## THE SOLUTION TO POLLUTION IS DILUTION

Often, we go through the routine of cleaning without thinking about what we are accomplishing. The issue with this is we may not be obtaining the results that we want to achieve. By understanding the "why" and going back to the basics, we could dramatically change the results.

When we are cleaning a surface such as a cage, tub, floor, bathing system, or the skin of our pets this basic science needs to be followed. First, we should remove the organic material or residue, then clean, and last disinfect. Many get confused in the process and mix up the cleaning and disinfecting steps or think that disinfecting on top of organic material gets the job done. Let's break that down a little further so we understand the principles. If you use bleach as a cleaning agent then there is an issue because bleach is a disinfectant and does not contain surfactants to actually clean. If you don't remove the organic material first that would be like spraying a pile of poo with bleach and thinking you have adequately disinfected.

As we look at any surface, the first thing we need to accomplish is to remove as much of the debris as possible before we start the cleaning process. The phrase "The Solution to Pollution is Dilution" means if we can minimize the dirt, bacteria, fecal material before we start, the less material will be there to clean and disinfect. Once we remove the excess "material" then we can use a cleaner that will remove the small amount of the "material" that is left. Once that is accomplished, we can come back with a correct product to actually disinfect or kill any residual "bugs" that are still hanging out. The whole idea here is to prevent the spread of disease.

Many of the substances we deal with that harbor bacteria, fungi, or viruses tend to be very tenacious like fecal material, oils in the tubes of the bathing system, or oils on the pets. When dried, these substances get even more tenacious. The good news is that the drying process does kill some of the infectious "beasts" but rarely gets them all. So, in our cleaning process we often have to soak or rehydrate to be able to clean efficiently. Spraying down or soaking dried fecal material, soaking the tubes from the bathing system, or conditioning the pet's skin prior to bathing all are methods that we use to accomplish this. In hard surfaces, mechanical cleaning is typically required to remove the material like scraping the floor or running a pipe cleaner type tool down the hoses to remove the oils and debris. In our pets, we must take a softer approach. Aggressive scrubbing on the skin often will create inflammation which in turn may cause even more debris when the body responds.

When it comes to the stage of cleaning, we need a product that is designed to break up the organic matter so that it can be diluted even further. Things like bleach, vinegar, disinfectants (unless in a combination) are not designed to do this. Remember also these are chemicals and must go through a chemical reaction so it takes a little bit of time for this to occur. For instance, if you have a nasty, greasy cooking pan cleaning can be easier by letting it soak for a bit in dish soap. Similarly with a pet, if you will leave the shampoo (not dish soap!!!) on for about 5 minutes you will get better cleaning results than if you shampoo twice in close succession (and use less product).

When it comes to disinfecting (after the cleaning) it too is a chemical reaction. Way too often we spray it on a surface and wipe it off instantly and assume we have done our job. In actuality, disinfectants need a certain amount of contact time. If we rush the process then we don't get the full benefit of the product. It is important to also note that the contact time does vary depending on the organism you are trying to kill. Some bacteria and viruses are very fragile and are killed easily but some are very hardy and resistant and need a lot of contact time to be eliminated. The hard part is the bottle may say that it kills parvo, HIV, MRSA/MRSP, and Salmonella but it doesn't list out the contact times to accomplish each one of those. That is always a good discussion to have with your supplier so that you are aware, and you can adequately protect yourself and the environment.

As groomers and veterinarians, one of our main emphases is the health and wellbeing of the pets (not to mention ourselves) we care for. If we are not cleaning and disinfecting their environment or the equipment we use to take care of the pet's skin appropriately, then we become the source of disease ourselves. This should not be something that we consider doing once a month, once a week, or even once a day. It should be our thought process between every animal if there is any chance we could spread disease. Think about yourself. Would you feel comfortable bathing in someone else's dirty bath water or sitting on the exam table (in those special paper gowns) after someone else that might be carrying a disease? We can't write this off as a difference as matter of human versus pet. It is a matter of potential disease spread. The issue with the spread of disease is we can't see the "beasties" that cause disease, therefore, it is easy to ignore them. Instead, we should assume they are always there and be diligent about stopping the spread. The phrase we should live by is "the Solution to Pollution is Dilution" and work to get rid of as many of the "bad guys as we can.