

The end of Temporomandibular Joint Dysfunction (TMD) – LILT heals at the source



When the jaw clicks, pops or locks constantly, it can be painful as well as annoying. The problem, known as a temporomandibular joint dysfunction, or TMD, can cause headaches and aching pain in the mandible, face and ear. Due to its multiple causes, the condition can be persistent, inexplicable, and resistant to a wide variety of therapies.

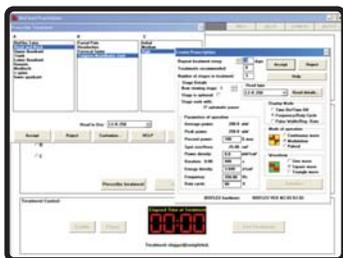
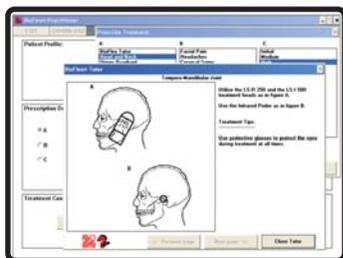
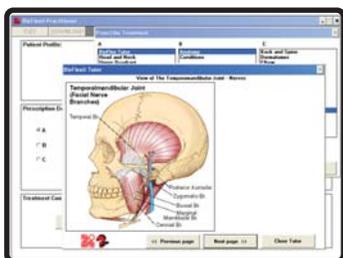
When practitioners (whether they currently use low intensity laser therapy “LILT” or not) encounter a patient with TMD, they’re

frequently seeing people who may have already been treated by dentists, oral surgeons, general practice physicians, neurologists, chiropractors, physical therapists, biofeedback therapists – and even by psychiatrists. Patients may recount surgeries, orthodontics, prescription drugs, and a sense of hopelessness with regard to living “normally.”

“We’re now in a position to reverse the course of TMD using Bioflex (LILT)—the only non-invasive treatment that restores full function by treating the source of the pain,” says Dr. Fred Kahn of Toronto’s Meditech Laser Rehabilitation Center. Indeed, it’s a curative therapy, unlike most therapies that modulate symptoms.

Dr. Kahn explains, “Even the causes of TMD are sometimes inconclusive. The temporomandibular joint—TMJ—is one of the most complex joints in the body. The healthy TMJ opens

and closes like a hinge but also allows the lower jaw to slide forward. The TMJs are located right in front of each ear. An injury, or clenching and



grinding of the teeth, can cause the disk to degenerate or be displaced; and unlike other joints in the body (like a knee or shoulder or elbow) the lower jaw consists of two joints working in synergy, which makes it highly sensitive to misalignment (malocclusion).”

As one dentist comments candidly, “Dentists see people with absolutely lousy teeth and really terrible bites all the time; but as a group, these people don’t necessarily have more headaches [from TMD] than those people with perfect teeth. It makes it difficult to find the ultimate cause and treat it successfully.”

Published research corroborates successful treat-

ment of TMD at the Meditech Laser Rehabilitation Center. In one paper, “Effectiveness Of Low Level Laser Therapy In Temporomandibular Disorder,” Drs. S. Kulekcioglu; K. Sivrioglu; O. Ozcan, M. Parlak

continued page 2

In the News at Meditech

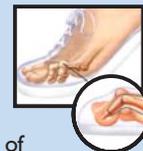
New Temporomandibular Joint Dysfunction TMD Protocol Available to BioFlex Users

BioFlex users will be pleased to learn that we’re releasing a new protocol to treat TMD. There are approximately 50 million TMD sufferers in North America today. The protocol calls for eight treatments, 22 minutes in duration, using the LS-R 250, LS-I 500 and the LD-I75 treatment heads.

Free software upgrades are available to all BioFlex users still within the warranty period. Please call or email Meditech for software upgrades.

Hammer Toe and Bunions – LILT Can relieve the pain, inflammation and discomfort

It’s summer and all those abused toes are out on parade. Did you know “hammer toe and bunions” affects approximately 75 million people – 70% of them women? A hammertoe is marked by a contracture of the tendons, laxity of the ligaments, and angulation of the second and third phalanges of the toe. Fashionistas take note – it’s not only unhealthy, it’s terribly unattractive.



It’s predominately due to footwear and it’s easily relieved with laser therapy. Most other therapies are nominally effective and involve some surgical and/or mechanical intervention. With LILT, the fashionable toe becomes a more relaxed, healthy and painless toe.

Bioflex User Group Now Accessible Online

The BioFlex online user group is now accessible through the Meditech site at www.meditech-bioflex.com. This is a password-protected confidential user group forum for sharing treatment information, protocols, user tips, and for posing questions in a confidential manner. Meditech clinical and technical personnel will monitor the user group and will answer questions or offer suggestions and support.

Please call or email to join and receive your confidential password. This user group is open to BioFlex registered healthcare professionals only.



continued from page 1

(Department of Physical Medicine and Rehabilitation, Uludag University School of Medicine in Bursa, Turkey) set out to investigate the effectiveness of low intensity laser therapy in the treatment of temporomandibular disorder. The doctors selected thirty-five patients whom they evaluated using magnetic resonance imaging and randomly allocated to active treatment (n=20) and placebo treatment (n= 15) groups. In addition to a daily exercise program, they treated all patients with fifteen sessions of low intensity laser therapy. They then assessed pain, joint motion, joint sounds and tender points.

The results? While the researchers observed reduction in pain in both active and placebo treatment groups, they saw that active and passive maximum mouth opening, lateral motion, and the number of tender points were significantly improved only in the active treatment group. Treatment effects in myogenic [muscle-related] and arthrogenic [joint-related] cases produced similar results.

The doctors concluded that low-intensity laser therapy should be considered as the appropriate therapy in the management of temporomandibular disorder.

[Source: *Scandinavian Journal of Rheumatology* VOL. 32 2003 PP. 114-8]

Ten years of TMD reversed in 13 treatments

Temporomandibular Joint Dysfunction TMD was threatening to turn into a life sentence for Heather when she came to the Meditech Laser Rehabilitation Center. Her intake assessment confirmed how difficult TMD had been to correct, before the use of LILT as a treatment modality.

Dr. Fred Kahn explains Heather's history: "For ten years, Heather had lived with pain on the left side of her face and head. She'd already seen numerous specialists that included radiologists, dental specialists, neurologists, acupuncturists, and chiropractors.

She'd been given anti-inflammatory drugs, analgesics, and cortisone injections. As her pain was constant, she'd even had her TMJ temporarily frozen. She'd had teeth removed. Nothing helped.

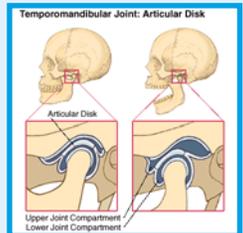
As is common with TMD, Heather's pain was aggravated by chewing food and swallowing liquids. In short, this disorder had made daily living an exercise in endurance. The pain involved the entire left side of her head and up to 32 Tylenol per day gave only slight relief."

After recounting this entire experience in her first clinic visit, Heather began a series of treatments. She was given eight treatments in the spring of 2003.

She reported significant improvement upon her third treatment. After the fifth treatment, she felt well enough to be discharged.

With the return of winter weather in November, Heather noticed that her pain had returned over a period of about three weeks—triggered, she felt, by cold temperatures. She consulted Dr. Fred Kahn a second time and was given five more treatments, ending in early December, 2003.

Dr. Kahn reports that this case of chronic acute/TMD was fully resolved and that Heather is now asymptomatic and fully functional.



Consecutive Patient Treatment Summary*

Temporomandibular Joint Dysfunction TMD

Patient No.	No. of Tx's	Symptom Duration (Yrs)	Patient's Status
1542	3	2.0	Discharged
1122	3	12.0	Discharged
2086	2	6.0	Discharged
991	1	3.0	Discharged
1576	5	*24 hrs	Discharged
823	13	10.0	Discharged
1589	11	0.1	Discharged
1288	2	*1 week	Discharged
1556	1	10.0	Discharged
1646	4	0.2	Discharged
1187	21	14.0	Discharged
11848	8	0.4	Discharged
1569	4	0.2	Discharged
1582	2	1.0	Discharged

Total # of Patient 14.0

Average # Tx's 5.7

TMD pathology lasts from weeks to years, affecting the patient's quality of life. LILT can restore function and eliminate the pain in an average of 5.7 treatments (Tx's) or a matter of a few weeks. Other studies yield success as well*.

References* Internal Clinical patient treatment summary, Meditech Laser Rehabilitation Clinic. + Low Level Laser Therapy with Trigger Points Technique: A study on 243 Patients. Zlatko Simunovic, MD, FMH Journal of Clin. Laser Medicine & Surgery, (1996) V 14, No. 4, pp. 163-167

Integrating LILT into a physiotherapy practice

“As usual, it’s the small details that make it all work”. Says Andrew Ihasz, a therapist who uses the BioFlex Professional System [BioFlex] at the Woodbridge Physiotherapy Centre in Woodbridge, Ontario.

Andrew made this comment after we invited the Woodbridge team to pass on their advice about adding LILT to a physio practice. So why carry timers? Because the BioFlex system is hands-free; so Andrew alternates between the BioFlex treatment room and his exercise room while the laser sessions are in progress. In effect, he’s able to perform two treatments at once.

The Woodbridge Physiotherapy Center has been offering BioFlex treatments for the last year, according to owner Marianne Guizzetti, who works with a team of two other therapists, Andrew, a kinesiologist and Mary Luccisano, also a physiotherapist.

“Our first experience with laser therapy was in school,” says Luccisano, “where we learned about the mechanism of action involved in laser; but we weren’t given parameters and treatment protocols. So while we all knew that laser was effective, we were waiting for a standard system of protocols that would eliminate variables. BioFlex is allowing us to treat a larger range of cases.”

Management Choices

Q: *How did the clinic choose the BioFlex system?*

A: Guizzetti went to several companies to compare treatment systems. She was impressed with the research offered by Dr. Fred Kahn, as well as her first-hand observations of the treatments at the Meditech Laser Rehabilitation Center—a step she recommends to her peers. The other deciding factors were the hands-free feature and the significantly larger treatment heads in the

BioFlex system. Andrew adds, “You can’t be working on a tennis ball sized area when you’re dealing with a back injury.”

Q: *Does introducing BioFlex system into your physio practice require renovation to your clinic space?*

A: No. The Woodbridge Physiotherapy Center simply recommends an ‘enclosed’ space, which could be a room (they designated theirs as a laser-only room) or a curtained-off area. The enclosure is important, for safety reasons. While the treatment stations are mobile, Guizzetti prefers that patients come to the unit. “We located the laser room close to the gym area, so that the therapist can be treating in both areas simultaneously.”

Q: *How did you promote your introduction of LILT?*

A: “We simply used word of mouth, the natural phenomenon of satisfied patients sharing good news. After two months, our treatment room was in use all day every day.”

Q: *How has the BioFlex system affected your practice?*

A: Guizzetti: “As a practitioner, I was simply looking for the best system. The BioFlex unit hasn’t decreased the amount of manual therapy we do, nor did we expect it to; it’s a supplement. The hands-free factor is still the biggest advantage; we can set up and then return to manual treatments in other rooms.”



Promoting BioFlex system in your physiotherapy practice

- *MDs will become interested in their patient’s progress with you if you take the initiative.*
- *Take plenty of before and after photographs.*
- *Ask for testimonials from patients. Forward these to the family doctor, explaining your treatment plan.*
- *Invite the MDs to refer others in their care that could benefit.*
- *Invite the MDs to ask for a demo.*
- *Show each new patient a video [available from Meditech in Toronto.] The video compiles media clips from TV programs, news broadcasts, and pro sports broadcasts that mention laser therapy. This quickly establishes that laser has been in use by some of the most accomplished athletes. Professional athletes can’t afford a treatment that isn’t fast and effective.*

continues on page 4

Clinical Choices

Q: *How does a physiotherapist select patients for treatment with the BioFlex system?*

A: Guizzetti responds, "We did our own internal study to choose patients who were proving difficult to treat with other modalities. We further experimented with different body parts, and recorded the effect of laser therapy on each. At first, we chose long-term patients who had, frankly, exhausted all other treatments. This seemed to be a correct choice in that we used the therapy first on those with the fewest other options."

Q: *How did you work your initial training into your practice?*

A: The therapists spent two days using BioFlex system at the Meditech Laser Rehabilitation Center in Toronto. They also attended—and recommend—the Annual Laser Therapy Conference, which was held in Toronto in February of this year. [covered in the April issue of Laser Report]

Q: *How do you schedule laser treatment sessions?*

A: "While the program's pre-set protocols are 20 to 60 minutes, the benefit of the BioFlex system is that the parameters are adjustable within reason once you have significant experience. We can change the relationship between duration and energy density, if necessary. Still, we recommend that you leave a few extra minutes for changeovers in treatment heads and for posture changes—or you'll find yourself falling behind as the day goes on..."

Guizzetti stresses the importance of proper patient assessments: "Because of our medical knowledge, we can put the area in question in the best possible position to receive LILT." Andrew adds, "I recommend that your

laser room includes a treatment table, several chairs, pillows, wedges, footstools – so that you can select the correct posture for application of LILT."

Important tips:

Says Andrew: "Icing for 5 to 10 minutes prior to treatment improves overall outcome, because vasoconstriction [decreasing blood flow through the area] allows more photonic [light] energy to be absorbed by the cells at the injury site, rather than being carried off by the blood. As well, we position the area to allow maximum light penetration."

Finally, the therapists caution practitioners not to be tempted to reduce treatment times in deference to a crowded schedule: "This is not about pushing people through." The Woodbridge Physiotherapy Center also recommends staying in touch with the BioFlex system's developers at the Meditech Laser Rehabilitation Center in Toronto, to consult on dosage and parameters and to review their patients' progress.

The pathologies most frequently treated with the BioFlex system at the Meditech Laser Rehabilitation Center:

- Degenerative osteoarthritis
 - Muscle injuries and tears
 - Rotator cuff injuries [shoulder injuries]
 - Herniated disc
 - Myofascial conditions
 - Carpal tunnel syndrome
 - Rheumatoid arthritis
 - Trauma
 - Temporomandibular Disorder
 - Post-surgical recovery
 - Diabetic neuropathy
 - Acute strains and sprains
 - Plantar fasciitis
- [inflammation of the tissue supporting the arch of the foot]
- Chronic metatarsalgia [pain in the ball of the foot]
 - Scar tissue of any kind
 - Gout

Are you registered?

Meditech International Inc. Summer and Fall Seminars 2004

Meditech International Inc., promotes the correct medical application of Low Intensity Laser Therapy with regular monthly seminars. Additionally the company sponsors an Annual International Seminar on Advances in Low Intensity Laser Therapy (LILT) with lectures by recognized specialists in the laser field.

All seminars include course material, structured classroom presentations on theory, research and hands on clinical exposure. Completion of the program is a Certification of the participant's understanding and practice of LILT.

SEMINAR DATE	LOCATION	CONTENT
July 16-18	Meditech Laser Rehab Clinic	Theory, Practice & New Applications
August 20-22	Meditech Laser Rehab Clinic	Theory & Practice
September 17-19	Meditech Laser Rehab Clinic	Theory & Practice
October 15-17	Meditech Laser Rehab Clinic	Theory & Practice
November 12-14	Meditech Laser Rehab Clinic	Theory & Practice
December 10-12	Meditech Laser Rehab Clinic	Theory & Practice

Meditech Laser Rehabilitation Clinic

411 Horner Avenue, Unit 1
Toronto, Ontario M8W 4W3
Phone: (416) 251 1055
Fax: (416) 251 2446
www.meditech-bioflex.com
info@meditech-bioflex.com

Course Program e-mail:
lp@meditech-bioflex.com

Hotel and travel information is available on request.



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