

# Paper, Plastic, or Reusable?



“Paper, plastic, or do you have reusable bags?” How do you answer this question?

## Paper versus Plastic Bags

You usually have a choice between paper and plastic bags at checkout to transport your items from the store to your home. The most popular choice is plastic—worldwide consumption of plastic bags is between 500 billion and 1 trillion each year.

The main problem with plastic bags is that you don’t know what happens to that bag after its single use, even if you recycle it. In an ideal world, the plastic bag would be used and then recycled into another product. Unfortunately, Americans only recycle 1 in 200 bags. More alarming is the fact that plastic bags from the 1980s still exist in landfills because they do not degrade.

While paper bags can degrade in a landfill, each paper bag has a greater carbon footprint than plastic.

## Reusable Bags

Reusable bags have become common and more accessible. Generally, reusable bags cost between \$1 and \$5 per bag. If properly maintained, bags can last at least 4 years and save more than 600 single-use bags from being introduced into the environment.

Some potential issues with reusable bags are remembering to bring them with you to the store and having to overcome a bagging area set up only for plastic bags.

The most common reusable bag is made from non-woven polypropylene (PP). It is not biodegradable, but it is recyclable. Natural alternatives to consider include bamboo, cotton, jute, or hemp, which are more expensive but biodegradable.

## Food Safety and Reusable Bags: Prevent Cross-Contamination

The main food safety concern with reusable bags is the possibility of unintentional contamination by harmful bacteria that may cause illness. Cross-contamination can occur from one use to another if you—

- never wash reusable bags
- use the bags for items other than just food
- don’t separate grocery food items while bagging
- store the bags improperly

Follow these guidelines to prevent cross-contamination and reduce the risk of foodborne illness:

- Purchase bags specifically for food. Label them with permanent markers, and consider a color-coded system to further separate food items in transport. For example, green bags could be used for vegetables and red bags for meats.
- Keep meat, poultry, eggs, and fish separate from ready-to-eat foods (like fruits and vegetables). Consider putting meat, poultry, eggs, and fish in plastic bags to reduce the risk of juices leaking and contaminating reusable bags and food.
- Keep bags for non-food items (like cleaners, sports gear, and books) separate from food bags.
- Clean bags after each use according to the manufacturer’s care instructions. Understand the material your bags are made from and how to clean them. Depending on the material, you will need to machine-wash, wipe, or hand-wash them.
  - Instead of using bleach for colored bags, use laundry detergent with sanitizer.
  - You can safely machine wash woven polypropylene (PP), cotton, and hemp bags in cold water.
  - You can wash non-woven polypropylene (PP) bags (the most commonly used material) in the washing machine, but most manufacturers do not recommend it because it can reduce the life of the bag.

- Remember that cotton tends to shrink when washed in a machine.
- Air-dry all reusable bags to keep them from shrinking.
- It is best to hand-wash most bamboo, jute, recycled polyethylene terephthalate (PET), non-woven polypropylene (PP), nylon, and poly-nylon bags. Wash bags in a sink filled with warm, soapy water and laundry sanitizer, then allow them to air-dry completely.
- Laminated reusable bags, such as insulated bags, and other non-fabric reusable bags should be wiped down with a wet sanitizing cloth or “washed” with a disinfectant spray.
- You can also spray non-woven polypropylene (PP) bags with an antibacterial spray cleaner, but be sure to turn the bags inside out and carefully clean the inner seams.
- Do not use antibacterial cleaners with bleach or hydrogen peroxide.
- Before using and storing the bags, check all seams for moisture where microorganisms can grow. Also check for any unusual odors indicating contamination and bacterial growth.
- Store clean reusable bags in a clean, cool, dry place rather than in your car’s trunk, where high temperatures promote the growth of microorganisms that can make you sick.
- Lastly, clean and sanitize all areas in the home (like kitchen countertops and tables) where you have placed reusable bags or totes. Bags and totes may have come into contact with bacteria while at the store and/or during transportation.

## References and Resources

- American Cleaning Institute. Cleaning Reusable Bags. Retrieved from [http://www.cleaninginstitute.org/clean\\_living/cleaning\\_reusable\\_bags.aspx](http://www.cleaninginstitute.org/clean_living/cleaning_reusable_bags.aspx)
- Anderson, M. (2016). Confronting Plastic Pollution One Bag at a Time. United States Environmental Protection Agency (EPA) Blog. Retrieved from: <https://blog.epa.gov/tag/plastic-bags/>
- Klemm, S. (2018). Reusable Grocery Tote Safety. Academy of Nutrition and Dietetics. Retrieved from <https://www.eatright.org/homefoodsafety/four-steps-separate/reusable-grocery-tote-safety>
- Le Guan, C. (2019). When the Mermaids Cry: The Great Plastic Tide. Santa Aguila Foundation. Retrieved from <http://plastic-pollution.org/>

## Resources For Educators

- American Cleaning Institute. Got Germ-Free Reusable Bags (GRUB)? (Poster). [http://www.cleaninginstitute.org/assets/1/AssetManager/GRUB\\_flyer.pdf](http://www.cleaninginstitute.org/assets/1/AssetManager/GRUB_flyer.pdf)
- Academy of Nutrition and Dietetics. Grocery Tote Safety Tips. (Handout). <https://www.eatright.org/-/media/homefoodsafety/multimedia/downloads/grocerytotesafetytipsheet.pdf?la=en&hash=BBD08073AB2993B241DAB1DC8B083C013D6215E8>

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