## What You Need to Know about

# COLONOSCOPY



JINI PATEL THOMPSON

#### What You Need To Know About Colonoscopies

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#### **Table of Contents**

What You Need To Know Before You Have A Colonoscopy	2
What To Do If You Decide To Have A Colonoscopy	6
Before Your Colonoscopy	7
After Your Colonoscopy	8
Pre & Post Colonoscopy Treatment Summary	11
Colonoscopes Cannot Be Sterilized - Clinical Evidence	12
Colonoscopy Lawsuits	21
About the Author	23

#### WHAT YOU NEED TO KNOW BEFORE A COLONOSCOPY

The next time your doctor suggests you have another colonoscopy done, first take the time to really weigh up the risks versus the possible benefits. This report is going to outline only the most prevalent risks that are present with every colonoscopy. I'm not going to get into rare risks here, like intestinal perforation, just those that may occur through routine procedures.

Regarding possible benefits, the first question you should ask yourself and your doctor is: Will the results of this colonoscopy change the course of treatment? Certainly, there are serious occasions where the best course of action is to have the colonoscopy. But, if your doctor is primarily recommending a colonoscopy as an information-gathering procedure, or as liability protection, then it's not going to benefit you too much. It may, however, cause a lot of damage, and that's what this report is going to help you assess.

Here's how a colonoscopy works: First, you have to self-administer a "bowel preparation" procedure. These are substances that cause you to completely clear out your bowel and leave the walls of your colon squeaky clean so the fiber optic camera can get a good picture of what's happening with your mucosal lining and intestinal wall. Understandably, a complete clear out of your bowels over a 1 to 3-day period is not pleasant, usually toxic, and sometimes painful and traumatic.

But the really damaging thing about this kind of a colon cleansing is that it pretty much destroys your bacterial flora and balance of microorganisms in your colon. The average colon contains 3 to 4 pounds of bacteria. If you're healthy, most of that consists of good, healthy bacteria. So the colonoscopy prep procedure has just stripped your colon of its good, protective bacteria. And guess what? Your colon is now wide open to secondary or opportunistic infection by pathogenic bacteria, yeast, viruses, parasites, etc.

Into this now highly vulnerable colon, the doctor then inserts a colonoscope. This is a long tube that closely resembles a garden hose with a fiber optic camera on the end of it. But here's what most people (including your own doctor) don't know about colonoscopes: It's impossible to properly or completely sterilize them.

It was actually Natasha Trenev (the founder of Natren probiotics) who first alerted me to this whole issue. We were on a TV show together when she told a story of how the Mayo Clinic had sent out letters to all its patients who'd had a colonoscopy - warning them that due to the inability to sterilize the apparatus, the patient might have been exposed to hepatitis, AIDS, etc. I was aghast. Could this really be true?

I began researching mainstream medical and scientific journals for evidence and I'm sure you'll be as horrified as I was at the results. But before we get into the technical medical jargon, let's take a look at this newspaper article from the *LA Times*, where the reporter covered this exact issue:

## UNSTERILE DEVICES PROMPT WARNINGS; Use of dirty endoscopes in colon and throat exams can pass along infections, activists say

The nation's leading manufacturer of endoscopes has known for a decade that some scopes contain cavities inaccessible to cleaning by hand but has failed to fix the oversight," said David Lewis, a University of Georgia research microbiologist who has conducted research for the federal Environmental Protection Agency on the issue of dirty endoscopes.

There is wide consensus that it is difficult to sterilize the devices, which can cost \$28,000 each, without using temperatures so high that the scopes themselves become damaged. The scopes have numerous cavities that are difficult to clean, even by hand, critics say.

Acknowledged Timothy Ulatowski, an FDA official who oversees endoscope compliance: "When these things were designed, cleaning and sterilization was obviously an afterthought."

Even the government can't agree on how long is needed to clean the devices. The FDA says endoscopes should be disinfected for 45 minutes to kill tuberculosis bacteria, but the Centers for Disease Control believes the job can be done in 20 minutes, Lewis says.

He and other microbiologists advocate sterile disposable parts for endoscopes as well as the use of a condom-like sheath for each new patient. But they say manufacturers and health-care providers have resisted such solutions because of added costs.

Lewis says Olympus, which provides 70% of endoscopes on the U.S. market, has long been aware of cleaning problems associated with its product. In a patent filed in 1993, he says, the company wrote that at times "satisfactory cleaning cannot be achieved."

(Source: John M. Glionna. The Los Angeles Times. Feb 13, 2003. pg. B.1)

So now you have a colon that's been stripped of its natural protective microflora, and directly exposed to a colonoscope that may be infected with any number of harmful viruses, bacteria and other pathogenic microorganisms.

I know that, because this is such a fantastical claim to make, more evidence is certainly needed. So let's get a little deeper into this issue and make sure it's grounded in hard science. Each of the following problems (from evidence gleaned from mainstream medical journals), highlights a different facet of the sterilization problem:

- Endoscopes and colonoscopes are damaged by high temperature sterilization, so technicians have to use other methods to attempt sterilization. I say "attempt" because to date, they have not found an alternate method that can kill every type of pathogen. (1,7)
- A common sterilant for colonoscopes (gluteraldehyde) has actually been proven to *cause* colitis. If you develop any of the following symptoms within 48 hours of having a colonoscopy, it's likely the gluteraldehyde residues on the colonoscope are responsible: Cramps and abdominal pain, tenesmus (painful, urgent straining to defecate), rectal bleeding and in some cases, hemorrhaging. (2)
- Gluteraldehyde (the most commonly used disinfectant for colonoscopes) also cannot kill mycobacteria. Mycobacterium (MAP) is the fungal/bacterial hybrid microorganism that has been identified in up to 98% of patients with Crohn's Disease. (3)

- Ethylene oxide gas sterilization has also been shown to be ineffective for sterilizing flexible endoscopes, like colonoscopes. (4)
- Of all the endoscopes (gastroscopes, bronchoscopes, sigmoidoscopes), colonoscopes are the most difficult to sterilize.<sup>(5)</sup>
- Human error also plays a big role in colonoscope contamination. One study observed staff responsible for cleaning colonoscopy apparatus for two years running and their conclusion was: If the staff do not clean the colonoscope properly prior to disinfection, then no matter what sterilization procedure is in place, the colonoscope remains highly contaminated; and after two years of observation, they discovered a lot of evidence of human error. (6,7)

In the last section of this report, I have listed the specific medical publications and quoted the texts these assertions come from, so you have the hard science backing up these claims. Your doctor will also need to see this section when you take this report in to him/her.

However, before we get to that, here's what to do if you're faced with a colonoscopy, to minimize the potential damage.



"Gee. I had hoped to make it to the adult table at Thanksgiving before you recommended I have my first colonoscopy."

#### WHAT TO DO IF YOU DECIDE TO HAVE A COLONOSCOPY

Those of you who have read my books know my personal opinion on colonoscopies and that I haven't had another one done since my first, over 25 years ago. However, in the event that you really do need to have one done, what can you do to protect yourself?

A medical supply company called Stryker was working on a colonoscopy apparatus with a disposable sheath – called ColonoSleeve – and this would have been ideal. Unfortunately, in 2008 they abandoned the project for unknown reasons. I don't currently know of any other disposable colonoscopy product, but check with your doctor as one may be developed at any time.

If you're just having a sigmoidoscopy done, make sure your doctor uses a disposable sigmoidoscope. These are commonly available, so should be easily obtained.

However, while using a disposable scope will greatly protect against infection, it still doesn't make up for the disruption and destruction of your healthy bowel flora. So

following your colonoscopy, you will also need to go on high dose, therapeutic-quality probiotic supplementation.

Ideally, you want to first follow the colonoscopy with *Jini's Probiotic Retention Enema* and then at least 3 months of high dose oral probiotic supplementation. You may also want to follow *Jini's Wild Oregano Oil Protocol* as well to get rid of any new pathogens transmitted via the colonoscope.

Obviously, I can't give you full details of all these protocols here – or this would then have to be a book! But I can give you the basic probiotic supplementation and enema that should be enough to deal with routine cases. Then if you have complications (*C. difficile* or any other infections) you can get any of my books where these two protocols (and more) are given in detail. Or you can get just these two protocols in my eBook, *Jini's Healing Guide: Natural Treatments for Gut Infection*, all are available at: www.LTYGshoppe.com

#### BEFORE YOUR COLONOSCOPY

If given a choice for your test prep procedure, opt to use only natural substances like magnesium citrate, clear juice and broths for 2 days and then a colon-flushing enema – use warm, filtered water for the enema. Using a disposable enema bag makes it easier to give enemas as the tip is much smaller than on a regular enema bag.

Also drink George's Aloe Vera Juice; 1/2 cup, 3 times per day on an empty stomach, during your test prep and then the morning of your colonoscopy. George's Aloe Vera is clear, like water, but very healing and soothing and will help protect against damage. All these supplements are available at: <a href="https://www.LTYGshoppe.com">www.LTYGshoppe.com</a> If you don't want to purchase online, just go there to see which brands I recommend (brands that are proven safe for people with IBD and sensitive digestive systems) and then purchase at your local health store.

#### AFTER YOUR COLONOSCOPY

#### 1. Administer Jini's Probiotic Retention Enema immediately after colonoscopy.

This retention enema, which delivers very high dose probiotics directly to your colon (and lower part of your ileum), is the fastest way to replace your good bacteria – which was cleaned out by the colonoscopy prep procedure.

#### Jini's Probiotic Retention Enema

- 2 tablespoons B. bifidum Natren Bifido Factor powder
- 2 tablespoons *L. bulgaricus* Natren Digesta-Lac powder
- 1 tablespoon of *L. acidophilus*\* Natren Megadophilus powder
- 8 ounces (1 cup) of warm spring or filtered water.

Mix together well (no lumps) and then pour into an enema bag. Administer slowly, massaging mixture into your colon. Retain mixture until all the water is absorbed. If possible, do it right before bed (lying in your bed) and then just go to sleep. Then the bacteria will have all night (hopefully) to colonize.

The use of dairy-based powders is preferred for all three probiotics, if tolerated. If you can't, then use the non-dairy powders. However, Digesta-Lac is only available in encapsulated powders in the non-dairy formulation, so you'll have to just open the capsules, until you have two tablespoons of powder.

\*Although *L. acidophilus* is primarily active in the small intestine, in disease states the ileocecal valve (between the large and small intestine) often malfunctions and bacteria from the colon washes up into the small intestine. Also, a colonoscope can sometimes bang up against this valve and damage it or spread infection. Therefore I like to add some *acidophilus* to the retention enema mixture just in case this may be occurring.

As the name suggests, this is not a cleansing or flushing enema, but rather it is an implant or retention enema – where the goal is to hold the mixture in your colon until the liquid is completely absorbed (about two hours). This will greatly help to protect against secondary or opportunistic infection by flooding the colon with lots of beneficial bacteria as soon after your colonoscopy as you can.

#### 2. High dose oral probiotic supplementation

You need to take the full spectrum of probiotics (*L. acidophilus, L. bulgaricus, B. bifidum* - and *B. infantis* is good too, but not crucial) in either capsule or powder form for at least three months following a colonoscopy. Clinical studies show that to obtain a therapeutic effect, you need to ingest a minimum of 7 to 10 billion CFU (colony forming units) of each species, per day.

And again, the probiotics you take need to be of therapeutic quality and potency, which most brands are not. As I recommend Natren probiotics, I'm going to give you the dosage instructions for the various Natren products. If you choose to use a different brand, then make sure it meets the potency requirements for bioavailable probiotics, guaranteed to the *end* of the expiry date, and that the dosage equals 7 to 10 billion CFU of each species, per day. However, as I have yet to see another brand of probiotics that meets these rigorous requirements, you really should use Natren to be ensured of the results.

If you are having three or more bowel movements per day, you will need to take the probiotics in powder form – otherwise the transit time through your gastrointestinal tract is too fast and capsules will not dissolve properly. If you are having two or less bowel movements per day, you can take the capsules if you prefer.

Take your probiotics 1 to 3 times per day (the frequency depends on the amount of bacteria contained in each dose). Take one Natren Healthy Trinity capsule, twice a day for three months, then one capsule per day for one year. Since each species is enrobed in a separate oil bubble, the species are not touching each other (so remain potent and viable) inside the capsule, and they are protected from stomach acids, so you can take

them on an empty stomach, or with food. I recommend you take one of the capsules with food, and the second on an empty stomach right before bed.

If you are taking the single species probiotics (e.g. just *L. acidophilus* on its own), these are available in two formulations; either loose powder in a jar, or encapsulated powder.

If taking the loose powder, then take 1 teaspoon of each powder (i.e. one teaspoon of each different species; Megadophilus, Bifido Factor, Digesta-Lac) mixed together in 8 ounces of room temperature filtered or spring water, three times a day on an empty stomach (20 minutes before food, or two hours after food) for three months. Then take 1 teaspoon of each, 1 to 2 times a day for the rest of the year.

If you prefer the encapsulated powders (also called Megadophilus, Bifido Factor, Digesta-Lac), then take 2 capsules, 3 times a day on an empty stomach (20 minutes before food, or two hours after food) for three months. Then take 2 capsules, 1 to 2 times per day for the rest of the year.

Again, these encapsulated powders are not the same as the Healthy Trinity capsules I described in the previous paragraph. These capsules contain only one species per capsule and they are in the powdered growth medium. The powdered probiotics are available in dairy-based or non-dairy formulations. Take the dairy-based if you can, but if you're intolerant to dairy, then use the non-dairy powders. The Healthy Trinity capsules do not contain any dairy.

Alternatively, what many people like to do, and find to be the most effective, is to take their probiotics in a manner called "probiotic layering". Since the different forms of probiotic delivery (i.e. powders vs. oil suspension capsules) have different benefits to the body, the most effective therapy can be to combine the two. So then you would take one Healthy Trinity capsule once a day and either 1 teaspoon of each powder (Megadophilus, Bifido Factor, Digesta-Lac), or 2 capsules of each encapsulated powder, 2 to 3 times a day (on an empty stomach).

You may need to experiment (follow your intuition) to find the optimal probiotic dosing for your body. But keep in mind the therapeutic directive that you must consume 7 to 10 billion CFU of each species, each day, to see good results.

You can order Natren probiotics from my <u>LTYG Health Shoppe</u>, where they are kept refrigerated at all times and then shipped to you on ice. Or you could get your local health store to order them in for you, as long as you can be assured that they will keep them in a refrigerator in the store.

If you're confused about probiotics or want more information, then you may want to get my teleseminar, *Probiotics 1*, which has a wealth of in-depth information on probiotics and dosing.

Once your bowel flora is healthy, you need to maintain a daily intake of probiotics (as our ancestors did for thousands of years). This can be achieved simply through eating the right foods. Excellent sources of food-based probiotics include: raw milk, homemade yogurt, fermented vegetables, fermented beans and kefir.

Other sources of good bacteria and enzymes include fermented breads (fermented for 24 to 48 hours before baking), lacto-fermented vegetables and lacto-fermented beverages. For an excellent resource on how to prepare these healing foods, pick up the *Nourishing Traditions* cookbook by Sally Fallon and Mary Enig PhD.

#### PRE & POST COLONOSCOPY TREATMENT SUMMARY

Here's a summary of the steps you can take to minimize the damage of a colonoscopy and speed your recovery:

- Only have a colonoscopy if absolutely necessary; use other screening methods if possible.
- Use a natural bowel clearing procedure: clear broths, clear juice, magnesium citrate and a colon-flushing enema using warm, filtered water.

- Protect the gut before the colonoscopy by drinking half a cup of George's Aloe
   Vera Juice 3x/day and the morning of the colonoscopy.
- Administer Jini's Probiotic Retention Enema immediately after the colonoscopy
  (as soon as you can) and then follow with high dose oral probiotics for 3 months.
- Continue to eat food-source probiotics as part of your regular diet; homemade yoghurt, kefir, fermented vegetables, etc.
- If you develop a C. difficile, mycobacteria, or other infection after the colonoscopy, then get *Jini's Healing Guide: Natural Treatments for Gut Infection* to eliminate the infection and heal the gut.

#### COLONOSCOPES CANNOT BE STERILIZED - Clinical Evidence

Here's the scientific evidence (from mainstream, peer-reviewed medical journals) that I promised you – with the actual articles quoted that outline the top concerns surrounding the inability to sterilize colonoscopes and other endoscopes. Until the medical profession develops a disposable colonoscopy, or some kind of protective sheath, a colonoscopy poses a serious risk of infection.

#### 1. Many Scopes Damaged By High Heat Sterilization

The article below highlights the ongoing debate over how exactly to effectively sterilize endoscopes (include bronchoscopes, sigmoidoscopes, colonoscopes, gastroscopes, etc.). The sterilant most widely used for scopes which are damaged by high temperatures (and most are) is gluteraldehyde. But, see the next article to find out why gluteraldehyde is NOT a good sterilant for the patient receiving a colonoscopy.

Endoscope decontamination: Where do we go from here?

By Babb JR, Bradley CR

Thorough cleaning and disinfection or sterilization of endoscopes and associated equipment will reduce the likelihood of misdiagnosis and post-procedural infection. It will also prevent instrument deterioration and

malfunction. With a rapid escalation in demand for endoscopy, particularly that associated with minimally invasive surgery, it is important that we have the processing technology to match the diagnostic and therapeutic value of these instruments without exposing staff and patients to unnecessary risk.

Wherever possible staff should purchase heat tolerant endoscopic equipment that is readily accessible for cleaning. Automated processors, e.g. washer disinfectors and ultrasonic cleaners, improve the quality of the decontamination process but machines must have a self-disinfect function to prevent instrument recontamination during processing. Sterile, or filtered bacteria-free, water is essential for bronchoscopes and invasive instruments. Glutaraldehyde is still the most widely used disinfectant, particularly for the heat sensitive flexible endoscopes, but it is irritant and sensitizing and a safer alternative is sought.

Peracetic acid is more rapidly efficacious and probably less irritant and, provided it does not damage endoscopes and processing equipment, may prove a suitable alternative. Unfortunately there are no nationally agreed test methods for assessing this and other new endoscope disinfectants and therefore no register of suitable or approved products.

There is also no proven safe alternative to ethylene oxide for sterilizing invasive heat labile flexible endoscopes. It is important that, if toxic disinfectants and sterilants are used, staff and patients are suitably protected from exposure. Update training is essential for all processing staff if infection risks are to be minimized and sensitization problems avoided.

(Source: J Hosp Infect 1995; Vol 30, Iss Suppl.: 543-551)

#### 2. Common Colonoscope Disinfectant Causes Colitis

In this next article we find that gluteraldehyde on colonoscopes (the residue left after

sterilization), can result in toxic colitis - symptoms within 48 hours of the colonoscopy included cramps and abdominal pain, tenesmus (painful, urgent straining to defecate), rectal bleeding and in some cases, hemorrhaging. Also, if you've been diagnosed with ischemic colitis, you may in fact have gluteraldehyde-induced toxic colitis!

#### Glutaraldehyde colitis: radiologic findings

By Birnbaum BA, Gordon RB, Jacobs JE

Department of Radiology, Hospital of the University of Pennsylvania,

Philadelphia 19104

**Purpose**: Two percent glutaraldehyde on colonic mucosa may result in a toxic colitis, and the clinical features may mimic those of colonic ischemia. The study was performed to determine the radiologic appearance of glutaraldehyde-induced toxic colitis.

**Materials And Methods**: A retrospective review was performed with the clinical and imaging findings in four patients with glutaraldehyde-induced colitis seen during a 6-year period.

Results: Patients developed a self-limited syndrome of cramps and abdominal pain, tenesmus, and rectal bleeding within 48 hours of uncomplicated sigmoidoscopy or colonoscopy. Sample cultures excluded enteric pathogens. Computed tomography (CT) demonstrated circumferential thickening of the colonic wall in a left-sided distribution in all patients. Heterogeneous mural enhancement (target-sign appearance) was noted in two patients. Follow-up CT studies confirmed resolution of mural wall thickening with conservative management.

**Conclusion**: The clinical and radiologic features of glutaraldehyde-induced toxic colitis may mimic those of colonic ischemia. This complication should be suspected in patients who develop hemorrhagic colitis immediately after undergoing colonoscopy.

#### 3. Commonly Used Colonoscope Disinfectant Cannot Kill Mycobacterium

Also important to note, is that gluteraldehyde (the most commonly use disinfectant for endoscopes) is not very effective against mycobacteria (remember that Mycobacterium Avium Paratuberculosis has been detected in 92-100% of Crohn's patients - incidence varies between studies). The normal amount of time a hospital immerses a colonoscope in gluteraldehyde is 10-20 minutes. This article shows that even after 45 minutes, mycobacteria still remained in four out of five scopes.

## Mycobacteria and glutaraldehyde: Is high-level disinfection of endoscopes possible?

By Urayama S, Kozarek RA, Sumida S, Raltz S, Merriam L, Pethigal P

**Background**: High-level disinfection of endoscopes has traditionally been undertaken by manual or automatic scope cleaning plus a 10 to 20 minute soak in 2% alkaline glutaraldehyde. Mycobacteria species are less sensitive to glutaraldehyde, and a 45-minute instrument soak has recently been recommended by the manufacturer. Because of concerns over endoscope damage, need for more endoscopes, and perception that the current cleaning method is adequate, we prospectively studied mycobacteria-contaminated endoscopes at various stages of the cleaning process.

**Methods**: All work was done under a laminar flow hood in a microbiology laboratory. Five gastrointestinal scopes were contaminated with 10(8) colony forming units per milliliter (CFU/mL) of Mycobacterium chelonei, an atypical mycobacterium similar in chemical resistance to Mycobacterium tuberculosis but with less infectious potential. Cultures of the sheath, biopsy channel, and elevator channel were taken at baseline, after manual cleaning, and after 10, 20, and 45 minutes of glutaraldehyde soak both before and after alcohol rinse.

**Results**: Manual cleaning resulted in a mean of 4.7 log(10) reduction in viable mycobacterial colonies. Qualitative studies of the external endoscope surface as well as the air-water valve showed no detectable organisms after a 10-minute exposure to alkaline glutaraldehyde. Conventional quantitative culture techniques of the channels demonstrated one endoscope out of five with consistent growth after a 10-minute exposure to glutaraldehyde.

Following alcohol treatment, there was no significant colony growth. In contrast, a quantitative membrane filter system showed the presence of at least one mycobacterial colony in four out of five scopes after a 45-minute glutaraldehyde exposure.

**Conclusions**: Additional studies utilizing a standardized mycobacterial species, inoculum size, and suspension characteristics are recommended to delineate adequate duration of disinfectant exposure time.

(Source: Gastrointest Endoscop 1996; Vol 43, Iss 5:451-456)

#### 4. Gas Sterilization Ineffective For Colonoscopes

Here we have another article assessing endoscope sterilization procedures - in this case gas sterilization, and the conclusion is again: unable to properly/reliably sterilize: "The inability of all sterilizers, including the 12/88, to kill organisms in narrow lumens reliably when serum and salt were present raises concern about the current practice of gas sterilization of flexible endoscopes".

Here's the hard evidence:

Comparison of ion plasma, vaporized hydrogen peroxide, and 100% ethylene oxide sterilizers to the 12/88 ethylene oxide gas sterilizer

By Alfa MJ, Degagne P, Olson N, Puchalski T

**Objective**: The performance of a standard gas sterilizer, which uses a mixture of 12% ethylene oxide (EtO) and 88% chlorofluorocarbon as the sterilizing gas (12/88), was compared to selected gas, ion plasma, and vaporized hydrogen peroxide (H2O2) sterilizers that do not use chlorofluorocarbons. The effect of serum and salt on sterilizer performance was evaluated.

**Design**: Test carriers (porcelain and stainless steel penicylinders, or 125-cm lengths of plastic tubing [internal diameter of 3.2 mm]) were inoculated with Escherichia coli, Enterococcus faecalis, Pseudomonas aeruginosa, Mycobacterium chelonei, Bacillus stearothermophilus spores, Bacillus subtilis spores, and Bacillus circulans spores and then subjected to sterilization using 12/88, 100% EtO, ion plasma, or vaporized H2O2 (hydrogen peroxide).

The bacterial inoculum was prepared with and without 10% serum and 0.65% salt, and the residual bacterial load after sterilization as determined using viable counts.

**Result**: All of the sterilizers tested effected a six-log(50) reduction of the bacterial inoculum on penicylinders, unless 10% serum and 0.65% salt were present, in which case the 100% EtO, vaporized H2O2, and ion plasma sterilizers were not as effective as the 12/88 sterilizer. None of the sterilizers could eradicate 10(6) CFU of all of the bacteria in 10% serum and 0.65% salt when inoculated inside a narrow lumen.

**Conclusions**: The margin of safety for the 100% EtO, vaporized H2O2, and ion plasma sterilizers is less than that of the 12/88 sterilizer. The inability of all sterilizers, including the 12/88, to kill organisms in narrow lumens reliably when serum and salt were present raises concern about the current practice of gas sterilization of flexible endoscopes.

(Source: Infect Control Hosp Epidemiol 1996; Vol 17, Iss 2:92-100)

#### 5. Of All Endoscopes, Colonoscopes Have Highest Level Of Contamination

This article highlights the fact (in a TWO-YEAR study) that whether manual or automated sterilization procedures were used, colonoscopes were more often contaminated than gastroscopes or bronchoscopes:

**Design**: Test carriers (porcelain and stainless steel penicylinders, or 125-cm lengths of plastic tubing [internal diameter of 3.2 mm]) were inoculated with Escherichia coli, Enterococcus faecalis, Pseudomonas aeruginosa, Mycobacterium chelonei, Bacillus stearothermophilus spores, Bacillus subtilis spores, and Bacillus circulans spores and then subjected to sterilization using 12/88, 100% EtO, ion plasma, or vaporized H2O2 (hydrogen peroxide).

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(Source: Infect Control Hosp Epidemiol 1996; Vol 17, Iss 2:92-100)

#### 6. Human Error Results In Unsterile Colonoscopes

This next article points out that even if a hospital does have an effective sterilization or disinfection method in place - the endoscope will NOT be sterile if it has not been thoroughly cleaned BEFORE sterilization/disinfection takes place. And this is where the potential for human error, lack of time, lack of staff, etc. comes into play.

## *High-level disinfection or "sterilization" of endoscopes?*By Muscarella LF

Controversy has surrounded the use of liquid chemical germicides to reprocess medical instruments that are damaged by heat sterilization. A review of the literature was performed to assess and compare the efficacy of disinfection and sterilization processes. The results of this review demonstrate that high-level disinfection of thoroughly cleaned endoscopes is not associated with a higher infection rate than is "sterilization."

While there may be a theoretical distinction between the highest level of disinfection and sterilization, thorough cleaning eliminates clinical differences between the two. High-level disinfection is quick, effective, inexpensive, and recommended whenever heat sterilization is not feasible. A low-temperature sterilization process should be considered only if it is comparable in cost to disinfection or if it offers demonstrated advantages without damaging the instrument. Neither disinfection nor sterilization is likely to be effective if the instrument is not cleaned thoroughly after use.

(Source: Infect Control Hosp Epidemiol 1996; Vol 17, Iss 3:183-187)

#### 7. Following Sterilization Procedures Doesn't Result in Sterile Colonoscopes

This study shows that following standard colonoscope sterilization procedures 62.3% of the outside surfaces were still contaminated and 40.3% of the channels were still

contaminated with infectious bacteria. Instituting further sterilization procedures reduced the bacterial contamination but did not eliminate it - i.e. the colonoscopes still were not sterile.

### Quality improvement in gastrointestinal endoscopy: Microbiologic surveillance of disinfection

By Merighi A, Contato E, Scagliarini R, Mirolo G, Tampieri ML, Pazzi P, Gullini S

**Background**: Cleaning and disinfection procedures play an essential role in the prevention of infection transmission in gastrointestinal endoscopy. In spite of published detailed guidelines, several variants and weak points still exist.

**Methods**: Cleaning-disinfection procedures were carried out according to "Working Party, Sydney 1990." A microbiologic surveillance protocol tested the contamination of endoscopes and of automatic washing machines. To assess and improve the efficacy of disinfection, we adopted a quality assurance program.

**Results**: During a 2-year follow-up, the outside surfaces of gastroscopes were contaminated in 60.5% and channels in 41.3%; the outside areas of colonoscopes were contaminated in 62.3% and channels in 40.3%. Isolated bacteria were gram-negative organisms, particularly Pseudomonas species, and grampositive organisms, mostly Staphylococcus species. The water reservoirs of automatic washing machines were frequently contaminated by Pseudomonas aeruginosa. The disinfection of washing machines and alcohol rinsing of endoscopes after standard procedures significantly reduced the bacterial contamination.

**Conclusions**: The microbiologic surveillance pointed out the main weak points that could be improved by the adoption of corrective interventions. Quality assurance is a feasible method to assess the efficacy of cleaning-

disinfection, and its wide application would improve quality of care.

(Source: Gastrointest Endoscop 1996; Vol 43, Iss 5:457-462)

#### COLONOSCOPY LAWSUITS

In the course of my research I also came across a lawyer named Jamie Sheller who has been handling litigation cases regarding colonoscopies. I figured I might as well send her my research (although I suspected she already had similar information). Here is what she emailed back to me, and she has given me permission to print her words here:

"Thanks for the info! Your research is excellent! In addition to what your research discovered, I have found in the cases I have looked into that there is a HUGE amount of human error in cleaning scopes and maintaining the equipment. There are no government regulations, so the staff cleaning the scopes and fixing the scope processors have no clue about what they are doing and there are repeated horror stories of scopes not being cleaned at all for weeks at a time, and the personnel using the scopes have no idea that the cleaning equipment is not working. They think they have a clean scope when the processor has not been working at all. This has happened repeatedly in Calif., NJ, NY, Ireland, etc. etc."

Please feel free to print out this report and take it in to your gastroenterologist. Believe it or not, he/she may not even be aware of the gravity of this problem. People need to insist that their doctor either use a disposable colonoscope, or, that they get a colonoscope with a disposable sheath.

Money talks, and when patients refuse colonoscopies unless they are made sterile, then doctors will pressure medical supply companies to come up with a solution. Consider the risks before deciding to have a colonoscopy in the first place, and if you do then be sure to follow the guidelines for both before and after the colonoscopy to protect your gut.

Remember that all the supplements and books mentioned in this report are available at:

www.LTYGshoppe.com If you don't want to purchase online, just go there to see which brands I recommend (brands that are proven safe for people with IBD and sensitive digestive systems) and then purchase at your local health store.



#### **ABOUT THE AUTHOR**

A former journalist, Jini Patel Thompson is an internationally recognized expert on natural healing for colitis, Crohn's, diverticulitis and IBS. Her books have sold in over 80 countries. She has appeared repeatedly on podcast, radio and TV shows giving hope to those suffering from gastrointestinal disease. Jini is a popular speaker at natural health-related conferences, and her health articles have been published in magazines and journals in the U.S., Australia, UK, and on the Internet worldwide. She is married with 3 children, 11 horses, 3 dogs and 8 sheep.

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