

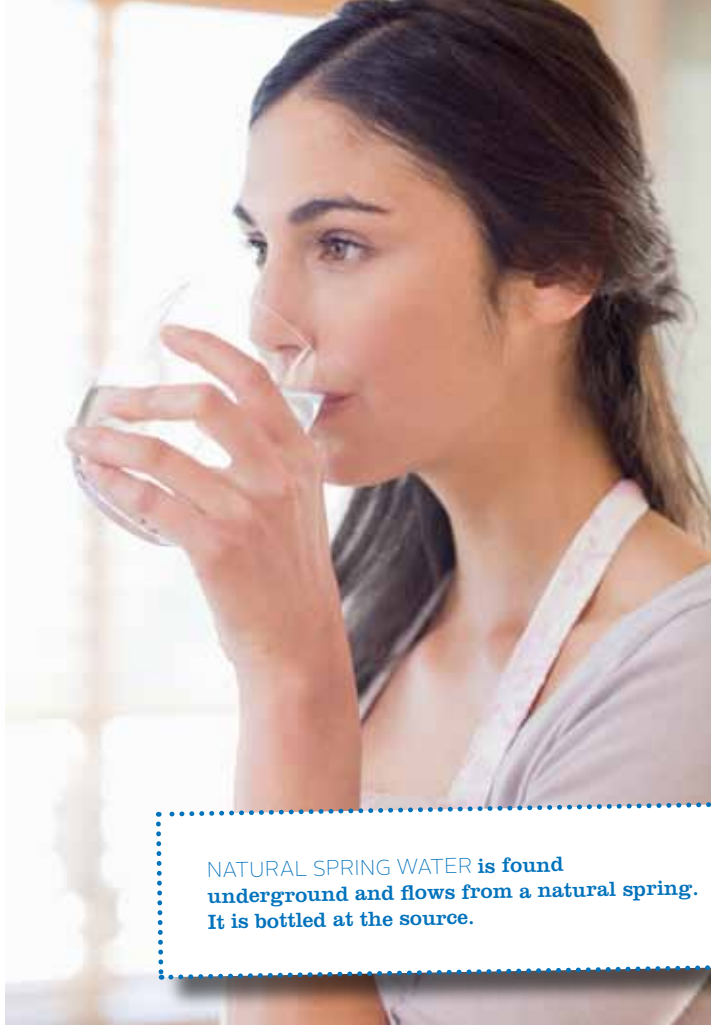


Which is better:



Tap or bottled water?

Bernadette Abraham, Dubai-based fitness and nutrition expert, sets off to uncover the facts about what we should drink and why



NATURAL SPRING WATER is found underground and flows from a natural spring. It is bottled at the source.

Given the large selection of water available, from tap water to bottled water, it is difficult to know which is best for you and your family. In my search for the truth about our drinking water, my first priority was to find non-fluoridated water. While many people believe that fluoride helps prevent cavities, there is emerging evidence that this toxic compound can damage our health and lower the IQ of our children.

What I initially thought would be a simple task turned out to be quite complex. Some of the information I requested was either not accessible to the public, required written approval before being released or required the knowledge from upper management. My motives were almost always questioned and I was met with a lot of apprehension. Nonetheless, I pursued my research for the simple reason that I had no ill intentions and as a consumer, felt privy to this information.

DIFFERENT TYPES OF WATER

Strictly speaking, water is water. All water is a compound of one oxygen and two hydrogen molecules. The difference, however, between the various tap and bottled waters is the source and the processing it undergoes before being sold to the consumer. The most common types are:

Tap water: Municipal water that has been treated, processed and disinfected. In the UAE, this means desalinated sea water.

Well water: Comes from a hole drilled into the ground that taps into an underground water source. A pump then brings it to the surface.

Natural spring water: Found underground and flows from a spring. It is bottled at the source.

Artesian or spring water: Comes from a natural source but the bottling is done off site and undergoes processing and purification.

Mineral water: Can be either natural spring or artesian water and must contain a minimum level of dissolved solids, including minerals and trace elements.










FEAR OF TAP WATER

There are a number of reasons why people in the UAE prefer to drink bottled water over tap water. Safety, convenience and prestige are just a few. There is a general unspoken consensus that bottled water is cleaner, purer and therefore safer than tap water. But is it really?

After speaking to a number of different departments at the Dubai Municipality, it was determined that there are different entities that regulate bottled water and tap water. The tap water that flows into our households is governed separately by each emirate. In Dubai, tap water is regulated and tested by labs at DEWA (Dubai Electricity and Water Authority), in Sharjah it is SEWA and so on.

Bottled water sourced in Dubai is tested at the Dubai Central Lab and the testing reports are not accessible to the public. The standards and regulations for tap water, however, is public information and will soon become available online. I have yet to receive this information, but I was told that the World Health Organization standards are used as a reference. »

UAE WATER COMPOSITION

	SOURCE	STANDARDS	TESTING FREQUENCY	FLUORIDE	REUSE BOTTLES	SODIUM MG/L	CHLORIDE MG/L	TOURS
MASAFI 	Mineral water from Fujairah mountains	NSF, CODEX, GCC, Australian standards	Internal: Monthly External: Yearly by a third party	No	No	10	47	Yes. Contact marketing head on 04 346 5959
AL AIN 	Well water from Al Ain	HACCP, ISO 9001, 14001, 18001, 22000, ABWA	Monthly by a third party	Yes	Yes	8	40	Yes. Call 03 708 3700
AQUAFINA 	Well water from Dibba, Fujairah	Pepsi Co Intl, UAE, WHO, ISO certified	Internal: Daily External: Monthly	Yes. <0.5 mg/L	Not Applicable	16	22	Need permission. Call 04 339 3000
EVIAN 	Mineral water from the French Alps	NSF	Several hundred tests done on site. Yearly by a third party.	No. Fluoride naturally occurring. 0.07 mg/L	No	6.5	6.8	Yes. Contact headquarters in France. www.evian.com
ARWA 	Municipal water in Al Ain	Coca-Cola, ISO and Abu Dhabi standards	Internal: Every one to two hours External: Depends on standards	No	Not Applicable	2.5	<1	Yes. Send fax request to plant manager at 03 782 5806
OASIS 	DUBAL – DEWA	HACCP, IBWA, ISO certified	Internal: Unknown External: Unknown	No	Yes and no. New four-gallon bottles are one-time use.	16	50	Yes. Call 600 522 261
NESTLE 	DUBAL – DEWA	Nestle International, HACCP, ISO 14000, 18000, 22000	Internal: Every two hours External: Weekly by Dubai Municipality and quarterly by Nestle Paris	Yes. 0.4 mg/L	Yes	<5	43	Yes. Send request to service@nestlewaters.ae to visit plant in TechnoPark, Jebel Ali
CULLIGA 	DUBAL – DEWA	Culligan International, HACCP, WHO, ABWA, Dubai Municipality, GC01025-2009	Internal: Monthly External: Every two months by a third party	Yes. 0.6 mg/L	Yes	<5	23	Maybe next year when plant is moved to TechnoPark, Jebel Ali.
PALM SPRING 	DUBAL – DEWA	UAE regulations, ISO 22000, HACCP	Internal: Daily External: Weekly and monthly depending on standards	Yes. 0.2 mg/L	Yes	<5	40	Yes. Contact general manager. 04 886 7232



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IS BOTTLED BETTER?

Depending on the type of water and the country of origin, different bottling procedures and filtration processes are used. For example, artesian water has different processes and filtration systems than well water.

Given that the majority of the UAE bottling companies use municipal water, it seems reasonable to question our heavy reliance on bottled water. Granted, bottling companies do filter and re-mineralise the municipal water, but does that warrant the extra cost? Can we not achieve the same results with a certified home-use filtration system?

The other point to consider is the risk that plastic bottles pose to our health and the environment. Plastic bottles contain bisphenol A or BPA, a synthetic chemical that mimics estrogen and has been linked to serious health problems. Phthalates are other chemicals that are widely used in plastics to make them more flexible. These have also been linked to developmental and reproductive problems.

Aside from the potential health risks, the harsh impact that plastic bottles have on our environment seriously needs to be considered. Most plastic bottles end up being shipped to another country and dumped in landfills.

There are different filtration systems, testing frequencies, testing criteria, and even different processes for cleaning reusable plastic bottles. However, Dubai Municipality assures that all bottled water in the emirate is tested by the Dubai Central Lab, which suggests there is a baseline measure. Unfortunately this information is not accessible to the public yet.

WHAT'S IN OUR WATER?

Most readily available bottled water in the UAE contains sodium and chloride in varying amounts. Sodium is an electrolyte that plays a key role in hydration, nerve and muscle function, as well as blood pressure maintenance. For normal body function, the recommended sodium intake for adults is 500mg per day and no more than 2,400 mg. All of the waters listed in the table (previous page) contain less than 16mg of water per litre and in general, if you consume fresh, unprocessed food, there is no need to be concerned by the level of sodium in water.

Chloride is essential for maintaining acid-base, electrolyte and fluid balance in the body. It also plays an important role in digestion because it is a key component of hydrochloric acid in the stomach.

According to the National Academy of Sciences in the US, the recommended daily allowance for adults is 750mg per day. This equates to a quarter of a teaspoon of salt.

THE TAP WATER DEBATE

We are fortunate to live in a country that has quality and safety standards and regulations in place. The problem, however, is that the quality of the tap water does not only depend on the treatment done at the large desalination plants, but also on the maintenance of water tanks and pipes.

It is possible that old pipes leach contaminants such as lead, iron, copper and so on, and poorly maintained water tanks harbour bacteria that can contaminate the water.

The solution? If you are concerned about the safety and quality of your tap water, get it tested and/or consider using a home filtration system. I would want my water to be free of fluoride, arsenic and, more importantly, disinfection byproducts created by the chlorination of water.

The best option would be to equip your entire house with a filtration system certified by the NSF (National Science Foundation), but a simple filter installed on your kitchen tap is also a good option and simple to do. The two best systems I have found are the activated carbon filters and reverse osmosis.

THE BOTTOM LINE

The Environmental Working Group, an American environmental health research and advocacy organisation, analysed more than 170 varieties of bottled water and at the end of its report, concluded that filtered tap water is best. I would have to agree.

We cannot argue with the fact that bottled water is convenient. However, this convenience must be questioned when we have access to clean municipal water and when the consequences of plastic bottles can negatively affect our health and the health of our planet. ✨

Carbon filters are one of the best at-home water filtration options

