

LM

feel the
difference

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Clinical picture: Finnish Institute of
Occupational Health
Product picture: LM-Dental

The LM-ErgoSense is a hand-held instrument at the forefront of dental technology, combining a unique ergonomic design with new technology.

Tested by the Finnish Institute of Occupational Health

Clinicians go for the ergonomic test winner

Dentistry requires that hands be constantly in use. For dental clinicians and hygienists, obvious risk factors are repetitive hand movements, standing still for long periods, and persistent use of hand muscles to manipulate instruments. As a result, according to several studies, two-thirds of dental workers often suffer from back, neck, shoulder, arm and hand ailments. Now, thanks to new advances in the ergonomics of dentistry, an ergonomic hand instrument can improve this.

Ergonomics relies more on common sense than advanced technology. The word itself comes from the Greek *ergon* (work) and *nomos* (laws of nature). Ergonomics can be described as simply adjusting work, tools, and work environment, so they match human features and long-term needs.

Perhaps the best and easiest way to improve the discomforts related to dentistry is to focus on ergonomics when selecting the hand instruments used daily. Dental clinicians hold instruments in their hands for about 2,000 hours per year; as such, ergonomics has a huge impact on their occupational health.

Tests by the Finnish Institute of Occupational Health have shown that muscle strain can be relieved and job satisfaction and personal health improved by proper ergonomics. The LM-ErgoSense hand instruments are the result of constant product development, decades of manufacturing expertise and continuous

innovation in collaboration with clinicians and scientific communities.

These investments have been rewarded time and again by dental clinicians and professionals. In several studies focusing on ergonomics and productivity, the new LM-ErgoSense instruments were rated the top choice.

Clinicians love its design and grip

When a well-designed hand instrument fits the hand perfectly, it allows dentists to fully focus on their work. Scientific studies show that hand instruments with thicker handles are easier to use, cause less perceived

strain and lead to increased productivity than those with thinner handles (1). In ten out of fourteen specified usability features, the LM-ErgoSense was rated the best when compared with other instruments during a dental scaling simulation (1). It also ranked the best instrument.

The LM-ErgoSense has both a larger diameter (13.7 mm) and an optimal design. The instrument's tactile sensitivity and non-slip surface ensure a firm hold during any dental procedures. The colors are new and refreshing, and the name and code number on the handle make identification easier during clinical procedures and maintenance.



The LM-ErgoSense silicone handle has proven to be truly ergonomic in clinical tests provided by the Finnish Institute of Occupational Health.

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I think the LM-ErgoSense is the most comfortable dental hygiene handle in the market. It's a must-have for every hygienist!”

- Diane Millar, MA, hygienist and dental hygiene educator

Last but not least, the instrument can be equipped with an intelligent RFID chip fitted into the handle. This means the instrument can be traced, bringing patient safety up to a new level.

“The LM-ErgoSense handle is very aesthetically pleasing and fits my hand perfectly. Tactile sensitivity and feel are good, and the instrument doesn't twist in my hand. Which means my grip is now secure,” says **Mika Huttunen**, a dentist working at Rovaniemi Viisaudenhammas, Rovaniemi, Finland.

“The LM-ErgoSense handle feels secure and comfortable in my hand. At the same time, I don't need to grip it too hard when I start scaling,” **Diane Millar**, MA, hygienist and dental hygiene educator describing her experiences with the new LM-ErgoSense. “The thicker handle lets me work for longer; I don't need to take small breaks. It's more comfortable and my hand doesn't get tired.”

Comfort leads to increased productivity

In another study focusing on ergonomics, usability features and productivity using different hand-held instruments, the thicker, silicone-coated LM instruments were the preferred choice when measured against all 18 usability criteria in the test (2). These tests also showed that the most ergonomic hand instrument lead to increased productivity.

“I tried the LM-ErgoSense and I really liked it. It felt lighter and I got a better grip of the instrument, thanks to the handle's shape,” as described by **Heikki Tursas**, a dentist from Puutarhakadun Hammaspiste, Turku, Finland.

Ergonomics is not just about comfort while working—it also improves efficiency and productivity.

In the world of dentistry, scientific studies have shown that ergonomic hand instruments should be used to prevent musculoskeletal ailments.

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Reference studies:

- (1) *Evaluation of ergonomics and usability of dental scaling instruments. Dental scaling simulation and Field study, part III.* Sormunen, E., Nevala N. Finnish Institute of Occupational Health, LM-Instruments Oy.
- (2) *Ergonomic and productivity evaluation of scaling instruments in dentistry.* Nevala N, Sormunen E, Remes J, Suomalainen K, The Ergonomics Open Journal 2013;6, 6–12.

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Intelligent design improves patient safety

The LM-ErgoSense instruments can be fitted with an advanced RFID chip. This means the instrument can be traced by simply scanning the chip with a reader; this together with the software creates a unique Dental Tracking System™.

Find more information on www.dentaltracking.com

Dental clinicians and hygienists have described the new LM-ErgoSense design as very successful. As well as being tactile sensitive, the instrument remains well-gripped.