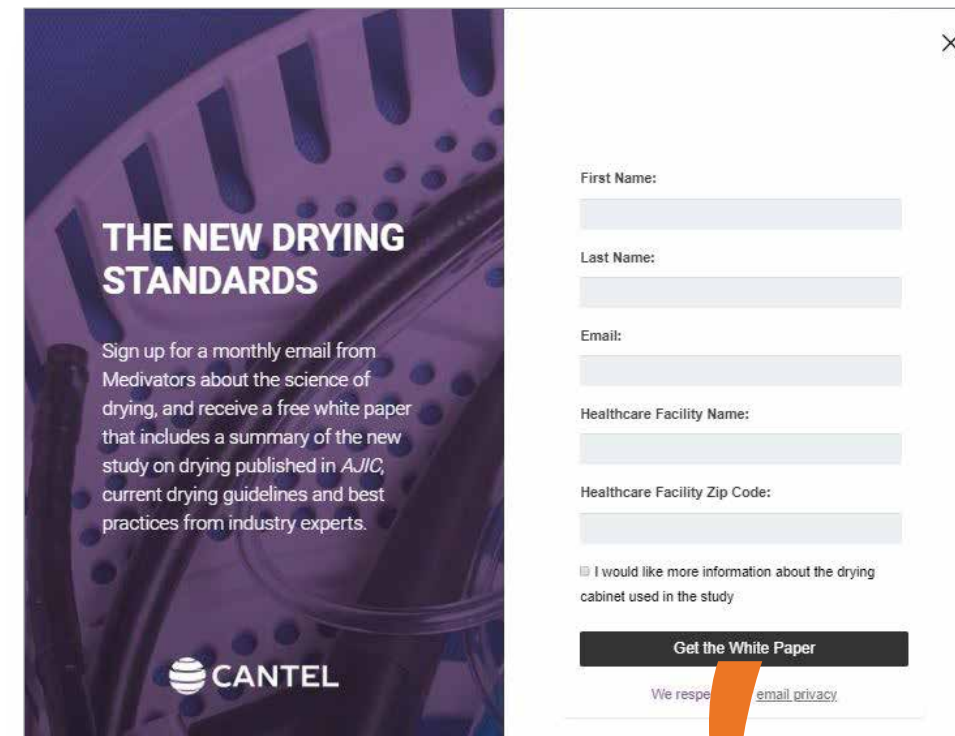
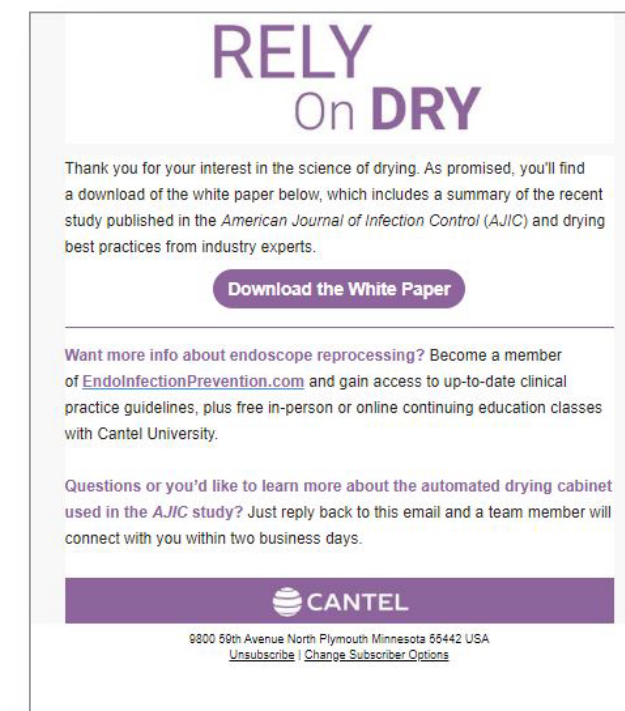


Rely on Dry Landing Page

LEARN MORE
Directs visitors to click on a link to learn more about the drying study published in *AJIC*.



Pop-up



E-mail

OFFER FOR A 12-PAGE WHITE PAPER that includes a summary of the new study on drying published in *AJIC*, current drying guidelines and best practices from industry experts.

To get access to the gated asset, individual's must add their name, e-mail, healthcare facility and zip code.

There's also a box visitors can check to receive more information about **ENDODRY™** Cabinet.

The landing page is connected to Google Analytics.

Once a visitor clicks on the **"Get the White Paper"** button, they automatically receive an e-mail with a download button for the white paper, a link to sign up for **EndoInfectionPrevention.com (EIP)** and the ability to reply back if interested in the **ENDODRY™** Cabinet (which we will funnel to sales).

They're also added to a list in our email marketing tool and will receive a monthly email with a link to the latest blog on **RelyOnDry.com**.

Our email marketing tool also includes analytics on opens, clicks, downloads, etc.

WHITE PAPER

A 12-page white paper that's a summary of the drying study published in *AJIC*, up-to-date societal drying guidelines and best practices from industry experts.


RELY On DRY

Thank you for your interest in the science of drying. As promised, you'll find a download of the white paper below, which includes a summary of the study published in the *American Journal of Infection Control* (AJIC), up-to-date societal drying guidelines and best practices from industry experts.

Download the White Paper

Want more info about endoscope reprocessing? Become a member of [EndoInfectionPrevention.com](#) and gain access to up-to-date clinical practice guidelines, plus free in-person or online continuing education classes with Cantel University.

Questions or you'd like to learn more about the automated drying cabinet used in the *AJIC* study? Just reply back to this email and a team member will connect with you within two business days.




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WHITE PAPER

IT'S TIME TO HANG HAIs OUT TO DRY

A summary of the new drying study published in *AJIC*, up-to-date societal drying guidelines and best practices from industry experts



12 pg White Paper

05 A CALL TO IMPROVE DRYING PRACTICES AND PREVENT INFECTION OUTBREAKS

Every year in the United States, **20 million** people receive a colonoscopy or esophagogastroduodenoscopy (EGD). **Twenty thousand** of those individuals will be hospitalized for an infection within seven days, and as a result, \$200 million will be wasted. This information gleaned from a Johns Hopkins study published in 2018, provided evidence to show that infection rates from upper-GI endoscopies and colonoscopies in the U.S. are much higher than what was thought previously.¹

49% of the endoscopes had moisture remaining²

71% of the endoscopes were found to have microbial growth²

Lead researcher, Cori Ofstead, said they were surprised to find that **accredited hospitals were "skipping steps or doing them poorly."**²

04 AJIC STUDY SUMMARY

The researchers, led by professors Ryan Perumpall, MD; Neil Marya, MD; Betty McGinty MS, HSA, BSHSA, RN, CGRN, CEB; and V. Raman Muthusamy, MD, MAS, FAGG, AGAF, FASGE, know drying is an important step in reprocessing. Their study, "Endoscope reprocessing: Comparison of drying effectiveness and microbial levels with an automated drying and storage cabinet with forced filtered air and a standard storage cabinet," published in *AJIC*'s September 2019 issue, evaluated the efficiency of an automated drying and storage cabinet compared to a standard storage cabinet. The researchers wanted to understand how well each cabinet can produce a dry endoscope and reduce the risk of microbial growth.

They performed their evaluation by assessing dryness using cobalt chloride paper at various times — 30 minutes, one hour, two hours, three hours and 24 hours — after HLD was completed.

THE RESULTS

The findings showed that the endoscopes stored in the standard storage cabinet retained fluid internally at 24 hours and was only able to dry the external surfaces within that time. The slower dry time is a result of the endoscopes hanging vertically without any airflow through the internal channels or over the external surfaces. Standard storage cabinets rely solely on gravity and ambient air to dry any residual fluid.

In contrast, the automated drying and storage cabinet showed that internal channels were measurably dry at one hour and external surfaces at three hours in all endoscopes.

The faster dry time can be attributed to a few factors:

- Air is filtered to instrument-grade levels (meaning no particles, moisture or oils) and is continuously circulating over the exterior of the scope
- A connector block with separate ports is hooked up to the endoscope for a constant flow of compressed air through internal channels
- The endoscopes are placed horizontally in a cassette system

The study also evaluated which type of cabinet could store endoscopes longest with no measurable moisture. Current market belief is that in the standard drying cabinet, endoscopes could only be stored up to seven days before needing to be reprocessed again.³ The automated drying cabinet used in the study can store endoscopes up to 31 days, over four times longer than the standard cabinet.

If you're interested in learning more about the study, you can read the full version in *AJIC*'s September 2019 issue. For now, read on to discover how you can apply the studies' findings to your practice.

DRYING CABINET COMPARISON

Standard drying cabinet Cabinet commonly used in the U.S.	Automated drying cabinet Cabinet used in the AJIC study (ENDODRY® Drying and Storage Cabinet)
	
No compressed air	Constant flow of instrument-grade air for direct-connection channel drying
No direct airflow through internal channels or over external surfaces	Endoscopes dry horizontally
Endoscopes hang in vertical position and rely on gravity	Cabinet circulates air within to dry external surfaces
Still has fluid internally at 24 hours	Verified to dry internal lumens within 1 hour and external endoscope within 3 hours
Takes 24 hours to dry externally (not verified)	Study has shown endoscopes can be stored up to 31 days before needing to be reprocessed again
Can be stored for up to 7 days before needing to be reprocessed again	

09 THE NEW DRYING STANDARDS

09 STANDARD CABINET OR AUTOMATED DRYING CABINET?

10-11 10 BEST PRACTICES TO PREVENT INFECTION

12 REFERENCES

IT'S TIME TO HANG HAIs OUT TO DRY

TO MAKE SURE WE'RE ALL ON THE SAME PAGE, LET'S QUICKLY REVIEW EACH DRYING-RELATED GUIDELINE. AS YOU READ THROUGH, CONSIDER THE FOLLOWING QUESTIONS:

- How do these organizations define "dry?"
- How long is an appropriate dry-time according to each set of guidelines?
- Are the guidelines intuitive and actionable? Do they help me repeatedly produce a dry endoscope?
- What types of tools do the societal guidelines recommend I use?

AAMI⁶

Drying of scopes and accessories are necessary before moving to storage. Facilitate drying by flushing channels with 70-80% ethyl or isopropyl alcohol, followed by a forced-air purge using medical-grade air.

Scope channels should be dried by flowing air through them for a pre-determined time. Do not use syringes to dry the channels.

Do not attach accessories to their named scope when placed in storage. Keep accessories with their named scope as a unique set.

AORN⁷

Drying is as important as cleaning and high-level disinfecting in the prevention of pathogen transmission.

Scope channels should be purged with instrument air or dried in a mechanical drying system.

Scope surfaces should be dried by hand with a lint-free, soft cloth.

All removable scope components should be dried.

If a scope is HLD manually, the scope should be manually rinsed and, if the scope will be stored for future use, the scope's external surfaces should be dried with a clean, lint-free cloth. The scope's internal lumens should be dried with instrument air.

Filtered air is necessary to avoid re-introducing contaminants into a post-HLD scope.

The scope should be handled carefully to avoid contact with the HLD soaking and rinsing containers, or with surfaces such as counters; contact could cause recontamination

CDC-HICPAC^{8,9}

After reprocessing is complete, store endoscopes and accessories in a manner that prevents recontamination, protects the equipment from damage and promotes drying. Store processed flexible endoscopes in a cabinet that is either:


- Of sufficient height, width, and depth to allow flexible endoscopes to hang vertically without coiling and without touching the bottom of the cabinet.
- Designed and intended by the manufacturer for horizontal storage of flexible endoscopes.
- After HLD, rinse scopes and flush channels with water, followed by 70%-90% ethyl or isopropyl alcohol.
- Follow alcohol rinse with forced air purge to reduce the potential for contamination by waterborne pathogens & to facilitate drying.

E-mail

[HOME](#) [BLOG](#)

Are your endoscopes reliably dry?

Inadequate drying can increase infection risk.


[LEARN MORE >](#)

Drying is a requirement. Not an option.

There isn't industry consensus on how to dry efficiently, leaving room for interpretation. A new study published in *AJIC* sets the record straight.


Not every "dry" is the same.

Standard drying cabinet
Cabinet commonly used in the U.S.



- No compressed air
- No direct airflow through internal channels or over external surfaces
- Endoscopes hang in vertical position and rely on gravity
- Still has fluid internally at 24 hours
- Takes 24 hours to dry externally (not verified)
- Can be stored for up to 7 days before needing to be reprocessed again

Automated drying cabinet
Cabinet used in the *AJIC* study. [Learn More >](#)




- Constant flow of instrument-grade air for direct connection channel drying
- Endoscopes dry horizontally
- Cabinet circulates air within to dry external surfaces
- Verified to dry internal lumens within 1 hour and external endoscope within 2 hours
- Study has shown endoscopes can be stored up to 31 days before needing to be reprocessed again

LEARN MORE ABOUT THE SCIENCE OF DRYING.

And why it matters to your practice.

[READ MORE >](#)



Three Myths About Endoscope Drying

Drying is an essential step when reprocessing endoscopes. It helps preserve the pristine condition of the endoscope following the automated endoscope reprocessor's cycle. Drying is recognized as a critical step of the process, however, there's little clarity on how to repeatedly produce a dry, safe endoscope.^{1,2} The act of drying is a process. The goal is to enhance patient safety by removing all measurable moisture from the endoscope, reducing the possibility of microbial crosscontamination.

However, it can get tricky because multiple factors can affect the amount of time it takes to dry an endoscope. The combination of air (air volume, air pressure, air quality) and the air's moisture content) and individual endoscope specifications (lumen length and diameter, end number of lumens) all must be considered when instituting an endoscope drying protocol. Setting an arbitrary minimum time to dry without control of all these factors will not deliver a consistently dry endoscope. A proposed "dry time" of 10 minutes only starts the drying process but hasn't been shown to complete it universally.³

Incomplete drying practices limit the efficacy of reprocessing, rather than strengthen its benefits. It's time we took in the mirror as an industry and be honest about the potential danger in established perceptions.

Drying's role in infection prevention

Endoscopes become highly contaminated during procedures. Because they're the perfect environment for bacteria to thrive and proliferate — dark and wet with plenty of food — effective disinfection, in general, is incredibly important to prevent spreading infection.


Drying's role, specifically, is critical. When done effectively, meaning there's no measurable moisture when the endoscope heads into surgery or storage, it limits the risk of bacteria from growing and helps keep the endoscope in its post-disinfected condition. When drying isn't complete, it no longer matters how rigorously you follow other reprocessing steps. Any measurable moisture enables bacterial growth, particularly when the endoscope won't be used immediately, increasing the risk of infection.³

Three myths about endoscope drying

1. Industry guidelines are the gold standard
Industry guidelines don't include specific, constructive advice on how to produce a dry endoscope, leaving too much room for interpretation and error. For instance, AAAH states that flowing air through channels for a specified period will achieve drying, but the guideline doesn't specify the period or what type of air would be most beneficial.⁴
2. Drying means dry.
The words "drying" and "dry" are often synonymously used, but there is a distinct difference between the two. "Drying" is a process whereas "dry" is a state of being. And while the two are interconnected, "drying" doesn't guarantee "dry."⁵
3. Several industry studies investigated drying but don't identify how to produce a dry endoscope.^{2,6} The findings mostly reveal what isn't effective and are often misinterpreted to support inadequate drying practices.
3. All drying cabinets produce the same dry quality
Just as not every clothes drier is of the same quality, not all drying cabinets are the same. Standard cabinets lack some of the critical functions just as not every clothes drier is of the same quality, such as a constant flow of compressed, instrument-grade filtered air through internal channels and over external automated cabinet walls, such as a constant flow of compressed, instrument-grade filtered air through internal channels and over external automated cabinet walls. It is a science known as an active dry system. With an active dry system, the environment is more controlled, forcing water to surfaces. It is a science known as an active dry system. With an active dry system, the environment is more controlled, forcing water to surfaces, endoscopes quickly and limiting the risk of bacterial growth. Without one, the environment within the cabinet is warm and humid, allowing bacteria to reproduce rapidly and biofilm to form. Reprocessing professionals and clinicians deserve to feel confident that every endoscope is efficiently. The risk of infection transmission is real. Reprocessing professionals and clinicians deserve to feel confident that every endoscope is safe for use on patients. And that means ensuring your drying process leads to a dry endoscope. Get the facts from a recent study on drying published in *AJIC*, and learn more about how you can elevate your drying practices to protect patients.

Disclaimer: Darin Dahlin is the Clinical Education Director at MedVetors, the medical division of Cantel.

¹ Theodor AN, Kim S, Sedelert A, et al. Inspection of endoscope instrument channels after reprocessing using a prototype borescope. *Gastrointest Endosc* 2018;88:612-619.




LEARN MORE ABOUT REPROCESSING BEST PRACTICES TO HELP PREVENT HAIs IN YOUR FACILITY.

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MONTHLY BLOG
dedicated to the
science of drying
and sent to
subscribers via
e-mail and
social media.

[HOME](#) [BLOG](#)

Three Myths About Endoscope Drying



By Darin Dahlin, Clinical Education Director (Posted in Drying Practices)

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Blog

AN INFOGRAPHIC will be posted on the blog and sent to subscribers via e-mail and promoted via social media.

The truth about drying and endoscope infection risk.

The industry-accepted endoscope drying time is not reliably safe.

20 million

The number of gastrointestinal procedures with an endoscope annually.

11

The number of times endoscope reprocessing has appeared on ECR's Top Hazards list.

20


The number of minutes it takes for bugs to reproduce in a wet endoscope.

Your drying process could leave your endoscopes contaminated.

DRYING VS. DRY


Drying


A process. Any measurable moisture can enable microbial growth.



Dry

A state. The end result of the drying process, where no measurable moisture is left.







A 10-minute "drying time" starts the drying process, but does not produce a dry endoscope.

A 1991 study is often used to support the industry-accepted notion that 10 minutes of drying is sufficient to create a safe endoscope 48 hours post-disinfection.³

A NEW STUDY REVEALS THE ACTUAL TIME NEEDED FOR AN ENDSCOPE TO BE MEASURABLY DRY:




For internal channels in an automated drying cabinet.¹




For external surfaces with an automated drying cabinet.¹

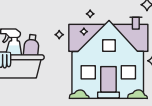
NOT PROPERLY DRYING YOUR ENDSCOPE WOULD BE LIKE:



Cooking a chicken half-way and calling it "cooked."



Pulling just the stems of weeds from your garden and considering the invader "gone."



Cleaning one room and calling your whole house "clean."

Widely accepted industry practices breed false confidence. The new fundamentals for clean, patient-ready endoscopes are here.

Learn more at [RelyOnDry.com](#)

1. Peterson BT, Charnot A, Cohen J, et al. Multicenter guideline on reprocessing flexible GI endoscopes. *Infect Control Hosp Epidemiol* 2011;135:937-957.
2. Garbino P, et al. Evaluation of a storage cabinet for heat-sensitive endoscopes in a clinical setting. *The Journal of Hospital Infection* 84:1 (2013): 74-8.
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4. Peterson BT, et al. "Endoscope Reprocessing: Comparison of Drying Effectiveness and Moisture Levels with an Automated Drying and Storage Cabinet with Forced Filtered Air and a Standard Storage Cabinet." *American Journal of Infectious Control*, vol. 47, no. 5, 2019, pp. 1080-1089.
5. Peterson BT, et al. "Endoscope Reprocessing: Comparison of Drying Effectiveness and Moisture Levels with an Automated Drying and Storage Cabinet with Forced Filtered Air and a Standard Storage Cabinet." *American Journal of Infectious Control*, vol. 47, no. 5, 2019, pp. 1080-1089.

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Infographic

Rely on Dry Landing Page

DIGITAL ADS AND SOCIAL MEDIA (PAID AND ORGANIC):

LinkedIn, Twitter, AJIC, IAHCHMM, Medivators website.

Starting in March we'll launch paid and organic social campaigns to promote **RelyOnDry.com** and **ENDODRY™** Cabinet on LinkedIn and Twitter.

INTERNAL PROMOTION:

Magnet and study mailer with communication to the field and social media posts to share.

RelyOnDry.com

There isn't industry consensus on how to dry endoscopes efficiently, leaving room for interpretation. A new study published in *AJIC* sets the record straight.

Learn more at RelyOnDry.com

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Not an option.

Magnet



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Medivators Carousel Banner

Are your endoscopes reliably dry?

A new study reveals the actual drying times needed for an endoscope to be measurably dry.

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SGNA Digital Ad

Are your endoscopes reliably dry?

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