



NOT ONLY A PIONEER OF MODERN IMPLANTOLOGY USING THE MINIMALLY INVASIVE PROCEDURE (MIMI) BUT ALSO NOW GERMANY'S LARGEST OWNER-MANAGED DENTAL COMPANY

Dr. med. dent. Armin Nedjat

It was only with the system of Germany's largest owner-managed dental company and the winner of the prestigious SENSUS Award 2013 in Dubai as "Best Innovation in Medicine" – the CHAMPIONS Implants System – that many practitioners found what is often referred to as the "ultimate all-in-one solution" among implant systems. If the MIMI surgical protocol or workflow is described as the "software", and the implants including their accessories as the "hardware", the one-piece and two-piece CHAMPIONS system stands out with 22 internationally active patents as well as numerous innovations that made a truly practice-oriented application of Implantology and its undisputed workflow possible in the first place. Prof. Dr. Dr. Jean-Pierre Bernard (Head of the Oral and Maxillofacial Surgery and Radiology Department, University of Geneva, Switzerland) also described the CHAMPIONS Group as the third revolution in Dental Implantology, following Brånemark in 1965 with "titanium osseointegration" and Straumann in 1983 with the introduction of the first roughened, sandblasted and acid-etched implant surfaces.

MIMI stands for Minimally Invasive Medical Implantation. MIMI can be regarded as the new "free" software – in other words, the operating system of modern Oral Implantology. MIMI describes the minimally invasive methodology of surgical implantation using flapless CNIP-Navigation and the possibility of 'osseous metamorphosis' (OMM) in "soft bone" – without any indication limitations – entirely without raising mucoperiosteal flaps or suturing.

The subsequent prosthetic phase is performed without any "active" reopening of the gingiva ("exposure" via a second surgery) and without any manipulation of the internal part of the implant body, which remains sterile during the "healing phase" of two-piece systems. I have been developing MIMI since 1994; it has now been in clinical use for almost 30 years and is now widely accepted worldwide by renowned Implantology experts – and, of course, successfully performed by them.

MIMI is also commonly referred to as the "keyhole method of Dental Implantology!" MIMI maximally preserves, both in surgery and Prosthetics, the bone-nourishing periosteum as well as the so-called "biological width." MIMI can be applied not only to delayed and immediate implants but also in narrow jaws (MIMI-II) and sinus lift procedures (MIMI-VI), thus covering approximately 99% of implant cases encountered in daily dental practice.

The MIMI-Nomenclature (Fig. 1) is summarized and classified into the following 6 categories.

In the MIMI procedure using CNIP, the Position + depth Stop Guides (Fig. 2) are not only reusable and resterilizable PEEK depth stops; they also already guide the clinician during drilling by ensuring correct distances from adjacent anatomical structures and parallel axial alignment.

For the yellow, white, and blue Champions Drills, 3 different Position Guide diameters (5, 7 and 9 mm) are available, which already correspond to the diameter of the future crown. In "hard bone" (D1 + D2), the additional Drills are supplied with 4 mm-Position Guides to allow safe and simple performance of so-called "crestal stress relief."

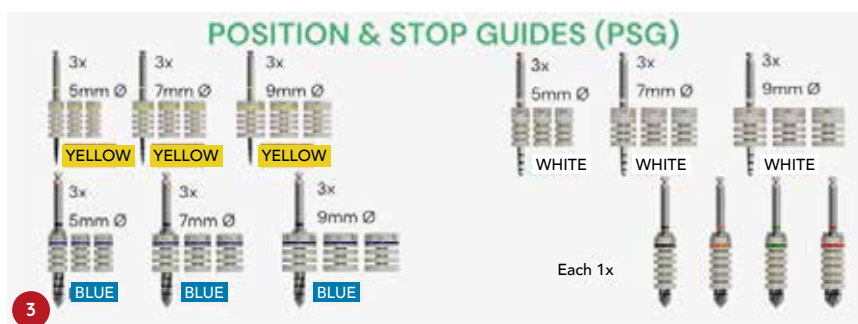
Thus, dentures supported by 4 splinted teeth/implants with "passively fitting" crowns sealed at the preparation margin can be definitively cemented within only a few days to one week post-op.

The PSGs combine Position- and Stop-Guides all-in-one (Fig. 3). They are repeatedly resterilizable and reusable for different patients. With 3 diameters for each of the 3 main Drill sizes, implant parallelism, correct implant distances, and the future crown diameters and crown positions can be easily determined already during cavity preparation.

For navigation in the MIMI-procedure, we use CHAMPIONS Guides (image series 5), the Position + Stop Guides (Fig. 3), and CNIP (Cortical Navigated Implantation Procedure), in which drilling and condensing are performed at low speed (approx. 30–70 rpm) in the spongiosa, ensuring that all instruments and implants always remain within the spongiosa! This is comparable to endodontic treatment, where working "manually" or at low-speed makes it impossible to perforate a root with files.

Image series 4: Fascinatingly simple – the MIMI-II technique (horizontal distraction without raising a mucoperiosteal flap) can be performed in just 30 minutes! The triple layer– buccal cortical bone, intact periosteum, and attached gingiva – are mobilized buc-

- MIMI 0:** Immediate implantation
(also with the Socket Shield technique [PET] and with the Smart Grinder for processing extracted teeth into an autologous bone graft)
- MIMI I:** Delayed implantation
- MIMI II:** Horizontal distraction
- MIMI III:** Vertical distraction
- MIMI IV:** Horizontal and vertical distractions
- MIMI V:** Indirect Sinus Lift (Summers)
- MIMI VI:** IDS (Internal Direct Sinus Lift – Nedjat)



cally by up to 5 mm without any problem and without fracture or laterally applied augmentation procedures so that the "bioactive container" causes no complications and is fully nourished by the periosteum.

Image series 5: Reusable and resterilizable flexible templates are recommended to determine implant positions preoperatively (on the plaster model) or intraoperatively, particularly in "extensive cases." An unobstructed view of the surgical field is essential.

All Champions implants are made of cold-formed grade 4 titanium with 99% pure titanium, and therefore not of a grade 5 titanium alloy (including 6% aluminum).

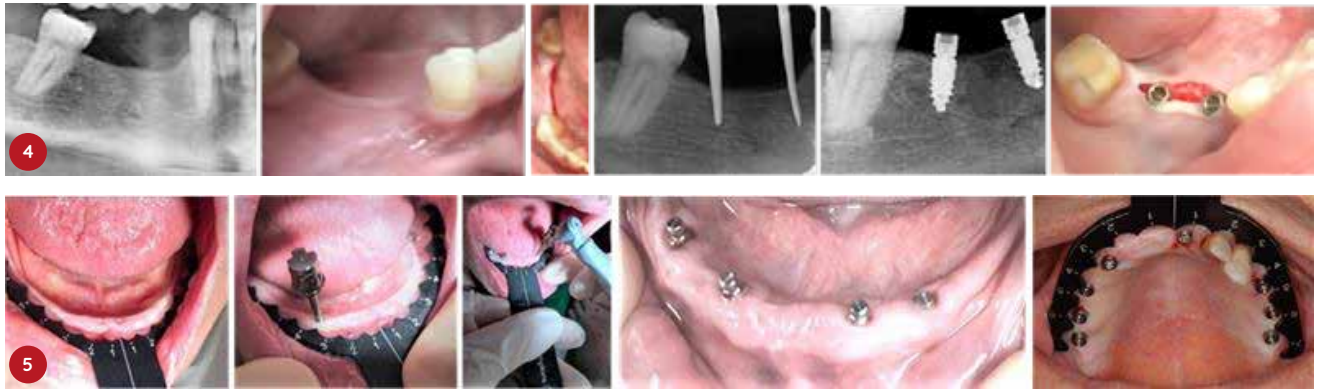
From the very beginning, quality, precision and full delivery capability have

been ensured by in-house full-scale production 'Made in Germany.' In addition, the Champions system has received certification from the CleanImplant Foundation.

Naturally, CHAMPIONS is fully 'digital', with libraries available and accessible in exocad, Cerec, and 3shape

Fig. 6: Innovative and unique features of the one-piece Square implants include titanium or zirconia "Prep Caps", which are used for compensation of greater divergences or in immediate implant cases.

In the two-piece Champions (R)Evolution system, the now gold-anodized so-called Shuttle serves all-in-one as insertion aid, impression tool (also scannable), surgical cover screw, and healing abutment.



CHAMPIONS® Cold-formed grade 4 titanium, one-piece

Champions® ,Classics'

Diameters in mm : 3.5

Lengths in mm: 8 · 10 · 12 · 14 · 16

Champions® ,New- Art'

Diameters in mm : 3.0 3.5 4.5 5.0 5.5

Lengths in mm: 6 · 8 · 10 · 12 · 14 · 16 · 18

Champions® Ball-Head ("Tulips")

Diameters in mm : 2.5 3.0 4.0

Lengths in mm: 8 · 10 · 12 · 14 · 16 · 18

CHAMPIONS® Cold-formed grade 4 titanium, two-piece

Champions® (R)Evolution

Diameters in mm : 3.5 4.0 4.5 5.0 5.5

Lengths in mm: 6.5 · 8 · 10 · 12 · 14 · 16



Fig. 7: The Champions (R)Evolution implants feature a bacteria-tight internal cone of 9.5°, as demonstrated by the Zipprich study (University of Frankfurt, 2012), even at a diameter of 3.5 mm, and a single prosthetic platform for all implant diameters, greatly simplifying the prosthetic 'workflow' in everyday laboratory practice.

Thanks to the crestal micro-thread, the ideal CHAMPIONS compression thread and the HP-Condensers, high primary stability is readily achievable.

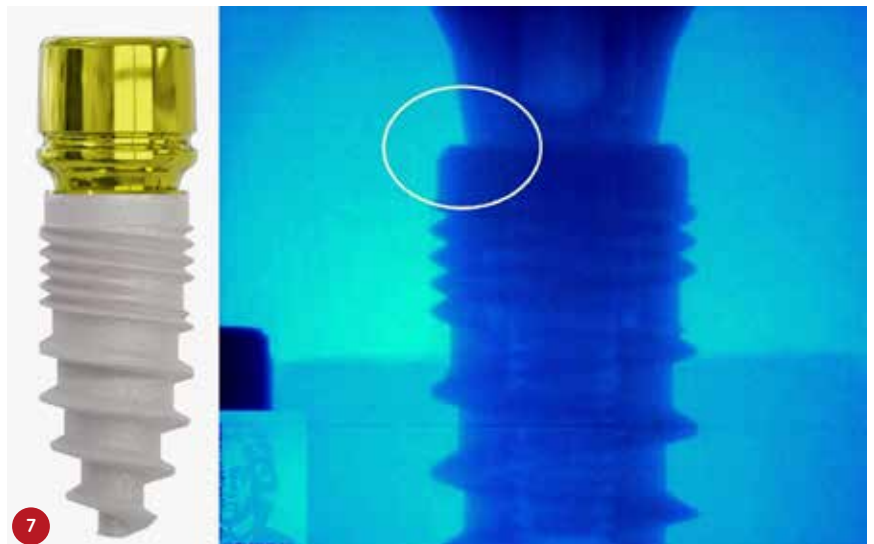


Fig. 8: With the CHAMPIONS bone HP-Condensers, treatment in "soft bone" can be performed within only a few minutes, requiring only short "healing times." In delayed implant cases in both the upper jaw and lower jaw, dentures are placed after just two months; in immediate implants, MIMI-II and MIMI-VI cases, after only 4 months – successfully and with great time savings.

From a prosthetic point of view : innovative & comprehensively equipped – whether 'standard'-Abutments with gingival heights of 1, 2, 3, 4 and 5 mm; so-called 'solid' Abutments (which can be poured with dental stone in the dental laboratory if they are definitely mounted intraorally and of which an impression is taken like a tooth preparation); prefabricated individual zircon abutments (in short: ICA, also suitable for primary telescopes!); Ball-Head or LOC- and Multi-Unit Abutments (also available in GH 1, 2, 3, 4, 5 mm).

A comprehensive range of solutions is available in the field of Dental Technology!

Image series 9: Immediate implantations (MIMI-0) can be performed aesthetically in surgery as well as in Prosthodontics without any problems.

Without CBCT and without laboratory-fabricated surgical guide templates, and usable at any dental chair or micromotor with a green contra-angle handpiece with the help of Champions-Guides, Position Guides and CNIP-Navigation – sustainable, aesthetically optimized and successful Implantology with the corresponding Implant Prosthetics can be performed in any dental practice without indication restrictions.

With Champions, an unbeatable 'work-flow' is ensured (e.g. one hour instead of 3 hours per single implant). In a "regular" dental practice, one operating hour costs approximately EUR 450. Using the Champions system and the MIMI procedure, we are able to complete surgery and the denture in just two short patient sessions.

On average, this saves two full hours for a standard implant case including Prosthetics: Total time using MIMI: 60 minutes versus 180 minutes across 5 patient sessions in conventional Im-



plantology (time value approx. EUR 900!).

Here you can see an implantation case with a denture (QR-Code Fig. 10) and the time comparison between the treatment time of CIM (Conventional Implantation Method) and MIMI (QR-Code Fig. 11).

A 10-year longitudinal study demonstrated a 96.5% success rate without peri-implantitis according to Albrektsson criteria (13,438 implants in 4,192 patients were examined, including smokers and other risk patients, i.e. "without patient selection"). Notably, IDS sinus lifts, MIMI-II ("flapless" horizontal distraction of narrow jaws) and immediate implantations show almost the same high success rates as delayed implantations in "wide jaws."

The MIMI and CHAMPIONS philosophies are convincing and scientifically well established. They inspire everyday clinical practice. This is experienced firsthand by colleagues entering or transitioning into Implantology during the 14-hour live surgery courses of the Future Dental Academy as the guiding principle developed in 2006 – KISS ("Keep It Safe & Simple") – meets participants' expectations by allowing them to prepare the cavities themselves and place the implants using the MIMI procedure.



CONTACT

Dr. med. dent. Armin Nedjat



For further information and video tutorials, please do not hesitate to contact the author directly:
nedjat@t-online.de