

# A Look at Computer Care and Maintenance

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Paul called me up last February and asked me to tell you everything I know about computer maintenance, in five minutes. I'd have been more flattered if he'd asked for everything I know about cow maintenance. Anyhow, it's not hard to tell you about maintaining computers in four minutes, which will leave me a minute at the end, for cows.

Computer chips sometimes fail in the first few hundred hours of use due to manufacturing flaws. After that, the most common cause of computer failure is high voltage surges which occur regularly on both electrical power lines and telephone lines, especially during thunderstorms.

You absolutely **MUST** have your computer plugged into a device called a "surge suppressor". It will cost about \$20 from a mail order catalog and is perfectly adequate in most situations. It has a cord that you plug into a regular wall outlet, and a bunch of protected outlets that you can use for your computer, printer, monitor, modem, and whatever else you may want. One switch turns everything on and off at once. This model also protects a phone line - you run a cable from one plug to the wall outlet, and from the other to your modem.

One characteristic of nearly all surge suppressors is that the important component sacrifices a little bit of itself each time it protects your computer. Eventually, after it protects you from a certain number of voltage surges, it will quit, with no outward signs. There is no way to test how much protection is left without destroying your suppressor, so it is not a bad idea to replace your surge suppressor every few years, or any time you know it has taken a big hit. I think you're better off buying a cheap surge suppressor, with phone line protection, and replacing it periodically than you would be buying an expensive one and forgetting about it.

About the only other preventable cause of premature computer failure is heat buildup caused by dust. It's not a bad idea to open the case of your computer occasionally and vacuum out any dust you can see. If dust builds up, it will interfere with cooling, and hot chips fail much sooner than cool ones. Even with a quarter inch of dust on them, chips should last for many years.

Computer viscera are not extremely fragile. You don't want to dislodge any cables, and you must make sure you aren't carrying any static electricity when you open up a computer. Just touch the metal case to discharge any static you may have picked up shuffling across the rug before you touch any electronic parts.

The data on your computer needs more attention to preventive maintenance than the hardware does. Spinrite

(Gibson Research, 22991 La Cadena, CA 92653; 714-830-2200) is a program that does a thorough exam of your hard disk and often can recapture data that might otherwise be lost. It costs about \$60, is easy to use, and will prevent most hard disk problems.

Most experts will also recommend you make regular backup copies of your entire hard disk using a program like PCBackup from PCTOOLS or FastBack. I haven't yet had any hard disk problems so I'm a little blasé. Most of the contents of my hard disk are programs that don't change anyway. I keep backup disks of all my programs stored in a basement freezer in case of fire. The important data that does change such as client records or programming code doesn't take up much space on floppies made with the DOS COPY command.

In case of fire, disks or tape are destroyed more by smoke and steam than by heat, so even if you keep backups in a fire safe or freezer they should be inside ziplock bags or some other smoke-proof container.

Now an advertisement. We are trying to establish a library of shareware, or computer programs that can be copied for free. We're especially interested in material written by bovine practitioners for bovine practitioners. This includes spreadsheets, forms, newsletters, or whatever else you can think of. If you have something to contribute contact me, or Julie Zdrojewski, or any member of the Information Management Committee.

So, back to cows. We do ventral paramedian abomasopexies in all kinds of less-than-sterile circumstances. I can overlook a few flies, but it seems a little tasteless when a cow starts shaking her front legs and launches a big gob of manure right into your incision. The solution is stretch wrap. It is sold by all the companies that sell packaging materials and plastic bags. It is very stretchy and really does stick to itself well, and to nothing else.

I tie up legs with rope halters and wrap the feet either before or after rolling the cow up. I consider wrapping the rear feet optional because all the manure showers I've experienced, at least doing DA's, have come from the front feet. I started using 10 inch wrap, but I guess I prefer the 5 inch because it will fit in my surgery grips. This brand comes with two blue handles on each roll. I saw off one of them to make the roll easier to use in close quarters. One supplier is National Bag, 800-247-6000, catalog number 87-531A2 for 10 inch or 87-529-A2 for the 5 inch width. you can get it many other places too.

We've also found a good source of custom made rope

halters. Sharon Christopherson, Morrisonville, IL 62546, 217-526-3427, will make them in any color or length you

prefer. We ask for halters that are three feet longer than standard and pay \$2.20 each for them by the dozen.

## Uterine Lavage: A New Look At An Old Technique

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For many years practitioners, including myself, have attempted to treat acute toxic metritis by flushing a variety of solutions into the uteruses of affected cows. We have relied primarily on the dilution effect of our solutions or their antibacterial activity to induce recovery. Frequently, the stress of adding additional pressure to the uterine lining as we pumped gallons of fluids into these cows was more than the animal's health could tolerate.

Over time our practice introduced many modifications including modifying the ends of the nasogastric tubes to minimize the trauma to the uterine wall, multiple ports for the discharge of water from the end of the tube, dual tubes (one input, one output) and even calf drenching kits.

### *Current Procedures*

The equipment we currently use has been constant for nearly two years and appears to be effective and present the least risks. It includes:

1. Tieman flexible rubber rectal catheter
2. Foal nasogastric tube — 3/8" O.D.
3. Recycled 500 ml Dextrose container
4. Storage vessel for disinfectants
5. 22 inch infusion pipette

The flexible rubber human rectal catheter is the only part of the apparatus that is presented to the uterus. Any other product in our experience is capable of causing injury to the friable infected uterine wall. The clear foal nasogastric tube is excellent for viewing the character of the fluid being removed from the uterus. The recycled dextrose container functions as a dipper, a funnel and as a reservoir for examining the discharged fluids.

### *Possible Risks*

Perforation of the uterine wall with the lavage equipment, rupture of the uterine wall from excessive fluid pressure, reflux of the fluid through the oviducts, and physical or chemical irritation of the uterine mucosa are potential consequences of *mishandled* equipment and supplies. Our *earlier* use of unguarded plastic nasogastric tubes, pumps,

calf bags and failing to remove the large quantities of fluids that we poured into the uterus, frequently left the health of our patients compromised.

It would be irresponsible of me not to make you aware that there are risks to the patient associated with this procedure, even under well-managed situations, and that you have an obligation to make your client aware of them. Your client must be well informed and it is he/she that accepts the risks NOT YOU. Compromises on the equipment appear to compound the risks, in my opinion. Therefore, the numerous modification of tubes and ends that have been tried by our practice are noted to encourage you NOT to consider them as suitable adaptations of the equipment presented. Hopefully, you will not have to re-live our failures.

If the tubes are intended for use on several farms, care must be taken to eliminate the potential for their being vectors for infectious disease. Ideally each farm should have its own set of tubes although this has never seemed practical. Our area is brucellosis free and with normal sanitation and respect for disinfectants, I am not aware of a situation in which the tubes were a vector for any disease transfer, however it is a concern.

### *General Principles*

Uterine lavage can be safely used to remove the toxic degradation products of retained fetal membranes and the frequently accumulated toxic fluid if: the fragility of the infected uterine wall is respected; small volumes of rinsing solutions are used and are not allowed to remain and stress the integrity of the oviducts; and medications are left in sufficient concentrations to be effective and are not overcome by the environment in which they are left.

Three principles must be observed:

1. If a lavage tube can be pushed through a wet paper bag, it should NOT be used in the uterus.
2. What goes in as a rinse should come out.
3. Volumes of rinse solution added at any one time should not exceed 1500 ml and not accumulate to > 4500ml in a cow that is 9-10 days post-partum.