

## FDI POLICY STATEMENT

### Dental Laboratory Technician

October, 1998	Barcelona	Spain
October, 2007	Dubai	United Arab Emirates
September, 2015	Bangkok	Thailand
September 2024,	Istanbul	Türkiye

#### CONTEXT

Over the last few decades more people have been keeping their teeth longer. This is the result of greater awareness of oral health, better disease prevention, improved treatments and advances in digitalisation and technology.

The dental technician has a central role in supporting dentists to provide high quality, custom-made restorations, prostheses and appliances.

There has been a decrease in complete edentulism and a significant increase in the partially dentate patient with a corresponding rise in the demand and provision of implant retained prostheses and aesthetic restorations.

Moreover, changes in dentistry related to dental materials and technology, e.g., digital workflow, international trade of dental laboratory products and changing attitudes toward collaboration, are leading to a profound transformation in the dental technician's profession.

#### SCOPE

In view of the rapidly evolving nature of dental technology, the improvement in materials and processes, the impact of sustainability and the rapid changes effected by digitisation and artificial intelligence (AI), it is important to update the previous Policy Statement on the Dental Laboratory Technician of 2015.

#### DEFINITIONS

**Dental laboratory technician:** A member of the extended dental team who manufactures a restoration or prosthesis for a prescribed patient for use intraorally or sometimes extra orally, according to the dentist's prescription. This person may have different titles and relationship with the patient in different countries.

## PRINCIPLES

The dental laboratory technician must be a highly trained, ethical professional member of the extended dental team, responsible for the construction of custom-made devices according to the specifications detailed in the prescription provided by the dentist. This is a role with standardized tasks and the process is used worldwide. The occupational exposure can vary, according to working conditions and materials used.

## POLICY

FDI World Dental Federation:

- continues to be opposed to any kind of diagnosis, planning or direct treatment of patients by dental laboratory technicians without the prior request of the dentist. The final medical responsibility remains with the dentist, unless otherwise legislated by national law;
- emphasizes that, when dental treatment involves collaboration between a dentist and a dental laboratory technician for the purpose of providing the best possible oral healthcare to the population, the dentist should use the services of a duly qualified dental laboratory technician;
- encourages dental technicians to take steps to adopt increasingly sustainable, healthier and environmentally friendly practices;
- emphasizes that dental technicians are members of the extended dental team and those employing dental laboratory technicians should secure their physical and mental safety. This should include making sure that effective protective measures are in place to limit all occupational risks (chemical, physical, infectious, musculoskeletal and repetitive strain disorders etc.) <sup>(1)(5)</sup>
- recommends that the dental laboratory technician should:
  - practise within the limits of the dental laboratory technician's scope of work as defined by law and regulation of each country;
  - undertake lifelong continuing professional development including updating and maintaining knowledge of digitalization and AI, material science and infection control;
  - follow the prescription, directions and material specifications provided by the dentist, and otherwise discuss with the prescribing dentist any concerns about the prescription or reasons why the prescription cannot be fulfilled;
  - communicate with the dentist with respect to alternative or new techniques, materials and procedures;
  - ensure the use only of certified products and methods for a high standard of service;
  - as manufacturer, deliver the certificate of conformity of a prescribed custom-

- made device to the dentist where national legislation requires this;
- comply with the instructions, guidelines and advice provided by the manufacturers of materials used in fabricating dental devices;
  - assume the legal responsibilities for work within the laboratory as specified by the laws and regulations of the country, state and/or governmental jurisdiction;
  - provide the dentist with all necessary information about the laboratory work performed, including all materials used;
  - protect all data including the personal information of the patient and his/her dental devices, to be compliant with data protection legislation and to be aware of the importance of patient confidentiality;
  - reduce the use of polluting manufacturing products (waste and wastewater ) and to reduce the ecological footprint (digitalization, transport/short circuit, energy consumption);
  - be compliant with all relevant Health & Safety legislation and guidance including in the work place;
  - explore continuously new technologies to provide the highest quality products and process efficiencies.

## KEYWORDS

dental technician, dental laboratory, dental materials, dental team, occupational hazards, sustainability

## DISCLAIMER

The information in this Policy Statement was based on the best scientific evidence available at the time. It may be interpreted to reflect prevailing cultural sensitivities and socio-economic constraints.

## REFERENCES

1. World at work: Dental laboratory technicians N Torbica and S Krstev 2006 Feb; 63(2): 145–148. (pub med)
2. The Impact of Edentulism on Oral and General Health Emami *et al.*, 2013; ElhamEmami,<sup>1</sup> Raphael Freitas deSouza,<sup>2</sup> Marla Kabawat,<sup>1</sup> and Jocelyne S. Feine<sup>3,4</sup> 2013; 2013: 498305
3. F. Müller, M. Naharro, and G. E. Carlsson, “What are the prevalence and incidence of tooth loss in the adult and elderly population in Europe?” *Clinical Oral Implants Research*, vol. 18, supplement 3, pp. 2–14, 2007.
4. The dentist-laboratory relationship: a system for success Don Warden *J Am Coll Dent.* 2002 Winter;69(1):12
5. Frequency of respiratory function disorders among dental laboratory technicians working under conditions of high dust concentration A Abakay<sup>1</sup>, S

Atilgan, O Abakay, Y Atalay, S Güven, F Yaman, Y Palanci, G Tekbas, A Dalli, A C Tanrikulu Eur Rev Med Pharmacol Sci 2013 Mar;17(6):809-14.

6. Thu, K. M., Molinero-Mourelle, P., Yeung, A. W. K., Abou-Ayash, S., & Lam, W. Y. H. (2023). Which clinical and laboratory procedures should be used to fabricate digital complete dentures? A systematic review. The Journal of Prosthetic Dentistry.
7. Étude DCE & Artisanat - Caractérisation des Substances Dangereuses dans les rejets des activités artisanales Marie-Pierre FISCHER CNIDEP octobre 2014
8. User Experience and Sustainability of 3D Printing in Dentistry Tamas Hegedus<sup>1</sup>, Patrik Kreuter Int J Environ Res Public Health. 2022 Feb 9;19(4):1921.