southern Maine Denture Associates, Old Orchard Beach, Maine. Office: 207-934-5411; Cell: 207-604-6133.

Victoria, BC, denture clinic with well-established and busy location in professional medical building. Excellent for graduate whom would like build his/her own practice and buys existing denture clinic in beautiful Victoria. Serious inquiries only. Contact Sergei at 250 881-8560 or email: newdiatech@shaw.ca

CLINIC FOR RENT

Denturist/lab space available in London, Ontario, on lower level in a small professional building below long established dental office and near a bus stop. Approx. 1300 sq ft. nicely divided into lab and patient treatment areas with abundant natural light. This space has been the location of a dental lab and/or denturist office for over 30 years. $1600/month incl. utilities. Call in confidence Dr. Ted Clement or Dr. John Lafferty at 519-455-3022.

DENTURISTS WANTED

Denture clinic located in the heart of Lloydminster, Alberta, Canada's only border city, is seeking an energetic, dedicated, dynamic, professional licensed denturist. This is a full-time position in an ideal location, halfway between Saskatoon, SK and Edmonton, AB. The clinic is a bright and cheery workspace and has a large custom-built lab with lots of natural light (photos available upon request). An added
bonus is the opportunity to become the sole owner of this 30-year old established and busy clinic. Owner is considering retirement within the next two to three years but is willing to stay on as a lab technician once the transfer of ownership is complete. Contact kdclinic@telus.net or fax to 780-875-6721. Serious inquiries only, please.

- Very active 44-year denturist office requires an associate in western Canada. Please contact Ora Dental Studio, 800-665-1964.

- Licensed denturist wanted immediately for well-established Calgary practice. Excellent benefits, wage compensation, and perks. Respond to bernchilds@shaw.ca. All inquiries confidential.

- Busy denture clinic in Winkler, MB looking for experienced lab technician. Please email résumé to ctmelun@mts.net.

**TECHNICIAN WANTED**

- Seeking: Dental Lab Technician specializing in dentures. Technician must be organized and detailed in their work. Should have knowledge of Ivocap system and be able to repair, reline, rebase full and partial dentures as well as pour models and do wax ups. Our office is in Burlington. Contact Giovanna or Judy at 905-639-1597 or send resume to jbarrick@cogeco.ca

**EQUIPMENT FOR SALE**

- KAVO boil-out & polishing unit; Ticomium shell blaster for sale. Boil-out: $5000 obo; polishing unit $3000 obo. Polishing unit specifications and images may be viewed at www.wasserman-dental.com (Model wp-ex80). Ticomium shell blaster suitable for casting lab $3000 obo. If interested please call 519-622-4500 for additional information.

- Dust collection. Quatro velocity X2 two station, one mc2 micro coordinated controller, one bench-mount slide valve, 2 illuminated airports, and one air wedge, all in perfect working order, replacement value $2500 asking $1600. Contact dentureclinic@cogeco.net or 905-937-6060.

**CLINICS FOR SALE**

- **Opportunity of a lifetime!** If you are looking to achieve better work/life balance, this is an opportunity to relocate to Southwest Ontario. With a large senior population in our area, we have a loyal patient base and a continual substantial annual growth. The business is based on high quality dentures construction. It is the only denture clinic in town with an excellent location, modern, fully-equipped and professionally designed. Low overhead, patients and dental referrals make this clinic very profitable. The extra space gives the possibility to sublease. Current owner willing to stay on to ensure a smooth transition if needed. For more information, call Daniela at 519-995-5533.

**CLINIC FOR RENT/LEASE**

- **Operatory for rent** at Leslie and Sheppard in Toronto. Modern dental office is seeking a denturist, or a dentist, or an independent dental hygienist, or specialist to rent operatory. Please contact Paola or Rebecca at 416-492-3777, 416-492-9073.

- **For lease:** space available for lease in commercial plaza on busy street in London, ON. 975 SqFt to develop with signage and good exposure. Outside completely renovated. Only $850/month.

**CLINICS WANTED**

- Are you approaching the end or your career, tired, stressed and looking to balance your lifestyle but can’t due to your busy practice? Are you trying to slow down, take time and enjoy the life you have earned by working so hard? I have the solution to your problems. I am a young energetic denturist looking for a large and busy practice to purchase and learn as I continue to work in partnership with you as a team. Still enjoy the freedom of practicing and a good income without the burden and stress of ownership. If interested contact Allison at 705-527-7772 or email Allison@lifestylesmidland.com.

**DENTURISTS AVAILABLE**

- **Profit from implants** placed in your practice. Dentist available for Ottawa and Eastern Ontario to place implants in your practice and you fabricate the prosthesis. For details email Dr. Raja Sandhu BDS, DMD rsandhu@sandhudental.ca and visit www.affordableimplants.ca
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