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Chocolate And Cognitive Function

Lekshmi.S

Feba Jose

Shilpa Lal

Jiju V

Elessy Abraham

Abstract: ***Various studies were conducted to examine the cognitive function of chocolates. Besides their role in diet, it also plays a crucial role in therapeutic purposes. They help to prevent cardiac diseases, CNS disorders, improves blood flow to brain etc. Continuous and balanced consumption can improve our memory power, learning skill and concentration. In addition to these dark chocolates helps to reduce insulin resistance and thereby it is preferred to use in diabetic conditions. These effects are due to the cocoa flavanoid which is the major active constituents in Theobroma cocoa.***

Keywords: Chocolate, cocoa, cognitive, flavanoids

I. INTRODUCTION

Chocolates are a very common snack for all of us without any restrictions about age. Chocolate is a typically sweet usually brown colored food preparation which is prepared from the plant *Theobroma cocoa*. It contains coca butter, lecithin, sometimes sugar milk and some ingredients for texture. They are sometimes favored with vanilla, orange, milk etc. they can be made into solid blocks, liquid as well as paste. Chocolate contains flavanoids and alkaloids like caffeine, theobromine and phenethylamine. Chocolates are using in a wide range of food preparations as a flavoring agent. Excess use of chocolate is considered as a threat to health as it harms our body to an extent. It is having so many benefits like in our behavior, memory power and to survive some health problems too. Here we are discussing about the effect of chocolate intake in memory power.

TOP DARK CHOCOLATE BRANDS IN INDIA

- ✓ Snickers Dark
- ✓ Kit kat dark
- ✓ Godiva
- ✓ Vochelle
- ✓ Mammoth
- ✓ Amul
- ✓ Cadbury Bournville
- ✓ Hershey's special dark

II. PREPARATION OF CHOCOLATE FROM COCOA

Cocoa pods are harvested by knocking them by a stick or by cutting from tree. Beans are removed from pod and placed in bins and allowed for fermentation which takes 78 days. After fermentation it is allowed to dry to prevent mold growth. Then they are carried to a chocolate manufacturing facility. Beans are cleaned and their shells are removed to extract the nib. Nibs are grounded liquefied to obtain pure chocolate in liquid form. This is chocolate liquor. This chocolate liquor is blended with cocoa butter. Refined and blended chocolate is then brings to couching which produce sugar and cocoa smaller than the tongue can detect for the smooth feeling in mouth. The final process is called tempering. Crystallization can result in formation of crystals of different size. So the

uniform sheen and crisp bite of chocolate are as a result of tempering process.

III. TYPES OF CHOCOLATES

DARK CHOCOLATE: it is prepared by adding sugar and fat to cocoa. It is called as black chocolate or plain chocolate. They contain or do not contain much less milk.

BAKING CHOCOLATE: it contains cocoa solids and cocoa butter without any added sugar in it. It is also called as bitter chocolate. They are also called as cooking chocolate.

SWEET CHOCOLATE: It contains cocoa solid, cocoa butter with some added vegetable oil. Most of the chocolates are consumed as sweet chocolate.

WHITE CHOCOLATE: It is a combination of cocoa butter, sugar and milk. It does not contain any cocoa solid. It is almost same to the texture of dark chocolate but due to the lack of cocoa solid many countries does not consider white chocolate as chocolate at all. It does not contain any theobromine so it can be given to animals too. As theobromine is found to be toxic to animals like cats and dogs.

MILK CHOCOLATE: milk chocolate is a type of sweet chocolate that also contains condensed milk or milk powder.

ORGANIC CHOCOLATE: these are chocolates which are certified as organic.

RAW CHOCOLATE: these are not been processed, heated neither contain any other ingredients.

SEMISWEET CHOCOLATE: has been using for cooking purpose. It is a dark chocolate with half much sugar as cocoa. It does not contain milk.

COMPOUND CHOCOLATE: it's a combination of cocoa with vegetable fat usually typical fat to replace cocoa butter.

IV. COGNITIVE ACTION OF CHOCOLATE

The cognitive actions of chocolates are due to the action of cocoa flavanols and methyl xanthines. The flavanols present in chocolates can improve blood flow to brain and also penetrate to brain and accumulate in the regions involving learning and memory. The minor dose of caffeine acts as a brain booster which can increase memory power, mood and concentration. From the olden days too chocolate has been used for various health problems like cardiovascular, neurological, behavioral, and dietary factors. The relation of habitual intake of chocolate to cognitive performance is evidenced from various neuropsychological tests.

V. DARK CHOCOLATE

These benefits of chocolates may not be restricted to dark chocolate. As dark chocolate contain high amount of cocoa than white and others, it is having high cognitive function. Other types also carry their ability for cognition and concentration too.

VI. STORAGE

Ideal storage temperature of chocolate is 15-17C. and a relative humidity 50%. Chocolate is very sensitive to temperature and humidity.

VII. APPLICATIONS OF CHOCOLATE

- ✓ Eating chocolate in an appropriate quantity can improve our memory.
- ✓ consumption of chocolate can make you happy as it is a dietary source of tryptophan which is an amino acid precursor to serotonin the neurotransmitter of happiness and positive mood.
- ✓ Chocolate can also improve the function of brain. Various studies showed that 5 days of consuming high flavanol cocoa can improve blood flow to the brain.
- ✓ It contains antioxidants that make it into the bloodstream. And protect lipoprotein against oxidative damage.
- ✓ Chocolate can also reduce insulin resistance by helping cells to function normally and regain ability to use body's insulin. So it is considered as good for diabetic patients.
- ✓ It can affect human heart like green tea. It contains natural chemicals that protect heart
- ✓ They can affect the minerals in our body. Dark chocolate contain high amount of magnesium which helps in metabolizing food to energy.
- ✓ They can protect body from aging caused by free radicals that can damage heart. So they can keep you look younger for a long time.
- ✓ Consuming flavanol rich chocolate can protect our skin from ultraviolet rays in sunlight
- ✓ Chocolate can control the bacteria in intestine. It increases the good bacteria and keeps a check on bad bacteria.
- ✓ It contains high amount of minerals and vitamins. Chocolate contain high concentrations of potassium, copper, magnesium and iron. Copper and potassium prevents against stroke and cardiovascular problems. Iron protect against anemia. Magnesium prevents type 2 diabetes, high blood pressure and heart disease.

VIII. CONCLUSION

However chocolate consumption is considered as one of the ways to improve memory. It can also be used for numerous purposes like, it improve the blood flow to brain, protect our heart, protect skin from UV rays. Even though it has many advantages over usage can lead to many health problems like, dental decay, obesity etc.

So chocolate is healthy to our body if we eat a right amount. Dark chocolate is healthier than white and milk chocolates. Because it contains less fat and sugar than the other two.

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