



Chemistry Is Life

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Chemistry Is Life

I woke up this morning and felt ever so blessed.
Miracles are all around us.
You would think that humanity would take care of its own chemistry kit.
Just think this is the only body you get.
Most diseases are caused by the unhealthy options we take in life.
We never think about the consequences until it's too late.
I don't know why this is never taught in schools.
I feel so blessed that my twin brother and I learned this over fifty years ago.
Both my Dad and Grandfather died way before their time.
I remember coming back from India fifty years ago.
My Mom sent me to have a checkup with our family doctor.
He smoked a cigar in the room while talking to me.
When he learned I was a vegetarian he said I was going to die within one year.
I told him in India over a billion people are vegetarians.
Unfortunately, he died within a year.
I love telling the CEO of a software company that I worked for shortly.
They developed software for heart surgeons.
One day we were talking and I asked him why preventive medicine is not
mainstream.
He looked me right in the eye and said that would never happen.
People don't want to take responsibility for their actions.
They come to us to get healed.
Wow having heart surgery is the answer.
It could have been prevented.
Common sense is uncommon.
We spend most of our lives swimming upstream and wonder why life is so
stressful.
The wise man turns around and lets the river carry him downstream.
It's so much easier when we do this.
Learn to marvel at the miracle of life while you are alive.
The day you die you will realize what a miracle it was to be alive.

Wow Wow Wow

If you stretched the DNA in one cell all the way out, it would be about 2m long and all the DNA in all your cells put together would be about twice the diameter of the Solar System.

Wow, wow, and wow.

¹Bacterial Cells

The average human body carries ten times more bacterial cells than human cells.

We were taught always to wash our hands and spray our countertops.

Yet we are a walking petri dish.

Once again there are 10 times more bacterial cells in your body than human cells.

For example, bacteria produce chemicals that help us harness energy and nutrients from our food.

Germ-free rodents have to consume nearly a third more calories than normal rodents to maintain their body weight, and when the same animals were later given a dose of bacteria, their body fat levels spiked even though they didn't eat any more than they had before.

Gut bacteria are also very important for maintaining immunity.

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¹¹ <https://www.zmescience.com/other/feature-post/10-quick-scientific-facts-will-blow-mind/>

8 times as many atoms ²

There are 8 times as many atoms in a teaspoonful of water as there are teaspoonful's of water in the Atlantic Ocean.

A teaspoon of water (about 5 mL) contains 2×10^{23} water molecules, but each water molecule is comprised of 3 atoms: two hydrogen atoms and one of oxygen. Moreover, if you'd laid down end to end each water molecule from a teaspoon down end to end, you'd end up with a length of 50 billion km — 10 times the width of our solar system.

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² <https://www.zmescience.com/other/feature-post/10-quick-scientific-facts-will-blow-mind>

You can't taste food without saliva³

You can't taste food without saliva.

In order for food to taste, chemicals from the food must first dissolve in saliva. It's only once they've been dissolved in a liquid that the chemicals can be detected by receptors on taste buds.

During this process, some salivary constituents chemically interact with taste substances.

For example, salivary buffers (e.g., bicarbonate ions) decrease the concentration of free hydrogen ions (sour taste), and some salivary proteins may bind with bitter-taste substances.

Here's a quick science experiment to test this out — get out a clean towel, and rub your tongue dry; then place some dry foods on your tongue, one by one, such as a cookie, pretzel, or some other dry food.

After this session, drink a glass of water and repeat.

Did you feel a difference?

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³ <https://www.zmescience.com/other/feature-post/10-quick-scientific-facts-will-blow-mind>

The known universe is made up of 50 billion galaxies ⁴

The known universe is made up of 50 billion galaxies.

There are between one billion and 1 Trillion stars in a normal galaxy.

In the Milky Way alone there might be as many as 100 billion Earth-like planets.

Still think we're alone?

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⁴ <https://www.zmescience.com/other/feature-post/10-quick-scientific-facts-will-blow-mind>

About 1% of our genes come from plants⁵

About 1% of our genes come from plants, fungi, and other germs
According to research from the University of Cambridge, humans have evolved
with genes acquired from plants and fungi.

But how did they get there?

Rather than a straightforward single branching tree where genes are inherited from
parents, scientists argue that sometimes foreign genes may spread by a process
known as horizontal gene transfer.

For instance, different species of bacteria often exchange genes via viruses.

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⁵ <https://www.zmescience.com/other/feature-post/10-quick-scientific-facts-will-blow-mind>

5 times around the Earth⁶

In an entire lifetime, the average person walks the equivalent of five times around the world

The average moderately active person takes around 7,500 steps/per day.

If you maintain that daily average and live until 80 years of age, you'll have walked about 216,262,500 steps in your lifetime.

Doing the math; the average person with an average stride living until 80 will walk a distance of around 110,000 miles — which is the equivalent of walking about 5 times around the Earth, right on the equator.

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⁶ <https://www.zmescience.com/other/feature-post/10-quick-scientific-facts-will-blow-mind>

Photon⁷

It takes a photon up to 40,000 years to travel from the core of the sun to its surface,
but only 8 minutes to travel the rest of the way to Earth

A photon travels, on average, a particular distance before being briefly absorbed
and released by an atom, which scatters it in a new random direction.

To travel from the sun's core to the sun's surface (696,000 kilometers) so it can
escape into space, a photon needs to make a huge number of drunken jumps.

The calculation is a little tricky, but the conclusion is that a photon takes many
thousands and many millions of years to drunkenly wander to the surface of the
Sun.

In a way, some of the light that reaches us today is energy produced millions of
years ago.
Amazing!

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⁷ <https://www.zmescience.com/other/feature-post/10-quick-scientific-facts-will-blow-mind>

Killer whales are actually dolphins⁸

Despite their name, killer whales or orcas are the largest members of the dolphin family.

Technically, orcas are also whales because delphinids belong to the Cetacean order within the toothed whale (Odontoceti) suborder.

However, the term whale is typically reserved for baleen whales of the Mysticeti suborder.

The major physical feature that ensures orcas are dolphins is the presence of a melon — a fatty deposit that assists the animals in echolocation and only exists in dolphins.

Orcas are highly intelligent, highly adaptable and able to communicate and coordinate hunting tactics.

They are extremely fast swimmers and have been recorded at speeds of up to 54kph!

A wild orca pod can cover over 160 kilometers a day, foraging, and socializing.

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⁸ <https://www.zmescience.com/other/feature-post/10-quick-scientific-facts-will-blow-mind>

Octopuses⁹

Octopuses have three hearts, nine brains, and blue blood

Two of the hearts work exclusively to move blood beyond the animal's gills, while the third keeps circulation flowing for the organs.

When the octopus swims, the organ heart stops beating, which explains why these creatures prefer to crawl rather than swim (it exhausts them).

An octopus also has nine brains — well, sort of. There's one 'main' brain where all the analysis and decision making takes place and eight ancillary brains — one at the base of each arm — that function as preprocessors for all the information obtained by that arm.

Two-thirds of an octopus' neurons reside in its arms, which can independently figure out how to open a shellfish, for instance, while the main brain is busy doing something else.

Our blood is red due to the fact that it contains iron-based hemoglobin to transport oxygen to cells.

Octopuses, on the other hand, use the copper-based cyanoglobin, which performs the same function, albeit less efficiently — this makes octopuses have less stamina than you

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⁹ <https://www.zmescience.com/other/feature-post/10-quick-scientific-facts-will-blow-mind>