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GREEN TEA'S HEALING TOUCH: A REVIEW OF ITS EVIDENCE-BASED HEALTH BENEFITS

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Abstract-To address this situation, companies need to be more inventive and develop more wild herbal plants for the medicinal use purpose. Green tea has the same honor - number three after the black type and oolong. Ancient and nowadays popular medicinal drinks around the globe. This product is a tea brand obtained from the leaf of the plant species of "Camellia sinensis.". Its effects can be pluralistic, it can be made as a drink or it may not be digested and thus rot, it will cause a systemic disturbance in the human body. A extract can be also produced from the leaves for medicine. Green tea not only has fewer caffeine but contains an of bioactive compounds found nowhere else. Formed from the action of polyphenols, which I must say are incredibly responsible in the process of fighting against and treating many diseases. This document is to explain why this research is important. a bioactive component of these plants and the commercial products made from them —Green tea

Key Word – Theacea , Green Tea, Camellia sinensis

INTRODUCTION

In the past, plants have served as a good source of medicine. The diseases that affect people are mentioned in writings like Ayurveda and this treatment was done using plant. India accounts for nearly 45,000 plant species; a number of them have been cited as their cure for the various ailments. The factors of the population rise, insufficient supply of the drugs, high cost of the treatment, and drug resistance experienced in synthetic drugs have made the focus on using plants to treat human diseases more important. India is a country, which can rightly be called among the active ancient states with a valuable heritage of healing plants. What the Ancient Chinese Proverb says _It is better to deprive oneself of three days of food than tea for one day is the proof to the tea's role in the lives of the Chinese. The Chinese have long known of the curative properties of the medicinal herbs precisely until modern studies on green tea have demonstrated this amazing benefit during the reign of emperors in which it was extensively used to treat ailments condition such as headaches and severe depression. Tea, next to water, heels coffee as the most widely consumed drink on the planet and surpasses wine, desalted drinks, and beer. Camellia sinensis is a plant species that its leaves and leaf buds are used to make Chinese tea. It is Camellia genus with the genus Theaceae as a part of the family. Common names like tea plant, tea tree, and tea shrub are as well, the most familiar. The cultivation of tea plants is of great economic value in many countries and Camellia sinensis is grown in up to 30 countries.

There are four different tea types, which are derived from the same plant, depending on how the leaves are being processed. This involves white, green, oolong, and black as a category. White tea is the one that is obtained from the young leaves and buds which have not turned green yet and the only processing is drying. Oolong tea is made from leaves that have been partially oxidised through a mechanically based system, while

black tea is created from leaves that have been fully oxidised through the traditional method. A mature tea leaves that undergo minimal change (only drying procedure) are used to produce green tea.

Green tea, which is the second most cultivable tea type, is largely consumed in China, Korea, and Japan. Black tea gets all flavonoids, the main part being called polyphenols and can deliver between 50 to 120mg per liter. Caffeine in your bloodstream in this case is 3 times higher than green tea. No wonder black, green and oolong tea are such good sources of vitamin C.

RESEARCH WORK

The chemical composition of green tea is in fact variable and depends on factors such as climate, season, horticultural practices, and position of the leaf on the harvested shoot. The leaves' green color is characteristic of the most beneficial elements of green tea which makes flavonoids so much important among the polyphenols. The predominant catechins are the ones that amounts to 80-90% of the flavonoids and 40% of the whole water- soluble solids present in tea [9,10,11].

The health effects of green tea depend on its bioavailability after being absorbed in the body. The persistent presence of the metabolites of the catechins can be detected in the blood plasma, urine, and the tissues. Out of the four main catechins found in green tea, are (-)-epicatechin, (-) –epicatechin-3-gallate, (-) –epigallocatechin and (-) –epigallocatechin-3-gallate (EGCG). The majority of the polyphenolic mixture is made up of EGCG, which accounts for 40% [12]. Generally, a cup of green tea consists of 300-400 milligrams of polyphenols, which is a non-toxic pharmacological equivalent. As a ready source of polyphenols, tea leaves rate high though enzyme polyphenol oxidase is responsible for quick degradation of these once the leaves are harvested, and the leaves are steamed at a high temperature.

these enzymes can get damaged by the high temperatures. Lastly, other compounds that can be found are the alkaloids (caffeine, theophylline and theobromine), amino acids, carbohydrates, proteins, chlorophyll, volatile organic compounds, 14 fluoride, aluminum, all minerals and the trace elements.

Health Benefits of Green Tea: The green tea is one of the most substantive beverages in Catechin, polyphenol and especially EGCG [2]. The EGCG is an important antioxidant: Furthermore, the slowdown of the cancer cell growth is only one of the benefits of this therapy, because it also kills cancer cells without harming the healthy tissue. It has in addition worked well in the provision of LDL and cholesterol normalcy and the suppression of blood clots' today's unusual formation, lipid regulation, and platelet suppression and migration of smooth muscle cells, [5, 6]. Blocking of blood clot formation is essential because these abnormal blood clots are the main cause of heart attacks and stroke, the first leading killer; this also proves that the prevention of stroke and heart attack is extremely important. The chemical composition of green tea is very complex because it contains a variety of chemical compounds, which are depicted below.

TABLE 1: CHEMICAL COMPOSITION OF GREEN TEA LEAVES

Constitutional Percentages	% of the dried leaf	Constituent Percentage	% of the dried leaves
Polyphenols	37.6	Ash	4.8
Carbohydrates	24.6	Chlorophyll	0.6
Caffeine	3.9	Lignin	6.4
Protein	15.3	Lipids	2.1
Amino acids	3.6	Organic acids	1.6

Polyphenols: Among them are such the most valuable components of green-tea-leaf, which are considered as the most healthy part in nutrition, and therefore they are called dietary source of antioxidants.
 Polyphenols which are responsible for 50-70% of the tea extract in water. However, the majority of these polyphenols are called flavonoids that are structurally generated in plants using the enzymes that they possess high volumes –from 0 to 5% to 1. 5% of them are more than 4000 kinds of species. Flavonoids, which take the flavor of green tea, comprise approximately 30-40% of its dry weight (catechins).

Tannins are the second-most significant polyphenols present in tea products. Tannins presence has been linked with better antioxidant activity, more health benefits, and less undesirable taste than other polyphenols present in tea products. In inclusion, the phenolic acids such as caffeic acid (5), chlorogenic acid (6), coumaric acid (7), gallic acid (GA) (8), and quinic acid ester (9), as well as the flavanols which are mostly kaempferol (10), myricetin (11), and quercetin (12) [23, 24, 25] years of age. Khan et. al. (2018) investigated plant polyphenol compounds in tea and their anticarcinogenic effects (26). In vitro studies showed that the epicatechin-3-gallate (ECG) component of green tea applied for suppression is (NSCLC) non-small cell lung cancer (NSCLC) invasion levels and urokinase-type plasminogen activator (Upa).

Mukhtar and Ahmad, 2000, and Khan *et al.* 2006 investigated the anticarcinogenic properties of green tea. Furthermore, some epidemiology research is in favor of the tea playing a role in preventing cancer development. As Asian populations that regularly take large amounts of green tea in their diet often show an improvement in cancer prevention, this is demonstrated in a number of studies conducted in Asia.

In the article of Nagma Khan "Antidiabetic Effects of Tea Polyphenols" (2018) her work shows. Diabetes is amongst the many important great problems of healthcare on a global level. Type-1 diabetes is a disease that cannot be prevented and it is treated by insulin therapy. Despite type-2 diabetes develops because of the combination of genetics, lifestyle and environmental factors, it can be prevented or reversed by modifying dietary intake and exercising. EGCG has been dispensed by suppressing the starch hydrolysis and inhibited alpha-amylase and alpha-glucosidase as it can penetrate the active site of both enzymes and can stick to it. EGCG was found to have an antidiabetic action in a high-fat diet and streptozotocin (STZ)-induced type-2 diabetes. Taking EGCG as the treatment contributed to the restoration of glucose metabolism, decrease of gluconeogenesis and lipogenesis in the liver. Moreover, the study revealed activation of PXR/CAR. As a

result, PXR/CAR-mediated phase II drug metabolism upgrading enzyme expression in the small intestine and liver occurred, relating SULT1A1, UGT1A1, and SULT2B1b [29]. The antihyperglycemic effect of polyphenols is the greatest. As we will see Gomes et al. does [93]. EGCG was capable to block up intestinal glucose creep into the blood stream and SGLT1, the sodium -dependent glucose transporter, is the reason behind the increase.

Logesh Rajan in 2022 carried out research on green tea polyphenol's effect on cardiometabolic health. Diseases such as the cardiovascular disorder (CVD) are chronic with multifactorial involvement that causes decline in the individual's health, well-being and lifestyle. According to the figures of WHO, cardiovascular diseases will be the most widespread reason for deaths at thirty-eight percent rates.

In her research, Christy Tangney explored the activity of green tea polyphenols on cardiovascular and inflammation in 2015. Atherosclerosis, the pathological condition often associated with cardiovascular diseases (CVDs) is a variable and chronic inflammatory condition, which is the basis of atherosclerotic lesions, resulting in their erosion or rupture, which can eventually lead to myocardial infarction, angina or cerebrovascular attacks. Since the personal vector of the disease is directly dependent on diet quality, smoking, and lack of physical activity, the ability of diets rich in bioactive compounds to help with the development and lowering of cardiovascular diseases is even more important. Since the inflammation is the main factor for the heart diseases and development of the diseases, the compounds with anti-inflammation properties are the ones that we should look for.

Green tea polyphenols have been studied first by Sabu M.C. in Tobacco and Health Journal article in November 2002. His in vitro experiments showed that a water soluble GTP solution would avoid lipid peroxidation and then ice it with hydroxyl superoxide radicals.

Badriyah shadid followed his green tea plants polyphenol actions on cardiovascular disease in 2021. Polyphenols have been well known for the positive effects on heart disease, including among others as a benefit to cardiovascular disease. However, the good news did not stop because of the several clinical studies in multiple chronic pathologies that seemed to prove their efficacy. Polyphenols' health benefits have come not only due their antioxidant activity, which is already well known.

In 2009, back in the year 2009, Peter W. Taylor conducted a study wherein the efficacy of green tea polyphenols in these molecules for antimicrobial properties was examined. The research done for the last 20 years has proven that the green tea polyphenolic catechins, which in particular are (−)-epigallocatechingallate (EGCg) and (−)-epicatechingallate (ECg), can inhibit the growth of a number of Gram-positive and Gram-negative bacterial species with a moderate potency. The fact that these compounds exerts control over the most common oral infections such as dental caries and periodontal disease have been shown. EGCG and ECG was found to be inhibitors of bacteria virulence factors and reversed antibiotics resistant phenotype of pathogenic bacteria Staphylococcus aureus (S. aureus).

Jing Luo recently conducted a study about green tea polyphenol's ability to reverse aging in 2021. Naturally occurring polyphenols are the largest, yet most studied group of antioxidants that can be grouped hydroxyl phenolic acids, flavonoids, stilbenes, lignans and other polyphenols which have a oxygen atom attached to the aromatic ring studies have shown that occurrence of polyphenols in diet is way bigger than several of micro-nutrients such as vitamins A,C, and carotenoids[11]. During the past two decades, polyphenolic compounds have been the focal point of much research as they are widely distributed in the different foods and their powerful antioxidant properties[11]. Besides, polyphenols were discovered to have beneficial influence on energy metabolism, the process that is very important to our wellness and potential to live longer, and there was also a reduction in the risk of aging-related chronic diseases.

Xanthine Bases/Purine Alkaloids: They are usually depicted by caffeine, which is the second principal constituent of the dry leaf; theophylline and theobromine, which are also in small amounts, are the other two products of caffeine. Xanthine alkaloids may be described as a purine which is a subdivision of imidazole and pyrimidine rings. The class of xanthine alkaloids made up primarily of caffeine, theobromine, and theophylline is where we will focus our analysis. The caffeine content in coffee is up to 0. 4-2.4% dry weight. When young leaves of camellia sinensis, camellia assamica, and camellia aliens are dried, they contain equal ranges of caffeine content which is between 2% and 3% dry weight. In addition, the absorption of greenhouse gasses

mitigates effects on climate to a certain extent. 02% in camellia kissi, and the caffeine content in tea (infusion) is between 1.0% and 3.5 out of a million is what makes it up[38, 39].

Methylxanthines, indeed, have a powerful impact on the physiological processes, resulting in the activation of metabolic and stress response systems. Caffeine is an analgesic and it is usually used along with some other analgesic, such as paracetamol, ibuprofen, or acetylsalicylic acid 40. Methylxantines also among case psychostimulatory activity which are characterized by milder effect as respect of amphetamines and cocaine. The mechanism with which adenosine receptor (A1 and A2A Receptor) by caffeine is being blocked were suggested as the ones responsible for the neuroprotective roles of caffeine[41]. Nevertheless, the useful results were enough to justify the shelter of the blood-brain barrier dysfunction. Based on the recent animal as well as epidemiological studies, a significant amount of evidence seems to indicate that a moderate consumption of caffeine in mid-life is protective against the emergence of various diseases. Moreover, caffeine and the methylxanthines have been introduced successfully for treating respiratory diseases[42, 43, 44].

Gangchen *et al.* (2015) investigated green tea polyphenols and concluded that it lowers the uric acid level by inhibiting xanthin oxidase. The green tea is mainly treated in Chinese literature, as a kind of medicine that promotes the water to expulse while quenching the thirst.

Shu-Hua Ouyang (2021) agreed nanoparticles antidepressant purine effect from green tea alkaloids. He studied the antidepressant-like effect and the mechanism of theacrine in chronic unpredictable mild stress.

Triterpenoid Saponins: Their makeup is mainly florapeonis A, B, C, D, E, and F (21–26), thus, they can be found in high concentration seeds and flowers.

The tea plants are rich in more than 70 different types of saponins that are distributed in a tissue-specific and maturation-specific manner (Guo *et al.* 2018)[48]. A study reveals that 50 putatively saponin compounds could be identified in the UPLC– UHPLC– MS tandem by mass spectrometer with the technique of ultra-high performance liquid chromatography coupled with a tandem mass spectrometer (UPLC– MS/MS). (Wu *et al.* 2019). The study of researchers by the means of LC–MS/MS was conducted to know which silping tea saponin molecules are present in tissues of the tea and infusions that is taken up by the beverage drinkers. They identified saponin molecules by analyzing MS spectra of relative peaks and retention times (Wu *et al.* 2019) from two different types of green teas (YR and LGP) in the ranges of 49-55. As it's known that the mushroom saponins from Camellia species have anticancer activities compared to this, the way that they work (Murakami *et al.* 2000; Ghosh *et al.* 2006; Morikawa *et al.* While its effects on normal cells remain elucidated, there is clear evidence associating the presence of whole saponins in tea with a decreased cancer mortality rate (Zhao et al. 2015; Matsuda et al. 2016; Jia et al. 2017; Cui et al. 2018). Next, in vitro tests were carried some tea saponins were found to have a very good effect in inhibiting cancer cell proliferation and in apoptosis in cancer cells (Ghosh et al. 2006; Zhao et al. 2015; Cui et al. 2018). Saponins are used in a series of concentration experiments as a means to kill human tongue squamous carcinoma cell lines (TCA8113) as well as a hepatocellular example of the same carcinoma, that is HepG2 and to determine their cytotoxic activity[58]. They present that total tea saponins possess anti-proliferative activity on two human cell lines, yet the sensitivity is unequal in both lines. When cells of TCA8113 were treated with 0. In the final mixture with the concentration of 0. 25 mg/mL of the green tea total saponins powder at about 75% of the cells survived. However, the moment the concentration equals to 0. 05mg/mL and 80% of the cells survived. The target TCA8113 cells were calculated to be about IC50 of 29. 20lg/ml 60. HepG2 cells, which had been given a 0. The concentration of the total saponin extract solution was 1mg/mL, and about 70% of cancer cells remained alive. When the ppm attained 0. The absolute number of surviving cells under this drug concentration was 18% as low as stated before. When 0. 05mg/mL was used to drop on HepG2 cells, the cell survival rate decreased to less than 12% very quickly. The IC50 for TCA8113 cells decrease significantly in comparison to untreated wild-type Hela cells. Specifically, it demonstrated that the spectrum ranges from 17 nm to 37 nm. 54lg/ml

Amino Acids: Amino acids can be 1 - 4% of the total dry weight and can be a mixture of arginine, aspartic acid, glutamic acid, glutamine, and serine but 5-Nethylglutamine (and it`s another name: theanine) which together compose more than 90% of the total amino acids present within the leaves of CI would like to add that theanine is the main amino acid that is the most abundant, accounting for about 1-2% of the dry weight of the green tea leaf, and therefore, it is regarded as the third major component of dry leaf. Not only this, it is also known as the only amino acid that is present on catechins slowly which green tea has its unique flavors

and taste and as they say, both good and bitter taste melts in mouth due to amino composition. The essential amino acids such as tryptophan, glycine, tyrosine, valine, leucine, threonine, and lysineal so found in red meat.

L-THE was the first amino acid to be isolated and identified in 1949 as a water-soluble non-proteinogenic amino acid mostly found in the tea plant (Camellia sinensis) and the one that is responsible for a unique taste that is similar to that of the tea is "that unique taste that we can only get from monosodium glutamate called 'umami'"-72. In compliance with universal nomenclature of the International Union of Pure and Applied Chemistry L-THE is abbreviated like this: '2- amino-4-(ethylcarbamoyl)butyric acid. ' It has several names such as 'gammaglutamylethylamide' and 'gamma-glutamyl-L-ethyl amide' reflects the presence of an amino acid which is conditionally essential found as a core unit in its structure[72,73];. Theanine may exist either in its racemic form that includes L- and D- enantiomers, or it may occur as an isomer that would compete for its absorption and metabolism. L- enantiomer is said to be metabolized faster, while the D- is mostly metabolized by kidneys[74].

It has been found that L-THE has several potential health benefits such as the ones related to emotional status, high blood pressure suppressions, improved sleep quality, and better cognitive and mood functions. Moreover, the intake of L-THE together with caffeine is believed to raise the levels of antioxidants and anti-inflammatory agents in the brain, which may be harmful for the brain and may be responsible for the cognitive impairment 75, 76. The L-THE that has been currently subjected to human studies have not shown any significant effect on eliminating stress or anxiety. Mostly the data so far is derived from animal research that has widely used pure l-THE in combination with other active biomolecules such caffeine and catechins, which may act synergistically or perhaps may even be antagonizing effects. The main amino acids that have an effect on muscle protein anabolism in older people are the essential amino acids (Volpi et al. , 2003). Moderate gram of essential amino acids preferably taken as a bolus has been reported as adequate of daily requirement (Wolfe, 2002). This indicates that theprotein quality is the key point to be considered in veteran peoples' diet model.

Studies on Beneficial Effects of Green Tea Extracts: The results of studies using animal models can be summarized by saying that green tea catechins are expected to suppress the development of a few degenerative diseases. In a number of studies it has been found that green tea has reduced specific kinds of toxins on the liver, and it also[29] has potential hepatoma anti-inflammatory properties after a cancer onset and hypolipidemic activity in mice that are diagnosed with liver disease. Catechins in green tea can also be considered as immunomodulators for immunosuppression therapy with antineoplastic humanize the sentence: agents[30] and gene[31] modification or medicine causing cancer[29]. On the other side, green tea, extracts and isolates showed efficient antioxidative activity and were also protective against neurodegenerative disorders.

The studies also show a link between green tea consumption and prevention of many types of cancer, such as lung, colon, esophagus, mouth, stomach, small intestine, kidney, pancreas, and mammary glands[33]. Many investigatory studies and human clinical trials have underscored that the green tea (to a degree black tea and oolong tea) drinking can reduce the health risk of variety of major chronic diseases. It was noted that this healthy impact was mainly caused by the polyphenols, strong antioxidants which are plenty in tea. Green tea, in particular, is the tea that can lower blood pressure and, as a result, the risks of stroke and coronary heart disease. Some of the animal studies in the green tea area show that it might be able to save against the possibility of chronic heart disease development by controlling the blood glucose level and body weight. Nevertheless, these data have been evaluated not with regard to older animals, especially some who will be seriously influenced by age-related biological and social economic factors.

Tea compounds have antioxidant, antimutagenic, and anticarcinogenic properties and therefore, could be used as a protective measure by humans against the danger of cancer created by harmful substances in the environment. Sano et al. presented that green tea leaves suppressed tert- butyl synthesis induced lipid peroxidation, and the same kidney antioxidant were seen after the oral treatment with the major tea polyphenol EGCG. The active oxygen method assessed how catechin powder and the individual catechins found in it behaved as antioxidants. Catechins from unpolished tea leaves had a much stronger antioxidant effect than dl-α-tocopherol (anti-oxidant vitamin E)[39]. In Shim *et al.*[40], a study on the chemoprevention of green tea among cigarette smokers, the authors conclude that it can block the increase of cigarette induced sister chromatid exchange (SCE) frequency.

Humans, Hirasawa and Takada[49] investigated the antifungal activity of green tea catechins against Candida albicans and the advantage of the combination of catechins and lower antifungal doses, which can help to avoid antifungal side effects. This connection between green tea ingestion and enhanced bone minerals density is also seen as a result of studies conducted. It has been was proven to operate as an independent risk factor for low possibility of fracture of hip bone, independent from smoking, drinking coffee, or when taking hormone replacement therapy[51]. The study by Park *et al*[51] showed that the extracts of green tea and GTP were effective in stimulating the growth and activity of bone cells. As mentioned in recent researches, the increasing number of hepatic stellate cells is believed to be one of the basic mechanisms for the process of liver fibrosis in chronic liver diseases. Nevertheless, EGCG, among other things, has shown a potential ability to suppress the proliferation of stem cells.[52, 53.]

By the way, anticarcinogenic activities of tea have been confirmed in experimental research indicating colon cancer inhibition among others[62]. However, there has been a disagreement in the epidemiological data which shows that tea protects against breast cancer[62]. A cases-control study was carried out between Southeast China from 2004 to 2005 with[63]. Coming to the question of study design, the 1009 patients who were aged between 20 and 87 years were the case group, and they had histologically confirmed breast cancer and the controls, who were selected randomly from breast clinics, were from among the 1009 healthy women of the same age range.

In a study, Hsu *et al*.[64] demonstrated that the oral administration of decaffeinated green tea polyphenols (catechins) can decrease the rise of reactive oxygen species during the hemodialysis process, the atherosclerotic disease risks, and the release of pro-inflammatory cytokines (64). The Single oral dose of catechins was compared between healthy subjects and hemodialysis patients as to pharma-cokinetics. Researchers have compared the antioxidant effects of catechin compounds present in three doses (0, 455, and 910 mg) of the Green Tea extract with antioxidant activity of 500 mg Vitamin C in the course of hemodialysis. In the above study by Sabu etal. conduced in rats on GTP treatment, glucose tolerance was found to improve after 60 min of the administration of GTP (500mg/kg) to normal rats. On the other hand Alloxan treated Diabetic rats were found to have significantly low levels of serum glucose after the administration of GTP (100 mg/kg). The continued daily administration of the extract (for 15 days) at a dose of 50 or 100 mg/kg resulted in a 29% and 44% reduction in the serum glucose level which was elevated due to the alloxan administration.

With regards to rat hepatoma cell (H4IIE), Heat-stable extracellular acidic protein (EAC) protein is abundant in those cells and glucose formation in the liver is substantially reduced by the d-aspartic acid (D-AA) protein isolated from A. asiatica leaves. It has been found out that the EGCG, is a great mimic for insulin, it increase the tyrosine-phosphorylation of the insulin receptor and insulin receptor substrate, as well, it decrease the expression of gluconeogenic gene enzyme phosphoenolpyruvate carboxykinase. The last few years have seen green tea and green tea extract being shown to modify glucose metabolism in the experimental models of type II diabetes mellitus 35, 100. Lambert et al. have shown that oral administration of 102 into the guts has oil-stripping and antimicrobial effects with 75 mg/kg as a dose EGCG attacked with Cmax of 128 mg/L of total plasma EGCG and half-life of 83 min. In fact, at an oral intake of the dose of 50 mg (0.7 mg/kg) which resulted in Cmax of 130 mg/L of total plasma EGCG and a half-life.

TABLE 2: EFFECTS OF GREEN TEA COMPONENTS

Component	Effect
Catechins (Astringency component in tea)[30]	Decreases blood cholesterol Body fat reduction Cancer prevention Antioxidant Tooth decay prevention Antibacterial Bad breath prevention[20]
Theanine (full-bodied flavor components in tea)[30]	Neuronal cell protection Relaxation effect Lowering of blood pressure[20,21]

Vitamins [30]	Vitamin c	Maintenance of healthy skin and mucus membranes[22,23]	
	Vitamin B2	Maintenance of heathy skin Antioxidant	
	Folic acids	Prevention of fetal neural tube defects	
	Vitamin E	Antioxidant	
	B-carotene	Maintenance of nighttime vision	
Saponins[30]		Lowering blood pressure Anti-influenza effect[24]	
Minerals (potassium, calcium, phosphorus, manganese, etc.)[30]		Biological regulators[24]	
Chlorophyll[30]		Deodorizing effect[24]	

TABLE 3: MARKETED PRODUCTS OF GREEN TEA EXTRACT

S no.	Product	Name	Company Name	Weight of extract	Use
1.	Tea bags	Green tea with Himalayan berries & herbs, Green tea lemons exquisite, Green tea, Kangra green tea, green tea	IMC, Himpure, Tetley, Himalayan brew, Lipton	40gm, 50gm 65gm 40gm 45gm	Its herbal ingredients helps to reduce the risk of cancer and prevents tooth decay. Lowers the risk of stroke
2.	Green tea premix	Green tea, Detox green tea, Organic green tea	Lipton, Senso foods PVT. LTD., Tetley	1kg, 1kg, 1.5kg	It helps to reduce the fat and weight.It lowers the risk of heart disease
3.	Capsules	Green tea capsules, green tea, green tea	Inlife, Ayurveda, Nature	640mg per capsule, 60 capsule, 120 capsules	They fastens the metabolisms and reduces blood sugar. Prevents the risk of developing endometrial cancer
4	Tablets	Green tea, green tea, green tea extract	Country life, Going Sx	90 tablets, 60 tablets	Enhance the immunity, increases bone density, controls blood sugar94
5.	Toner	Green tea, green tea, green tea	Plam, Biotique, Mamaearth	120ml, 120ml, 60ml	Helps in maintaining pH balance of skin. Lights up the skin tone[95]
6.	Gel	Green tea, green tea,green tea gel	Plam, Mamaearth, Beaface	45gm,60gm,100 gm	Boosts skin health, Lowers redness and irritation in skin and moisturizes skin
7.	Facewash	Green tea face wash, natural green tea, green tea	M caffeine, The mom's co, Good vibes	50ml, 20ml, 40ml	It cleanses and removes the dirt from the skin
8.	Green tea leaves	Green tea, green tea oil, green tea	Lipton, Assam green tea, Kangra green tea	100gm, 800gm, 60gm	Improves mental alertness, prevents digestive symptoms

9.	Green tea face oil	Green tea, green tea oil, green tea	M caffeine, Lotus, WOW	20ml, 50ml, 30ml	Averts wrinkles, green tea oil contains anti-aging constituents

CONCLUSION

Green tea catechin has several health benefits. There are numerous research studies have been performed regarding green tea catechins. Green tea is packed with various nutrition. This article proves that green tea is present in both the conventional and alternative medical fields, as well as in the modern society which believes in the saying and thereby taking the sayings of the saying being quoted.

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