



Infection prevention

Surface hygiene

Summary of the KRINKO recommendation: *Hygiene requirements for the cleaning and disinfection of surfaces*



Recommendation and level of evidence

Organisation and extent	<p>Specification of:</p> <ul style="list-style-type: none"> ■ basic conditions for quality assurance of surface hygiene by the head of the medical facility IV ■ how to clean and disinfect all surfaces in the cleaning and disinfection plan, including information on the reuse of the surface IV ■ cleaning and surface disinfection measures in ward and milk kitchens by hospital hygienists ■ cleaning and surface disinfection measures in areas for the preparation of medicinal products and for the reprocessing of medical devices IV ■ interfaces and the services not to be provided by external service providers ■ the service description providing the basis for action for service providers ■ procedural instructions and training measures by the service providers in coordination with the hygiene team
	<p>If no external service provider is involved, the facility management is responsible for compliance with the cleaning and disinfection plan, as well as for ensuring staff qualification IV</p>
	<p>In case of frequent nosocomial transmissions or outbreaks: monitoring of disinfection measures (surfaces with frequent hand/skin contact) as part of the intervention bundle and, if necessary, adjustment with regard to implementation, selection of active substances and application conditions of the disinfectants IB</p>
Structural prerequisite, material compatibility and surface design	<p>In areas without risk of infection: routine cleaning</p>
	<p>All surfaces relevant to hygiene need to be safe to clean and disinfect without causing material damage</p>
	<p>Do not use anti-adhesive or antimicrobial impregnated surfaces to complement basic hygiene as long as there is no evidence of infection prevention benefits and as long as risks to humans, the environment and the development of microbial resistance have not been clarified III</p>
	<p>Ventilated rooms with separate clean and unclean areas need to be available for the preparation and storage of aids in inpatient areas; facility-specific solutions must be implemented in the outpatient areas</p>
	<p>Depending on the facility size and the manufacturing method of disinfectant solutions: installation of automated decentralised dosing devices; dosing accuracy of the devices must meet the specifications of the Federal Institute for Materials Research and Testing (BAM), the Robert Koch Institute (RKI) and the Commission for Hospital Hygiene and Infection Prevention (KRINKO); the functional principle must not promote biofilm formation</p>
Quality assurance of surface cleaning and disinfection	<p>Hygienic-microbiological inspection of decentralised dosing devices in case of nosocomial outbreaks Regular technical inspection according to the manufacturer's specifications IV</p>
	<p>If no dosing device is used: ensure simple, reliable and low-error dosing methods, the correct application of which is guaranteed and verified</p>
	<p>Provide the necessary manpower and equipment for cleaning and disinfection in accordance with quality standards, including reprocessing technology; ensure quality and continuous improvement of implementation by means of familiarisation programmes and regular, documented education and training measures II</p>
	<p>Ensure the surface cleaning and disinfection quality by means of facility-specific hygiene monitoring II</p>
	<p>Non-routine inspection of disinfecting surface cleaning as part of the final disinfection in case of specific pathogens</p>
	<p>Annual proof of effectiveness of the disinfecting washing process for reusable textiles that are used for disinfection and hygienic-microbiological review of the possible sources in the event of outbreaks</p>





Infection prevention

Surface hygiene

Summary of the KRINKO recommendation: *Hygiene requirements for the cleaning and disinfection of surfaces*



Recommendation and level of evidence

	Recommendation and level of evidence
Selection of surface disinfectants	Hospital hygienist or facility manager selects the disinfectant incl. application concentration and exposure time; the required spectrum of activity must be guaranteed IB
	Weigh the spectrum of activity, efficacy, material compatibility and risks to humans and the environment IB
	In case of infections with noroviruses, rotaviruses and adenoviruses, use disinfectants that have a <i>limited spectrum of virucidal activity</i> ; in case of infections with hydrophilic nonenveloped viruses, use disinfectants that are <i>virucidal</i> II
	If there is mould contamination, use surface disinfectants with a <i>fungicidal</i> spectrum of activity II
	Do not use QAC-based surface disinfectants at the low concentration of the 4-hour value as there is a risk of resistance development
	In principle: apply products using the conditions of application that were used to determine their efficacy in a practical test II
Selection of procedures	Use the spray method for areas that cannot be reached by wiping IV
	Use H2O2 nebulisation equipment in addition to regular surface disinfection only in outbreaks of NI where routine wipe disinfection procedures do not lead to the end of the outbreak II
	Do not enter the room until the OEL has dropped below 0.5 ml/m ³ or 0.7 ml/m ³ IV Rooms may only be occupied after the DNEL value has fallen below 1.93 mg/m ³ IV No activity is achieved in blood residue; activity in fluid accumulations is uncertain II
	Only use mechanical methods for surface cleaning in areas without a risk of infection
	Do not use contactless physical instrument-based procedures in areas with an increased or particular risk of infection
Implementation	Cover the surface with enough surface disinfectant and do not remove it before the end of the exposure time by wiping or wiping dry
	Apply use solutions properly and protect them from contamination; observe the period of use IV
	Use fresh, clean wiping textiles; alternatively: use pre-soaked wipes from disposable packaging, reprocessible wipe dispenser systems or the washing machine (ready to use)
	Use application methods that do not require re-immersion of used wiping textiles in the detergent or disinfectant solution As a rule, re-immersion is not acceptable II
	Ensure proper reprocessing and dry storage of all tools used
	Separate cleaning and disinfecting wiping textiles from other laundry to be reprocessed; reusable wiping textiles used for cleaning should be able to be reprocessed and dried in a household washing machine and tumble dryer; reusable wiping textiles used for disinfection should be reprocessed in a disinfecting washing process II and machine dried; store in a dry place until next use and protect from recontamination
	Use disposable wiping textiles if it is not possible to reprocess disinfection wiping textiles in the disinfecting washing process II
	Weigh special procedures such as the mechanical pre-soaking of wiping textiles (ready to use) in a risk analysis and check efficacy
	As a rule, do not use reprocessible wipe dispenser systems in areas with an increased risk of infection II This does not include wipe dispenser systems with alcohol-based disinfectants Observe the duration of use of reprocessible wipe dispenser systems and ensure bactericidal, fungicidal and sporicidal reprocessing before refilling IV Carefully seal the system after each cloth withdrawal Test reprocessible wipe dispenser systems hygienically and microbiologically in case of nosocomial outbreaks II If necessary, conduct random annual hygienic-microbiological tests to check reprocessing
	Limit the use of alcohol-based surface disinfectants to small areas: do not apply more than 50 ml per m ² of room floor area IV
	Observe the exposure time after disinfection:
<ul style="list-style-type: none"> ■ on work surfaces before aseptic tasks ■ after visible contamination with material potentially containing pathogens ■ after contamination from environmental sources ■ after terminal disinfection ■ in patient bathtubs until they are filled with water again ■ in ward kitchens, when it is necessary to rinse with drinking water ■ when using surface disinfectants — especially those against viruses or bacterial spores — the application conditions of which have been determined on the basis of suspension testing only 	
Select disinfectant with a short exposure time if surfaces are to be reused quickly on a regular basis All other surfaces can be used again after drying	



For more information on professional infection prevention, healthcare best practices and important pathogens, please visit www.prevent-and-protect.com – our platform for infection control.