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ESTIMATION OF TRADITIONAL MEDICINAL PLANT AND MOST WIDELY USE BEVERAGES IN THE WORLD

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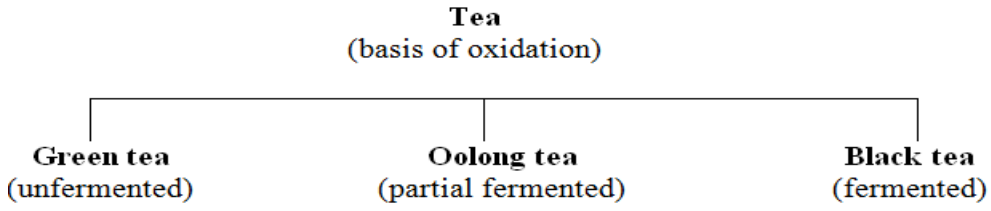
ABSTRACT

Green tea is derived from the plant *cameliya sinensis* belongs to *theacae* family. In ancient time tea is drink in the world wide beverage in the form of drought.it helps to detoxicant the body the many scientist has work on green tea and observed the many therapeutic properties from the many therapeutic uses of green tea. It has been focused on antimicrobial effect of green tea, also include the history of green tea, pharmacognosy of green tea, chemical active ingredient's active constituent of green tea is catechin which treat the antimicrobial infection. Green tea has the property to fight against chronic diseases such as cancer, heart diseases & liver diseases & many more. Many people in countries in the world are accustomed to tea consumptions in worldwide is less than tea & Coffee generally green tea has been found to be Superior to black tea in terms of health benefits due to their greater health benefits and demand & popularities are enhanced green tea is accounted for to contain a large number of bioactive fixing which contributed by polyphenols which assumes it shows action & treatment of numerous infectious diseases. The mechanism of green tea catechins & also the biological action evidences form in vitro & animal studies and human studies by using green tea catechins to diversion cardiovascular risk factor metabolic syndrome such as obesity, type 2 diabetes. The green tea also shows the anti-inflammatory, antibacterial, antifungal and antihypertensive and shows other many more activities.

KEYWORDS: Therapeutic effect, antimicrobial activity, catechin, green tea polyphenol, antioxidant, epigallocatechin.

INTRODUCTION

The history of the tea began in 2737 B.C.E by Chinese legend. Tea is discovered by emperor shen nong. One day, the water was boiling in the garden, a leaf from an overhanging wild tea tree put down into his pot. The emperor enjoyed drinking so much. Then he was research on that plant and discovered the teas medicinal properties. Indian history assigns the discovery of tea to prince Bodhi-Dharma. The tea leaves derived from the camellia sinuses. It can be classified into three classes on the basis of oxidation.



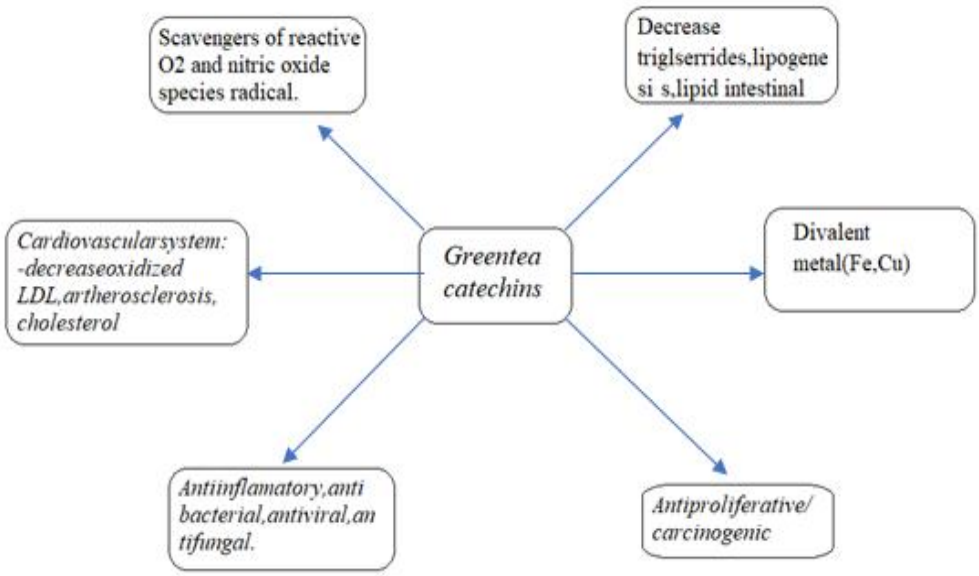
The black tea and green tea are process differently in the manufacturing. To prepare green tea freshly harvested leaves are right away steam to prevent fermentation. This process diminished the enzyme responsible for manufacturing down the color pigment in the leaves and permit tea to maintain green color. This process protects natural polyphenol with respect to the health promoting properties. The tea is a second beverages or drink which mostly consume in the world after the water. The synonyms of the green tea are camellia Thea. The cultivation and collection of green tea is required skill lab our and proper condition for its optimum growth. It is an evergreen shrub that can grow up to height 3.0 feet but is usually for cultivation. The leaves of camellia sinuses plants containing complex carbohydrates, lipid, vitamins, flavonoids. Flavonoids generally contain

higher amount of disease. Fighting anti-oxidant called polyphenol. Polyphenol shows diminished the thormo beginning, fat oxidation increasing the metabolic rate without expanding the hart rate.as compared to other teas, green tea has highest concentration of polyphenol including epigallocatechin gallate (EGCE). If the amount of poly phenol is increase it creates more bitter taste. The active constituent of the tea varies with climate, seasons, verity horticultural practices and after harvesting the enzymatic activity is stop in order to retain the majority of catechin flavonoid and its green color.

Composition of green tea: The chemical composion of green tea is multiplex .Protein (10-20% dry wt.)The enzyme constitute an important fraction, Amino acids(1-4% dry wt.), theonine, ethyl glutamine, glutamic acid, tyrosine, valine, lysine, carbohydrates(5.7% dry wt.)-cellulose, pectin, glucose, fructose and sucrose. Vitamins (B, C, E).

Compound	Green Tea
Protein	15
fiber	26
Minerals	5
lipids	7
Pigments	4
Amino Acids	4
Phenolic compounds	30

Antimicrobial properties of green tea



Processing of green tea

- cultivation
- Harvesting
- Deactivation of enzyme
- First drying
- Rolling and influential
- Second rolling and ventilation
- Final drying
- Refining
- Final firing
- Blending
- Selection
- Packaging

Image 1: Green tea

Antioxidant potential of green tea: antioxidant potential of green tea is the major focusing area of health effect. Green tea composed of polyphenol it shows more benefial in protecting the body from oxidative damage due to free radical as compared to other teas, green tea has highest concentration of polyphenol including EGCG higher content of polyphenol bitter will be the tea higher concentration of phenolic compound in green tea are gallic acid (GA), Gallo catechin (Gc) Calle chin (c) epicatechin (Ec) etc.other than it contains carotenoids ascorbic acid (vit c) minerals such as Mg Se Cr or Zn phytochemical compound .the flavins in dark tea and catechins In green tea are likewise power full as cellreinforciment.

Mechanism of antioxidant activity:

Reactive oxygen species (superoxide) and reactive nitrogen species (nitric oxides, peroxynitrite) fashioned by Oxidative stress of cell and tenderness produced by pathogens in host defense arrangement

↓

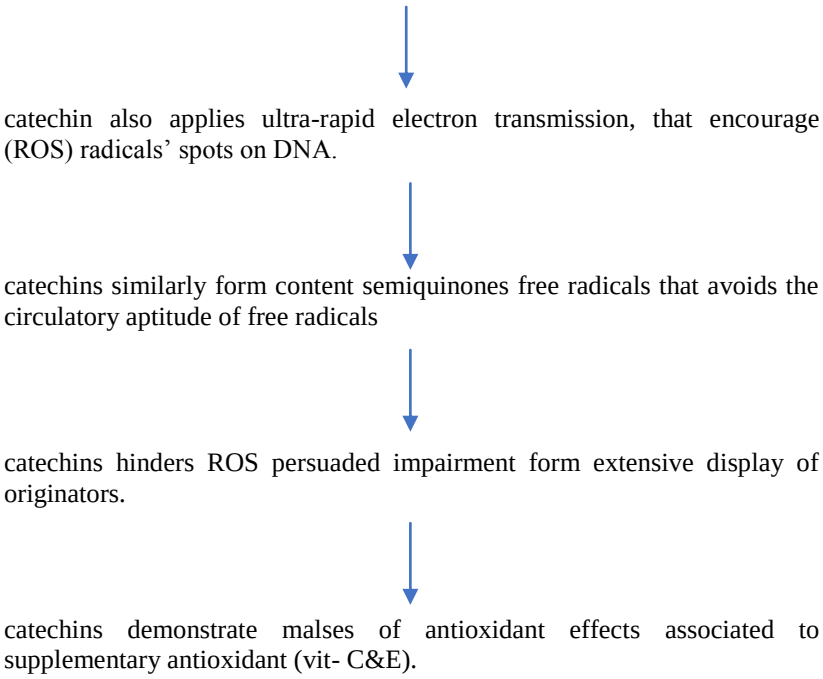
free radicals have distractive properties of cell chiefly on DNA proteins and lipids

↓

causes lipid peroxidation and eventually apoptotic cell death

↓

catechins that encompass free radicals have hunting belonging and turn as biological antioxidant hunting belonging of catechin destresses on super oxides.



Mechanism of Antimicrobial activity

In this activity the polyphenolic components having the property to modulate physical structure of cell membrane. The number of membrane dependent cellular processes, cell cycle arachidonic accidentalism and cell proliferation can be influence by combined of catechin with the cellular phospholipid palisade. Due to strong bacterial EGCG, Breakdown of 5,6- carboxyflurescein form phosphatidylcholine liposomes ,but due to weak bacterial activity a little damage to cell membrane .phosphatide and diacetyl phosphate not fully but partially protected to the cell membrane form EGCG damage ,when liposomes again constitute with phospatidylcholine.EGCG cause strong accumulation and NPN-fluorescence and extinguish of phosphatidylcholine liposomes and these produce low action in the influence of negatively charge lipid molecules .They shows firstly bacterial property by catechin and damage bacterial catechin and Gram positive bacteria may be described to expanse by the time infusion of negatively charged lipopolysaccharides.

Effect of drug metabolizing enzyme: Long term of tea increase UDP-glcuronosyl transferase activity in rats & after animation of catechins are metabolized by drug metabolizing enzyme in various organ.

Benefits and health effects of green tea

1. The prediction of active metabolites by the compound of green tea the undergo several Metabolic processing life methylations, sulfationand glucuranidakon.
2. various studies resulted after consumption of green tea the reside flection o catechins and the irmetabolites inbloodplasma, urine and different tissue of the body.
3. The rear various parameters by which the measurements of ingested green tea to extract Has to conduct bioavailability of blood plasma is studied after 2hours of ingestion and of urine is after 46 hours of ingestion.
4. The metabolites like an Ec and EGc is to be detected in blood plasma and urine.
5. The rear many facts how on the body when consuming of green tea such as: -

A) Contains heavy bioactive compound. Green tea is loaded with polyphenol antioxidants, including, acatechin called EG CG, these Antioxidants can have various beneficial effects on health.

B) It improves brain functions: Green tea contains less caffeine than coffee but enough to produce an effect. It also Contains the amino acids L- theanine which can work synergistically with caffeine to Improve brain functions.

C) It increases fat burning: Green tea may boost metabolic rate & increase fat burning.

D) Antioxidants may lower the risk of some cancers: Green tea has powerful antioxidant that may protect against cancer. Multiple studies show That green tea drinkers have lower risk of various types of cancer.

E) May help prevent type-2 diabetes: Some controlled studies that green tea may cause mild reduction in blood sugar level. It May also lower the risk of type of 2-diabetes.

Adverse Effect of Green Tea

Except that the green tea has several beneficial effects on health, the result of green tea and its constituent may beneficial up to a certain dose yet high dose. May affect. some adverse effects. Damaging effect of tea over consumption are due to above main factors.

i. Its caffeine contents
ii. Presence of albumin
iii. Results of tea polyphenols on iron bioavailability.

Avoid the tea form patient who suffers from the heart conditions or major cardiovascular problems.

Other therapeutic effect of Green tea

1. Preventing Alzheimer's disease & enhancing function of brain: Green tea help to increase the function of brain & prevent the brain degeneration. EGCG induce to decrease the production of Protein Beta-amyloid, which may over Accumulate in our brain, resulting nerve damage & memory loss overtime 12-acondition.

Related to Alzheimer's disease:

2. Glaucoma: - Catechin in green tea can also treat or prevent Glaucoma & other eye disease. The lens & Retina had absorbed green tea catechin which had improved eye sight by 20%.
3. Arthritis: - Green tea also having polyphenols which have anti-inflammatory properties.
4. Diabetes: - Green tea decrease the fasting glucose level which are controlling diabetes Health. Catechin shows result in controlling hyperglycemia in type2 diabetic patients.
5. Cancer: - Green tea polyphenols (GTP) EGCG (epigallacticatechingallate) no tonly inhibit an enzyme Which cause cancer but also kills cancer cells without any effect on healthy cells. Due to EGCG, the cancer cells literally failed to grow, because they needed to divide, they undergo the apoptosis.
6. Hypertension: - Green tea prevent high blood pressure.

CONCLUSION

Through in this entire study concluded that green tea is a potent cure to prevent the catechin may be prepared that catechin may be prepare hat result in significant useful as anti-infective agent for the treatment of severe systemic infections.

The human clinical confirmation is still limited, the future research needs to defined the actual immensity of health benefits.

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