

Is Bottled Water Safe for You and the Environment?

"You will draw water in joy,
from the wellspring of salvation."

— Isaiah 12:2-3



Why do Americans buy bottled water?

- They are concerned about their water quality.
- Bottled water is "convenient."

Is bottled water safer than tap water?

Bottled water has minimal regulations.

Municipal ("tap") water: Must meet or exceed defined standards. EPA inspectors monitor water quality. Not all contaminants are regulated.¹ Home filter is recommended.

Bottled water: Mostly industry regulated. No federal treatment requirements. Industry standards based on tap water, not as stringent. Industry monitors water quality. Bottled water only regulated by FDA if sold interstate.

Where does bottled water come from?

Source water is rarely pristine mountain spring water or glacial aquifer. Minimal regulation on the hydrologic source or label words; 40% of bottled water is tap water.²

Health Risks Associated with Plastic Water Bottles

Plastic bottles themselves can be a source of water contamination, due to chemical leaching or microbial contamination when bottles are reused, stored for periods of time, or heated in dishwasher or microwave. Numbers inside triangles on container bottoms define plastic type.



Plastic #1 (polyethylene terephthalate (PET)) is used in plastic water bottles and designed for single use; reuse potentially increases chemical leaching of carcinogenic and reproductive toxins with more risk over time reused.³ Scratches easily, susceptible to bacteria growth.



Plastic #7 (often polycarbonate) contains Bisphenol A (BPA), a hormone-mimicking chemical, found in translucent hard plastic containers. Used in 2.5 and 5 gallon water containers. Recent health concerns of BPA: hormone disruptor, linked to breast and prostate cancer, reproductive disorders & infertility, increased diabetes and cardiovascular disease.⁴

Is it more convenient? Or just more expensive?

Bottled water is a billion dollar industry. Most of the cost includes label, bottle, lid and transportation, the water itself is only a few cents.

Bottled water is a luxury you need not afford.

Economics: At \$2/16 oz, water costs more than gas (>\$10/gallon). Not including costs of energy, transportation, fuel, recycling or landfilling. Compare annual costs for bottled water (\$5000) to tap water (<50 cents). Add costs of home water filter, still costs less than \$200/yr.

Calculate your cost of bottled water at:

(www.canfeinesharim.org)

Cost of Convenience: Legacy of Plastic Bottles

Americans use *more than 250 million plastic bottles per day*, with less than 5% recycled.

Plastic is non biodegradable, *lasts forever and goes to landfills or oceans*. Many of the >3100 US landfills are near capacity, impacting real estate and contaminating our water supplies.

1.5 M barrels of oil are used to manufacture plastic bottles each year. Foreign oil dependence is a security concern; is this use of oil critical for our economy?

Plastic processing produces toxins (nickel, ethylbenzene, ethylene oxide and benzene).

High costs of *transporting millions of plastic water bottles* for home delivery and distribution.

Pumping impacts from withdrawing groundwater or spring water adversely affects local water supplies, depletes streamflow, and exports water from the watershed.

FOOTNOTES: 1. Contaminants of concern includes: lead and other Heavy Metals, NPS pollutants such as Pesticides, E. coli/fecal coliform bacteria, Pathogens/parasites (giardia), Chlorine, Pharmaceuticals and Volatile organics: ie. BTEX 2. (NRDC, 1999) 3. toxins such as DEHA, a known carcinogen, and benzyl butyl phthalate (BBP), a potential hormone disrupter, D. Lilya, 2001. 4. Reproductive Toxicology 24(2): 2007; JAMA 9/2007 6. Reproductive Toxic. 23(3): 2007

What Can I Do?

Filter water at your tap. Compare filters for contaminants removed, costs/gal, filter replacement frequency, and efficiency.

Visit www.waterfiltercomparisons.net.

Learn about your drinking water. Request a copy of "Consumer Confidence Report" from your Water Utility Co. to find out where your water comes from and contaminants found: www.epa.gov/safewater/dwinfo/.

Use safe, re-usable bottles like stainless steel or glass. (Visit www.canfeinesharim.org to order!)

Don't leave plastic water bottles in car, and don't store them in hot places, or for long periods. When done, recycle them!

Buy colored "milky" plastic rather than "clear"; the hard translucent plastic is often made with BPA.

Don't wash & reuse plastic bottles. Microbes grow easily; they are hard to clean, easy to scratch & chemicals leach.

Talk to your office manager about safe, cost effective water filtering at your workplace (try www.uscoffee.com/content/water.asp).



The Blessing of Rain

On Shemini Atzeres, we make a special blessing for rain. We also begin mention in the Amida of Hashem as the One who “makes the wind blow and the rain descend.” What does it mean for us to pray for rain? What does our praying for rain demand of us? And what role do rain and water play in our lives?

While water is an essential force for life, it can also be destructive, as the Talmud explains. It can be nourishing, as when we drink it, bathe in it, or use it to irrigate our crops. It surrounded the world when Hashem created the earth. Plants depend on water to produce energy in photosynthesis, which is why plants spring up around water.

On Shemini Atzeres, we pray that Hashem bring the rain that nourishes our crops and fills our reservoirs. Beneficial rain. At the right times. As the Gemara in Ta’anis says, “The day when rain falls is as great as the day on which heaven and earth were created” (8b). Rabbi Levi ben Chiyata said, “Without rain earth could not endure” (Bereshis Rabba 13:3).

In particular in the semi-arid land of Israel, water is a sign of its being a ‘good land.’ As Moshe explains to the Israelites, “For Hashem your G-d is bringing you to a good land, a land with brooks of water, fountains and depths...” (Devarim 8:7)

While rain can be nourishing and positive, it can also be destructive, when it comes down in too great a quantity or at the wrong times. One rainstorm at the wrong time of year or in too great a quantity can ruin an entire season’s crop. The Tanakh teaches how Hashem can send destructive rain, which is a sign of Hashem’s anger. The Mishna states that “if after Nissan rain falls, it is considered a curse,” (Ta’anis 1:7) as is learned from the prophet Shmuel calling to Hashem to send rain after Nissan to punish the people (I Shmuel 12:17). After Nissan, rain falling can cause wheat — a staple in Israel — to rot in the field. Such an occurrence can produce food shortages and famine, as it did in biblical times, and as it still does today in many parts of the world.

Living in cities and getting our food from supermarkets, we can forget how delicate the natural world is, and how shocks to the natural balance can have serious effects on life on the planet. We have become blind to the preciousness of the water that falls from the heavens, and our role and responsibility in making sure that it is clean and safe for ourselves and our children.

One way we can preserve water resources and drink cleaner water is by choosing to filter our tap water instead of buying bottled water. Pumping groundwater for bottling has impacts on local water supplies at the source, including depleting the flow of streams and reducing the water available for humans and animals in that area. Meanwhile, from a health standpoint, bottled water is not as safe as tap water, and has significant environmental impacts. *(For more information, see reverse.)*

Another way to appreciate Hashem’s blessing of rain is by conserving water. Here are some simple suggestions:

- ☆ Turn off the faucet! Don’t let it run between washing for netilas yadayim, while brushing your teeth, or while lathering dishes. These actions will sensitize you to the preciousness of water while also saving gallons over time.
- ☆ Use a full load for the dishwasher and the washing machine.
- ☆ Take shorter showers.
- ☆ Fix any leaks in your sink, tub, toilet or outdoor hose.

One of the challenges of living a Torah life is being consistent. Moshe commands the Jewish people to “Be wholehearted with the Lord, your Hashem” (Devarim 18:13). The Ramban understands this to be a positive mitzvah. Rav Shimson Rafael Hirsch comments on this verse that “We must not detach ourselves from Hashem with even the smallest fiber of our lives; we must be with Hashem in our entirety.”

It is relatively effortless to utter a five-minute prayer for beneficial rain. It requires significantly more effort to live a life that respects the preciousness of the resources Hashem provides. Our prayers for beneficial rain are extremely important, and our actions should be consistent with the emphasis of our prayers.

So, pray intensely for rain, and try to do your utmost to ensure that if Hashem blesses us with good rain, the water will be safe and healthy for our use and protected for our children. This Shemini Atzeres, let’s take on protecting the rains that we ask for, and the blessing of water that Hashem generously and continuously provides.

For a more detailed version of this drash, including footnotes, visit:
<http://www.canfeinesharim.org/uploads/11556rain.pdf>