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المركز الوطني للمتميزين

Tea a cup of good health

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I-Introduction

Everyone loves a nice hot cup of tea you probably do not even try to think what is tea made of and what is its story, but there is more of tea than meets the eye it is not just a lame subject as you think it is very interesting.

I had a hard time getting the information that I needed because of internet blackouts and a lot of sites were blocked and I had a very bad luck with references and it was my first research so I was struggling to write a good one.

Any way throughout my research I tried to answer the following questions:

- 1-what is tea? And what are its ingredients?
- 2-what is the origin of tea and when it was first discovered?
- 3-are there any benefits for drinking tea and if so what are they?
- 4-is there any side effects for tea?
- 5-what are the main types of tea?

But did my efforts go away or did I discover something important we will see at the end of my research.



II-body

Chapter one: definition of tea

Part one: what is tea???

Everyone in the world knows tea and a lot of people drink it but what is tea made of?

Tea is made from the leaf of the plant *Camellia sinensis*.

"Farmers that grow tea first harvest leaves from *Camellia sinensis* and then they let the leaves wilt and oxidize.

During oxidation chemicals in the leaves are broken down by enzymes that results in darkening the leaves and giving them the smell that we all like.

Tea type is determent by the amount of oxidization and other factors (like when do they harvest the leaves or what soil do they use or where do they grow it (hills, valleys, etc.))

. "(<http://www.cancer.gov/about-cancer/causes-prevention/risk/diet/tea-fact-sheet> 9/10/2015)



Part two: what are the ingredients of tea???

Tea is made of "polyphenols, [alkaloids](#) ([caffeine](#), [theophylline](#), and Theo bromine), [amino acids](#), [carbohydrates](#), [proteins](#), chlorophyll, volatile organic compounds (chemicals that readily produce vapors and contribute to the odor of tea), [fluoride](#),

Chapter two: the origin of tea

Part one: tea in China

Since tea is one of the most famous drinks in the world it is quite a shock when you know that it was discovered by mistake, "Tea was first discovered 5000 years ago the emperor of china was boiling some water and accidently some tea leaves dropped in the his pot.

Because he is curios he tasted the tea and loved it before long, tea became a staple of Chinese culture. By 800 AD a Zen Buddhist priest had already written a comprehensive history of its use".

(<http://yaleglobal.yale.edu/about/tea.jsp> 10/10/2015)

Part two: tea in Japan

"Some Buddhist missionaries brought tea back to japan because it was a part of their practice and because it was important to them. After that some Indian and Japanese Buddhist made the tea a part of their religion they used it to tell a story about Buddha. In their version, Buddha awoke after five years of a seven-year meditation, sat in the shadow of a wild tea tree and the leaves to revive himself.

After tea has made its way to japan, the Japanese created a whole culture around tea with the Tea Ceremony or "Cha-no-yu" - meaning literally "hot water for tea." The ritualized pouring and serving of tea by geisha hostesses became a mark of grace. The Irish-Greek journalist-historian Lafcadio Hearn, among the few foreigners to gain Japanese citizenship at the time, witnessed the practice and wrote extensively about the years it took to master the complex art form.

After that tea changed because of tea competitions, nobles would try to guess what kind of tea (or blend) they were tasting and they would win huge awards tea became a way to win stuff instead of its Religious nature, in the 1300s Buddhists started a campaign to return tea to what it was once but they couldn't complete their goal". (<http://yaleglobal.yale.edu/about/tea.jsp> 10/10/2015)

Chapter three:

The benefits of tea

part one: Benefits of tea in general

Most of us think green tea is good...well it is you see "green tea has substances linked to a lower heart diseases, cancer and diabetes". (http://www.health.harvard.edu/press_releases/health-benefits-linked-to-drinking-tea 9/10/2015)

But green tea is not a magic potion it should be used in combination with other healthy food to do its "magic" you see to keep our body healthy we need good food so green tea or not we all should eat reasonable amounts (not huge) of meat to "boost our bodies"(with or without the tea).

The best thing in tea is "polyphenols, in particular catechins and epicatechins those small parts have anti-inflammatory properties". (http://www.health.harvard.edu/press_releases/health-benefits-linked-to-drinking-tea 9/10/2015).And a little note on the side "coffee has polyphenols too". (http://www.health.harvard.edu/press_releases/health-benefits-linked-to-drinking-tea 9/10/2015)

Now there is a weird thing about tea "scientists do not know exactly if tea has these benefits or not, they are just guessing that polyphenols do what has been said above, scientists rule out the possibility that tea drinking people simply live healthier lives.

A little note cup of tea contains only a couple calories. But sugar-sweetened tea beverages are loaded with extra calories. IF there are any health benefits to green tea consumption, it is probably

completely offset by adding sugar."

(http://www.health.harvard.edu/press_releases/health-benefits-linked-to-drinking-tea 9/10/2015)

"Researchers THINK green tea reduces the risk of heart disease by lowering cholesterol and triglyceride levels. Studies show that black tea has similar effects. In fact, researchers estimate that the rate of heart attack will lessen by 11% if you drink 3 tea cups a day.

However, in May 2006, the U.S. Food and Drug Administration (FDA) rejected a petition from tea makers to allow tea labels to claim that green tea reduces the risk of heart disease. The FDA concluded that there is no credible evidence to support that claim". (http://www.health.harvard.edu/press_releases/health-benefits-linked-to-drinking-tea 9/10/2015) (That proves that no one is sure that tea is good for us it is just theory)

Part three: tea vs High cholesterol

"Research shows that green tea lowers total cholesterol and raises HDL ("good") cholesterol in both animals and people. One study says that tea drinking men have less total cholesterol than normal men.

Results from one animal study suggest that polyphenols in green tea may stop cholesterol from being absorbed in the intestine and also help the body get rid of cholesterol. In another small study of male smokers, researchers found that green tea significantly reduced blood levels of harmful LDL cholesterol".

(<https://umm.edu/health/medical/altmed/herb/green-tea> 9/10/2015)

I decided not to write about tea and cancer because it is a huge subject and because nothing in that area is confirmed.

Part three tea vs diabetes

"Tea has a very positive effect on type 1 diabetes and even if you do not have diabetes tea can help prevent you from having it". (<https://umm.edu/health/medical/altmed/herb/green-tea>) 9/10/2015 Tea has a very good effect on tea diabetes but it is a big subject so I did not write about it.

Chapter four: Tea side effects

Part one: tea and medication

Tea should not be take while using any of these meds:

Adenosine -- Green tea may inhibit the actions of adenosine, a medication given in the hospital for an irregular and usually unstable heart rhythm.

Benzodiazepines -- Caffeine, including caffeine from green tea, may reduce the sedative effects of these medications commonly used to treat anxiety, such as diazepam (Valium) and lorazepam (Ativan).

Beta-blockers, Propranolol, and Metoprolol -- Caffeine, including caffeine from green tea, may increase blood pressure in people taking propranolol (Inderal) and metoprolol (Lopressor, Toprol XL). These medications are used to treat high blood pressure and heart disease.

Blood-Thinning Medications -- tea side effects on blood-thinning medications can take a research on its own so I did not write anything.

Chemotherapy—tea side effects on chemotherapy can take a research on its own so I did not write anything.

Clozapine (Clozaril) -- The effects of the clozapine may be reduced if taken within 40 minutes after drinking green tea.

Ephedrine -- When taken with ephedrine, green tea may cause agitation, tremors, insomnia, and weight loss.

Lithium -- Green tea has been shown to reduce blood levels of lithium, a medication used to treat bipolar disorder. That can make lithium less effective.

Monoamine Oxidase Inhibitors (MAOIs) -- Green tea may cause a severe increase in blood pressure, called a "hypertensive crisis," when taken together with these drugs used to treat depression. Examples of MAOIs include:

Isocarboxazid (Marplan)

Moclobemide (Manerix)

Phenelzine (Nardil)

Tranylcypromine (Parnate)

Birth control pills -- Oral contraceptives can prolong the amount of time caffeine stays in the body, which may increase its stimulating effects.

Phenylpropanolamine—the same with chemotherapy.

Quinolone antibiotics -- Green tea may make these medications more effective but also increase the risk of side effect.

<https://umm.edu/health/medical/altmed/herb/green-tea> 9/10/2015)

Part two: tea and caffeine

"Drinking too much green tea can stimulate the body with too much caffeine and you might experience insomnia, dizziness, or heart palpitations. Pregnant women are also advised to stay away from green tea, as drinking too much of it can cause neural tube defects in their babies".

<http://healthpsych.psy.vanderbilt.edu/2009/TeaTime.htm> 22/10/2015)

Part three: tea and food

There are a few interactions between tea and some foods:

"iron: Tea appears to reduce absorption of iron from foods.

Milk: Adding milk to tea seems to reduce some of tea's benefits for the heart and blood vessels. Milk might bind and prevent absorption of the antioxidants in tea".

(<https://www.nlm.nih.gov/medlineplus/druginfo/natural/960.html> 22/10/2015)

Chapter five: Tea types

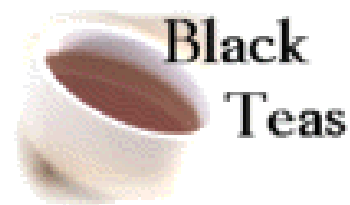
Part one: Black tea

"Black tea is a really oxidized kind of tea its flavor is stronger than all other kinds of tea and it has a lot of caffeine and it is a lot more reserved than all other kinds of tea it holds its flavor for years while green tea tends to lose its flavor in just a few months it is also called red tea in china because of its red color (most people call it black tea because of the leaf's color)"

(http://math.mercyhurst.edu/~bloshaj/lyndaexercises/chap_16/abouttea/teatypes.html 16/10/15)

"Also black tea accounts for over 90% of the tea consumption in the western world"

(<http://darjeeling.gov.in/darj-tea.html> 16/10/2015)



Part two: Green tea

"Green tea is mild not heavily oxidized form of tea it is made out of old leaves and twigs harvested from the dormant tea plant and dry-roasted".

(http://math.mercyhurst.edu/~bloshaj/lyndaexercises/chap_16/abouttea/teatypes.html 2015/10/16)

"Green tea was the beverage of Asia for centuries and now it is gaining popularity in the west and that's because of its great smell and its acclaimed health benefits that is making it the most beloved beverage for tea and non-tea drinkers".



Part three: oolong tea

Now here is a very wired kind of tea that most of the people do not know about oolong tea "it takes its name from a region in Taiwan were it was first developed".

(http://math.mercyhurst.edu/~bloshaj/lyndaexercises/chap_16/abouttea/teatypes.html 16/10/2015)

"Oolong's caffeine level is in the middle not as high as the black tea and not as low as the green tea".

(http://math.mercyhurst.edu/~bloshaj/lyndaexercises/chap_16/abouttea/teatypes.html 16/10/2015)

"Oolong tea has a similar (similar to the black tea) level of anti-oxidants.

Also the heightened levels of Polyphenol in oolong teas are effective in activating enzymes that control obesity".

(http://math.mercyhurst.edu/~bloshaj/lyndaexercises/chap_16/abouttea/teatypes.html 16/10/2015)



Part four: white tea

"White tea is the most delicate of all tea; the finest varieties are appreciated by tea connoisseurs for their unmatched subtlety, complexity and natural sweetness. The production of the delicate white tea consists of only two steps: Steaming and drying. The absence of withering, rolling and oxidation leaves the appearance of the leaves essentially unaltered."



III-conclusion

Now from what have been said above we conclude that tea is 5000 years old and it is still hot it has a Religious value and it is a mark for the Chinese culture.

Also it is a very common beverage and it has a very complex nature.

It has a very wide range of benefits but it is all unconfirmed.

It has interactions with some meds and food.

It has a side effect because of the caffeine in it.

Sugar kills the good nature of tea (considering it has one).

It has four main types (green, black, white and oolong) there are more types of tea but the rest are either blends or one of the main types +modifications.

Now form this research we can say that all of the benefits of tea are just theories so if you drink tea for its benefits only you should rethink what you are doing.

If you are a tea lover you should not drink it while you are on meds or having a nutritious meal.

You should not take tea for granted in the past it was only for the rich people.

Now we come to the end thank you for reading and I hope that you enjoyed it.



IV-References

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4	https://umm.edu/health/medical/altmed/herb/green-tea	9/10/2015
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6	http://www.health.harvard.edu/press_releases/health-benefits-linked-to-drinking-tea	9/10/2015
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8	http://yaleglobal.yale.edu/about/tea.jsp	10/10/2015

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