Why Veterinary Instrument Care Starts Before Sterilisation

In veterinary practice, infection prevention does not begin when instruments are placed in the steriliser. It starts much earlier, as soon as an instrument has been used and before blood, tissue or other biological material has time to dry on the surface.

Whether used during routine surgery, dental procedures, wound care, orthopaedics or emergency treatment, reusable veterinary instruments are exposed to a wide range of biological soils. If these residues are allowed to dry, they become harder to remove and may compromise the effectiveness of the cleaning, disinfection and sterilisation steps that follow.

Pre-cleaning, sometimes referred to as point-of-use cleaning, is therefore an important part of veterinary instrument care. Its role is not to sterilise the instrument, but to prevent contamination from becoming fixed to the surface before the item reaches the main cleaning and reprocessing stage.

For veterinary practices and wider animal health facilities, this first step has both clinical and operational value. Prompt and consistent pre-cleaning helps reduce bioburden, protect instrument surfaces, support staff safety and improve the reliability of the full decontamination process.

Why Pre-Cleaning Matters

Veterinary teams work in fast-moving environments where procedures can vary significantly from one animal to the next. A practice may move from routine neutering to dentistry, wound management or emergency surgery within the same day. Instruments may be used on different species, in different clinical conditions and with varying levels of contamination.



Prompt pre-treatment helps prevent blood, tissue, and other biological soils from drying onto instrument surfaces before sterilisation.

This creates a particular challenge for instrument reprocessing. Organic material can begin to dry soon after use, adhering to joints, hinges, serrations, textured surfaces and other hard-to-clean areas. Once this happens, residues become more difficult to remove and may interfere with the cleaning, disinfection and sterilisation steps that follow.

The issue is not simply visible cleanliness. Residual organic matter can shield microorganisms from later decontamination stages and prevent detergents or disinfectants from making full contact with the instrument surface. Even the most effective washer-disinfector or steriliser relies on instruments being properly cleaned first.

Pre-cleaning helps reduce this risk by keeping contamination from drying onto the instrument surface before full cleaning begins. For many veterinary practices, this is particularly important because instrument reprocessing is managed as part of the daily clinical workflow rather than through a separate sterile services department. A clear, practical pre-cleaning process can help reduce variation and support a more consistent standard of infection control.

Protecting Instruments, Patients and Staff

Veterinary instruments represent a significant investment for practices and animal health facilities. Surgical packs, dental sets, orthopaedic instruments and specialty devices must remain sharp, smooth, aligned and functional if they are to perform reliably in clinical use.

Poor cleaning habits can shorten their service life. Dried blood, tissue and saline can contribute to staining, corrosion and pitting. Vigorous scrubbing to remove hardened debris may scratch surfaces or damage fine edges. Over time, even small surface defects can create areas where contamination is more difficult to remove. Hinges may become stiff, cutting edges may dull and precision instruments may lose performance.

Pre-cleaning helps limit the time that corrosive or adhesive soils remain on the instrument surface. When debris is softened or removed early, staff can use gentler cleaning methods during the main reprocessing stage, helping instruments remain in better condition longer.

Keeping instruments in good condition has clear implications for both clinical performance and practice costs. Instruments that are well maintained are easier to clean, safer to use and less likely to need premature repair or replacement. For practices managing cost pressures, effective pre-cleaning offers a practical way to protect existing equipment while supporting infection control.

There is also an important occupational safety consideration. Instrument reprocessing can expose veterinary nurses and other clinical staff to contaminated sharps, scalpels, instruments and other items with cutting or piercing edges. If biological material has dried, staff may need to scrub

more forcefully, increasing the risk of slips, puncture injuries, splashing and exposure to contaminants.

A workflow that reduces the need for aggressive manual cleaning can also support better ergonomics. Repetitive scrubbing, particularly in high-volume surgical settings, can contribute to hand fatigue and discomfort. By making instruments easier to clean at the main reprocessing stage, pre-cleaning can help reduce unnecessary strain on the staff responsible for instrument care.

Enzymatic Cleaning

Enzymatic cleaning has an important role in the early stages of instrument reprocessing because it helps break down the organic soils that can remain on instruments after use. Enzyme-based formulations are designed to act on materials such as proteins, fats and carbohydrates, reducing larger residues into smaller, more water-soluble fragments that can be removed more easily during the main cleaning stage.

This is particularly relevant in veterinary practice, where the type and level of contamination can vary widely depending on the procedure, species and clinical setting. Enzymatic pre-cleaning helps start the breakdown of these residues before the main cleaning stage, supporting a more consistent process.

Enzymatic pre-cleaning should not be viewed as a replacement for the main cleaning stage, nor does it remove the need for careful inspection before sterilisation. Its value lies in preparing the instrument so that the following stages can work more effectively. By preventing soils from becoming fixed to the surface, it helps support a more reliable reprocessing pathway.

Tools and Techniques

Pre-cleaning needs to be practical enough to fit into the daily routine of veterinary work. The exact approach will depend on the practice setting, the type of procedure and the instruments being used, but the aim is to prevent contamination from drying and to prepare instruments for effective cleaning.

Enzymatic spray foams can be applied directly to used instruments soon after a procedure. These solutions help begin the breakdown of biological material and keep instruments moist during transfer to the cleaning area. They can be useful where instruments cannot be cleaned immediately but need to be protected before full reprocessing begins.

Pre-saturated wipes may be used for smaller items, or instruments that cannot be submerged. They provide a practical way to remove visible soil at the point of use and can be particularly useful where quick handling is needed between procedure areas and the reprocessing space.



Organic debris can become trapped in hinges, serrations, and box locks. Early pre-cleaning helps prevent contamination from drying in hard-to-clean areas.



Consistent instrument pre-cleaning protocols help protect veterinary staff from exposure risks associated with biological materials

Enzymatic sponges and soaking pads can also support pre-cleaning by providing gentle mechanical action on delicate or more complex surfaces. This can help loosen residue without relying on harsh scrubbing that may damage the instrument finish.

Because timing has a direct effect on how easily instruments can be cleaned, pre-cleaning should take place as soon as practical after use, before contamination has time to dry and adhere to the instrument surface. Even relatively short delays can make later cleaning more difficult, particularly around hinges, serrations, joints and other areas where residues can become trapped.

Material compatibility should also be considered. Veterinary instruments may include stainless steel, aluminium, plastics, rubber components and specialty coatings, all of which can respond differently to cleaning chemistry and repeated reprocessing. Products and processes should therefore be selected to avoid corrosion, pitting, dulling or degradation, with practice protocols reflecting the manufacturer's instructions for each instrument, particularly for complex or delicate devices.

Daily Workflows

For pre-cleaning to be effective, it has to fit naturally into the way a veterinary practice operates. Teams are often moving between consultations, procedures, recovery, theatre preparation and stock control, so any process that is unclear or too difficult to follow is unlikely to be applied consistently. Used instruments can then be left untreated while staff move on to the next animal or task.

A practical protocol should make clear what happens to instruments immediately after use, how they are contained during transfer, and who is responsible at each stage. This is particularly important in practices where reprocessing is managed by the same team responsible for wider clinical duties, rather than by a separate department. Labelling, tray systems and written procedures can all help reduce uncertainty and support a more consistent approach.

Training should cover both the purpose of pre-cleaning and the practical steps needed to carry it out safely. Veterinary nurses, clinical staff and support teams need to understand when instruments should be treated, how they should be handled and what precautions are required during transfer to the cleaning area. This includes safe segregation of sharps, appropriate personal protective equipment, suitable containment and adherence to written procedures.

The workflow should also include inspection before sterilisation. Instruments need to be checked after cleaning



Enzymatic cleaners help break down proteins, fats, and carbohydrates commonly found on veterinary instruments, supporting more effective cleaning and reprocessing

to confirm that visible contamination has been removed and that the item remains in good condition. If residues are found, the instrument should be re-cleaned before it is sterilised, as sterilising an instrument that has not been properly cleaned undermines the reliability of the whole process.

Supporting Compliance and Instrument Management

Veterinary practices are expected to maintain robust infection control procedures, even though the regulatory framework may differ from human healthcare. Professional guidance, health and safety requirements, manufacturer instructions and local protocols all influence how reusable instruments should be managed.

In practice, effective reprocessing depends on a consistent approach in which instruments are cleaned as soon as possible after use, visible contamination is removed before sterilisation, and staff are protected from avoidable exposure. Manufacturer instructions for cleaning, disinfection and sterilization should also be followed, particularly for complex or delicate instruments.

Documentation can also support good practice. Written procedures, training records, equipment maintenance logs and sterilisation records help demonstrate that infection control is being managed systematically. In larger veterinary groups, consistent protocols across sites can support quality assurance and reduce variation.



Every instrument should be inspected after cleaning to verify that visible contamination has been removed before sterilisation.

Pre-cleaning should be viewed as part of this wider governance structure. It is not an optional extra, but a practical step that supports the reliability of the full reprocessing cycle.

Good instrument care can also contribute to more sustainable practice. Reusable veterinary instruments are designed to withstand repeated cleaning and sterilisation, but their lifespan depends on how they are handled. Preventing corrosion, pitting and avoidable damage helps reduce waste and limits the need for unnecessary replacement.

When instruments are damaged or unavailable, the impact is felt beyond the cost of repair or replacement. Procedures may be delayed, specialty devices may need to be taken out of service, and staff may spend additional time managing avoidable equipment issues. A well-managed pre-cleaning process helps reduce these risks by keeping instruments in better condition and supporting a more predictable turnaround between procedures.

Safer Care

In a busy veterinary setting, the way instruments are handled immediately after use can have a lasting effect on the rest of the reprocessing cycle. Once biological material has dried onto a surface, cleaning becomes more difficult and the reliability of the following stages can be reduced.

Pre-cleaning should therefore be treated as part of routine clinical practice, rather than a task that can be delayed until instruments reach the cleaning area. By preventing residues from becoming fixed to the surface, veterinary teams can make cleaning, inspection and sterilisation more dependable.

For veterinary practices and animal health facilities, this first step supports safer care, protects valuable instruments and helps staff maintain a more reliable approach to reprocessing.





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