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Infection control and prevention (ICP)

Protect your patients  
and your practice team

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# Why is ICP in dental practices so important?

Despite the availability of modern medications, dangerous infectious diseases are again on the rise due to increased mobility. Without appropriate infection control practices, the risk of infections by pathogens is high. An increased awareness of infection control measures and consistently applying all necessary steps towards personal and practice hygiene will help us to live healthy lives. Comprehensive infection prevention to protect patients as well as staff in dental practices is therefore essential at all times. This can only be achieved through thorough and effective surface cleaning and disinfection, water treatment, hand hygiene, personal protective equipment and instrument reprocessing.

## 1 Surface disinfection

The aerosol cloud can contaminate all surfaces within a range of approx. two meters around the treatment center. All surfaces must be cleaned and disinfected immediately after each patient. This is much easier to accomplish when surfaces are smooth and clear, made of materials that are easy to clean. Follow the manufacturers surface disinfection instructions for use.

## 2 Water treatment

The water bearing hoses and valves in a treatment unit are particularly sensitive since water is a highly efficient medium for transporting and spreading germs. Close attention should be paid to the quality of the water, correct installation of the water treatment and waste water treatment. Follow the local guidelines/standards/regulations for drinking water standards. Supplying a treatment unit with a non-return valve, an integrated air-gap, an integrated disinfection system as well as having programs for regularly purging and sanitizing the water systems helps the practice team adhere to all hygiene regulations and recommendations. According to the guideline of the Robert Koch Institute instruments should be purged for 20 seconds after each patient. All water systems should be flushed in the morning.<sup>1</sup>

## 3 Instrument reprocessing

Due to their narrow media channels and angled interiors, instruments require special and careful reprocessing. In addition to the typical contamination occurring during treatment, such as blood, saliva, secretions and tissue, mechanical contaminations like abrasion and oil residue present a further challenge.

Instruments must be reprocessed after every patient treatment and may require special care. Please follow the manufacturers' instructions for use on how to appropriately reprocess their device.

Automatic reprocessing not only increases process safety, but also enhances work safety for the practice team. For these reasons, automatic reprocessing is preferable to manual reprocessing. All workflows related to the reprocessing of medical devices must be specified in work instructions and include the reprocessing instructions of the respective manufacturers. All reprocessing steps as well as cleaning and disinfection measures are then summarized in the infection control and prevention plan of the dental practice. Depending on your country of origin, there are several regulatory bodies that provide the standard for appropriate reprocessing of medical/dental devices such as: The Commission for Hospital Hygiene and Infection Prevention (KRINKO) at the Robert Koch Institute (RKI) and the Federal Institute for Drugs and Medical Devices (BfArM) and the Food and Drug Administration (FDA).<sup>2</sup>

## 4 How hand hygiene works<sup>3</sup>

Because our hands are the primary "transmission devices" for potentially dangerous pathogens, special attention must be paid to cleaning, disinfection and care.

### General prerequisites for effective hand hygiene

- No rings, watches or jewelry
- Short-clipped fingernails
- No artificial or painted fingernails

### Necessary equipment for effective hand hygiene

- Touch-free fittings
- Disposable towels
- Touch-free dispensers for soap and hand sanitizers

### Hand washing

Every staff member should wash hands when hands are visibly soiled, after touching contaminated equipment with bare hands, before and after each patient, before donning and after doffing gloves.

### Hand disinfection

Unless hands are visibly soiled, an alcohol-based hand rub is preferred over soap and water in most clinical situations due to evidence of better compliance. Depending on your country of origin, there may be an approved list of hand disinfectants. See the appropriate hand hygiene steps below.<sup>4</sup>

## 5 Personal Protective Equipment

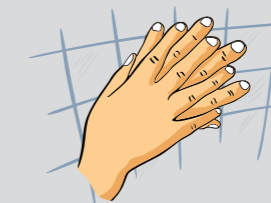
PPE are special coverings designed to protect dental health care personnel (DHCP) from exposure to or contact with infectious agents. These include gloves, face masks, protective eyewear, face shields, and

protective clothing (e.g., reusable or disposable gown, jacket, lab coat). PPE can also prevent microorganisms from spreading from DHCP to patients.<sup>5</sup>

## 6 steps of hand washing/disinfection<sup>6</sup>:



Rub palms together, include wrists if necessary.



Rub back of left hand over right palm and vice versa.



Rub palms together with fingers interlocked.



Rub palm of left hand with fingers of right hand in a circular motion and vice versa.



Rub around right thumb with left palm in a circular motion and vice versa.



Rub backs of interlocked fingers on opposing palms.

**Proper hand hygiene also includes wearing personal protective equipment as well as using skin care products from tubes or dispensers.**

<sup>3</sup> Hand Hygiene in Institutions of the Health System. Recommendation of the Commission for Hospital Hygiene and Infection Prevention (KRINKO) at the Robert Koch Institute (RKI); Bundesgesundheitsblatt 2016 · 59:1189-1220 (Original source only available in German: Händehygiene in Einrichtungen des Gesundheitswesens. Empfehlung der Kommission für Krankenhaushygiene und Infektionsprävention (KRINKO) beim Robert Koch-Institut (RKI); Bundesgesundheitsblatt 2016 · 59:1189-1220)

<sup>4</sup> <https://www.cdc.gov/handhygiene/providers/guideline.html>

<sup>5</sup> <https://www.cdc.gov/oralhealth/infectioncontrol/faqs/personal-protective-equipment.html>

<sup>6</sup> EN 1500 and World Health Organization

<sup>1</sup> Commission for Hospital Hygiene and Infection Prevention (KRINKO) at the Robert Koch Institute (RKI) and the Federal Institute for Drugs and Medical Devices (BfArM): Infection Prevention in Dentistry - Requirements in Regards to Hygiene. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz, 2006; 49:375-394 (Original source only available in German: Kommission für Krankenhaushygiene und Infektionsprävention (KRINKO) beim Robert Koch-Institut (RKI) und des Bundesinstitutes für Arzneimittel und Medizinprodukte (BfArM): Infektionsprävention in der Zahnheilkunde - Anforderungen an die Hygiene. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz, 2006; 49:375-394)

<sup>2</sup> Hygiene Requirements for the Reprocessing of Medical Devices - Recommendation from the Commission on Hospital Hygiene and Infection Protection at the Robert Koch Institute (RKI) and the Federal Institute for Drugs and Medical Devices (BfArM) on the „Hygiene requirements for the reprocessing of medical devices“ published in the Bundesgesundheitsblatt 2012 · 55:1244-1310 and Infection Prevention in Dentistry - Requirements in Regards to Hygiene - Recommendation of the Commission for Hospital Hygiene and Infection Prevention at the Robert Koch Institute, 2006 (Original source only available in German: Infektionsprävention in der Zahnheilkunde - Anforderungen an die Hygiene - Empfehlung der Kommission für Krankenhaushygiene und Infektionsprävention beim Robert Koch-Institut, 2006)

Up-to-date information on the current state and development of the coronavirus (COVID-19) can be found on the website of the World Health Organization at: [www.who.int](http://www.who.int)

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