



WHY TAP WATER IS BETTER FOR YOU

Did you know that the UAE has the world highest water consumption per capita, above 82% higher than the world average?

Consumption of water is the highest in the UAE with average per capita consumption of 500 litres a day, around 82 per cent above the global average, said Mohammed Mohammed Saleh, Director-General of the Federal Electricity and Water Authority (Fewa). This consumption per capita is three times higher than the European Union countries average.

Read more on this article:

<http://www.emirates247.com/news/emirates/uae-water-consumption-highest-in-the-world-2013-03-13-1.498498>

Related links:

<http://www.waterwise.gov.ae>

<http://www.fewa.gov.ae>

Did you know that there are different types of water?

Strictly speaking, water is water. The difference however between the various types of tap and bottled waters is the source and the processing that it undergoes before being sold to the consumer.

To start, this is a quick overview of the most common types:

Tap Water:

Municipal water that has been treated processed and disinfected. In the UAE, it is all 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 up to the surface.

Natural Spring Water:

Found underground and flows up from a natural spring and is directly 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 come from either natural spring or artesian water and must contain a minimum level of dissolved solids, including minerals and trace elements.

Treated Water:

is water that was used during industrial processes and that has been filtered and treated in order to be potable. In the UAE, Treated Water can come from Aluminum plants such as DUBAL where water is used to cool down the high temperatures.

Waste Water:

is sewage water that has been filtered in order to be potable. This water is illegal in the UAE but very common in countries such as Singapore where it is bottled and sold everywhere as potable water.

Did you know that UAE bottled water is mostly tap water?

Tap Water

There are a number of reasons why most people prefer to drink bottled water over tap water; safety, convenience, brand, etc. For some reason, 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 by each Emirate separately.

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. Tests carried by independent labs demonstrate that water in Dubai is excellent.

Bottled Water

There are many different certifications and standards that can be followed, which makes it very difficult to draw a parallel across the many different brands. Depending on the type of water being bottled and the country of origin, different procedures and filtration processes are used according to the respective standards being followed.

The Table below resumes the information on several parameters relevant for bottled water in the UAE:

- The source of the water.
- The standards that are followed.
- How often the water is tested.
- Whether or not fluoride is added.
- Whether or not their large home/office delivery bottles are reused.
- The sodium & chloride content.

| | Source | Standards | Testing Frequency | Fluoride | Reuse Bottles | Sodium mg/L | Chloride mg/L |
|--------------------|---------------------------------------|--|---|---|--|-------------|---------------|
| Masafi | Mineral Water from Fujeirah Mountains | NSF, CODEX, GCC, Australian standards | Internal: Monthly External: Yearly by a 3rd party | No | No | 10 | 47 |
| Al Ain | Well Water from Al Ain | HACCP, ISO 9001, 14001, 18001, 22000, ABWA | Monthly by 3rd party | Yes | Yes | 8 | 40 |
| Aquafina | Tap Water - DEWA | Pepsi Co Intl, UAE, WHO, ISO certified | Internal: Daily External: Monthly | Yes. <0.5 mg/L | Not Applicable | 16 | 22 |
| Evian | Mineral Water from the French Alps | NSF | Several hundred tests done on site. Yearly by 3rd party. | No. Fluoride naturally occurring. 0.07 mg/L | No | 6.5 | 6.8 |
| Arwa | Municipal Water in Al Ain | Coca-Cola, ISO & Abu Dhabi standards | Internal: every 1-2 hours External: depends on standards | No | Not Applicable | 2.5 | <1 |
| Oasis | Treated Water DUBAL | HACCP, IBWA, ISO certified | Internal: External: | No | Yes & No. New 4 Gallon bottles are 1-time use. | 16 | 50 |
| Nestle | Treated Water DUBAL | Nestle International, HACCP, ISO 14000, 18000, 22000 | Internal: every 2 hours External: Weekly by Dubai Municipality & Quarterly by Nestle Paris | Yes. 0.4 mg/L | Yes | <5 | 43 |
| Culligan | Treated Water DUBAL | Culligan International, HACCP, WHO, ABWA, Dubai Municipality, GC01025-2009 | Internal: monthly External: every 2 months by 3rd party | Yes. 0.6 mg/L | Yes | <5 | 23 |
| Palm Spring | Treated Water DUBAL-DEWA | UAE regulations, ISO 22000, HACCP | Internal: daily External: weekly & monthly depending on standards | Yes. 0.2 mg/L | Yes | <5 | 40 |

Did you know that chemical components such as Sodium, Chloride and Fluoride should be restricted in water?

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 an adult is 500mg per day and should not exceed 2,400 mg per day. Those with high blood pressure or are at risk of high blood pressure should not exceed 1,500mg per day.

All of the above-mentioned waters contain less than 16mg of water per liter and in general, if you consume fresh and unprocessed food, there is no need to concern yourself with the level of sodium in water. It does become a concern however if you consume more than a teaspoon of salt per day or if you eat a lot

of processed foods such as fast food, frozen dinners, deli meats, packaged snacks, canned soups, packaged soups, stock cubes, etc.

These foods are very high in sodium and can easily bring your daily intake beyond the recommended levels. Some canned soups have as much as 2,000 mg of sodium per can!

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, the recommended daily allowance for adults is 750mg per day. Putting that into perspective, it equates to a quarter teaspoon of salt. Processed foods are also high in chloride, so just like the sodium recommendation, fresh and natural food is always best to avoid over-consumption of these minerals.

Fluoride is a highly toxic substance that can cause a range of adverse health effects. Consider, for example, the poison warning that the FDA now requires on all fluoride toothpastes sold in the U.S. or the tens of millions of people throughout China and India who now suffer serious crippling bone diseases from drinking water with elevated levels of fluoride.

Water fluoridation is the practice of adding industrial-grade fluoride chemicals to water for the purpose of preventing tooth decay. Most developed nations, including all of Japan and 97% of Western Europe, do not fluoridate their water anymore.

As it is becoming increasingly clear, fluoridating water supplies is an outdated, unnecessary, and dangerous relic from a 1950s public health culture that viewed mass distribution of chemicals much differently than scientists do today. The few nations that still fluoridate their water should end the practice.

For more information you can visit www.fluoridealert.org

Did you know that chemicals can leach into bottled water over time?

The other point to consider is the risk that plastic bottles pose on our health. Plastic bottles contain a chemical called bis-phenol A or BPA, which is 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, which have also been linked to developmental and reproductive problems.

Read more: [Bisphenol A \(BPA\) Causes 100x More Harm Than Previously Imagined \(http://www.greenmedinfo.com/blog/research-bisphenol-bpa-causes-100x-more-harm-previously-imagined\)](http://www.greenmedinfo.com/blog/research-bisphenol-bpa-causes-100x-more-harm-previously-imagined)



Did you know that there is more risk of contamination by manipulating bottles rather than through the water supply?

Plastic water bottles aren't really meant to be used more than once. In an article in a 2007 issue of the journal *Practical Gastroenterology*, experts pointed out that commercial bottled water manufacturers don't recommend that consumers reuse their disposable bottles. That's because "everyday wear and tear from repeated washings and reuse can lead to physical breakdown of the plastic, such as visible thinning or cracks. Bacteria can harbor in the cracks, posing a health risk," they wrote. In addition, "reuse of plastic water bottles can lead to bacterial contamination unless washed regularly," which entails washing the bottle with mild soap, rinsing it well (but not with extremely hot water) and making sure there is no "physical breakdown prior to use."

Even reusable plastic water bottles could hold bacterial contamination risks, if you don't wash them or reuse them despite

"visual evidence of wear and tear," according to the article. "Bacteria that may settle in the cracks and scratches of the bottle appear to pose a greater health risk than the possibility of chemicals leaching from the plastic during daily risk."

And water bottles sure can be a haven for those bacteria. In a 2002 study published in the *Canadian Journal of Public Health*, researchers from the University of Calgary took 76 samples of water from water bottles of elementary school students; some of the bottles were reused for months on end without being washed. They found that nearly two-thirds of the samples had bacterial levels that exceeded that of drinking water guidelines, which may have been the result of "the effect of bacterial regrowth in bottles that have remained at room temperature for an extended period," researchers wrote in the study.

Standards & Regulations

Asking about the bottling company's standards and regulations was always a point of confusion and ambiguity which is why we need to point out that there might be gaps in the table above. As it turns out, there are different filtration systems, testing frequencies, testing criteria, and even different processes for cleaning their reusable plastic bottles.

However, all bottled water in Dubai gets tested by the Dubai Central Lab, which gives comfort in knowing that there is a baseline measure that needs to be met across the board. Those testing reports however are confidential and not accessible to the public.

Is Bottled Water The Way to Go?

Given the fact that the majority of the UAE bottling companies use Municipal or Treated Water, it seems reasonable to question our heavy reliance on bottled water.



Did you know that a simple filtration system may solve your drinking water concerns?

We are fortunate to be living 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

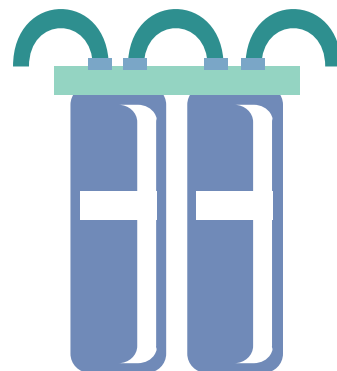
maintenance of water tanks and pipes where applicable. It is possible that old pipes leach contaminants like lead, iron, copper and so on, and poorly maintained water tanks harbor bacteria that can contaminate the water.

The solution?

If you are concerned about the safety and quality of your tap water, then get it tested and/or consider using a home-use filtration system. We would want our water to be free of fluoride, arsenic and more importantly, disinfection byproducts or DBP's created from the chlorination of water. The best option would be to equip your entire house with a NSF certified filtration system (<http://dropit.ae/Bottles-Filters.html#Filters>) but a simple filter installed directly at your kitchen tap is also a good option and simple to do. The two best systems are the Activated Carbon Filters and Reverse Osmosis (RO).

We don't like to suggest RO unless the water quality is really poor (which is not the case in

Dubai). The problem with RO systems is the wastage of water during the filtration process: it takes approximately 4 liters of unfiltered water to get 2 liters of filtered water! It cost so much energy to produce this water that it would be a shame to waste it.



Did you know that water can be re-mineralized?

RO systems remove it all, including minerals, with the risk of it becoming more acidic. It is also true that this can easily be resolved re-mineralizing your water by adding high quality Himalayan salt, which can be purchased from most health food stores. The ratio is 1/8 teaspoon of Himalayan salt to five gallons of filtered water but you can adjust the ratio as you see fit. The complete mineral composition of Himalayan pink crystal salt can be found here.

For your reference, one teaspoon (or 5.54grams) of Himalayan salt has 2.1 grams of sodium and 3.3 grams of chloride.

However, talking to Homeopaths and Nutritionists, they will all tell you that minerals should come from the food you eat, not the water you drink, so unless you are worried about acidic water, don't bother with re-mineralization.

Did you know that filtered water tastes better than bottled water?

The bottled water Industry marketing job is to convince the consumers about their preferences of bottled water over tap water, but:




Several studies and blind tastes have been performed and have proven that in most cases tap water is the preferred choice over bottled water. There are several studies supporting this statement but a good example is this study conducted in The

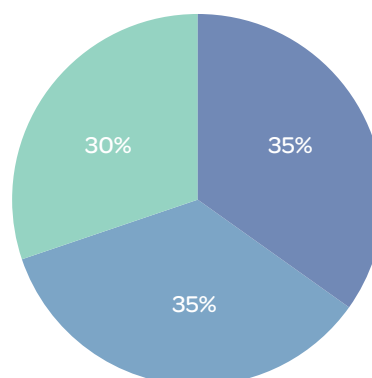
Good Morning America show in the US using the audience as participants in a blind water taste test. They used four different samples including tap water, O₂ Oxygenated Water, and two types of bottled water brands. Tap water was the most voted over the other three with 45% of the audience preference.

Read more: <https://www.banthebottle.net/articles/studies-show-tap-water-preferred-over-bottled-water/>

Water Taste: Tap water vs bottled water Consumers contradict the water bottle Industry

Best Tasting Water Sample:

-  Bottled Water
-  Filtered Water
-  Tap Water



According to the graphic above, the consumers choose indistinctly tap water or bottled water, therefore why drink bottled water instead of filtered water?

We have in our hands this economically and sustainably wise decision!