



Best Way to Dry Your Hands



MIT Study – Scope

- Scientists at MIT studied the seven most common hand drying methods in public restrooms.
- They looked at the entire life cycle of various competing products from cradle to grave—materials, manufacturer, use, and end of life—including use of transport, dispenser, waste bins, and bin liners.

MIT Study – Conclusion

- They found that paper towels and warm-air hand dryers have the highest environmental toll, generating 70% more carbon emissions than cold-air hand dryers.

MIT Study – Paper Towels

- Paper towels, whether from recycled or virgin paper, generate over three times more carbon emissions than the Dyson Airblade hand dryers, creating waste, consuming more energy, and using more water.
- In the US, 2% of total landfill consists of paper towels.

MIT Study – Warm-Air Dryers

- The environmental impact of warm air-hand dryers occurs during use. Energy-heating elements and inefficient motors make warm-air dryers up to 80% less energy-efficient than the Dyson Airblade hand dryer.

MIT Study – Comparison

Hand dryer environmental impact

1 = lowest impact,
7 = highest impact

	Global warming potential	Human health	Ecosystem quality	Cumulative energy demand	Water consumption	Land occupation
Airblade™ aluminium	1	1	1	1	3	1
Airblade™ plastic	1	1	1	1	1	1
XLERATOR®	3	3	3	3	4	3
Standard warm air dryer	7	7	4	6	7	4
Cotton roll towels	4	3	6	4	1	6
Paper towels virgin	5	5	7	7	5	7
Paper towels 100% recycled	5	5	4	5	5	5

Health Concerns

- But doesn't the Dyson Airblade spread germs more than other methods?
- Yes. Warm-air hand dryers do as well, to a lesser extent. That is why hospitals don't use electric hand dryers, since there may be lots of pathogens circulating with the potential to infect already vulnerable people.
- But in other settings, the effect is not significant if you wash your hands with soap.

Tradeoffs

- Germs are transmitted more easily via damp hands, so it's important to both wash and dry your hands well, regardless of drying method chosen.
- The Dyson Airblade is generally the best option.
- Warm-air dryers are next best.
- Paper towels are better than hand dryers for not spreading germs, and their environmental impact can be lessened by using only one.

Sources

- Rebecca Smithers, “Paper Towels Least Green Way of Drying Hands, Study Finds,” *The Guardian*, Nov. 11, 2011, <https://www.theguardian.com/environment/2011/nov/11/paper-towels-drying-hands-energy>.
- Brendan Koerner, “Electric Hand Dryers vs. Paper Towels,” *Slate*, June 17, 2008, <https://slate.com/technology/2008/06/are-electric-hand-dryers-better-for-the-environment-than-paper-towels.html>
- Emma Bryce, “Hand Dryer vs. Paper Towel: Which Is Cleaner?” *Slate*, Apr. 27, 2016, <https://slate.com/technology/2016/04/what-should-you-use-a-hand-dryer-or-a-paper-towel.html>