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## RESEARCH ARTICLE

### STUDY ABOUT THE NUTRITIONAL AND MEDICINAL PROPERTIES OF APPLE CIDER VINEGAR

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#### ABSTRACT

Apple cider vinegar otherwise known as cider vinegar or ACV, Is a type of vinegar made from cider or apple must and has a pale medium color. Unpasteurized or organic ACV contains mother of vinegar. Apple cider vinegar is fermented juice from crushed apples. Like apple juice, it likely contains some pectin, vitamin b1, vitamin b2, and vitamin b6, biotin, folic acid, niacin pantothenic acid and vitamin c. Using apple cider vinegar (ACV) diabetes significantly reduces haemoglobin A1C (HbA1C), lower density lipoprotein (LDL), cholesterol and triglycerides and increase high density lipoprotein (HDL) cholesterol. In another patient model, apple cider vinegar decreased triglycerides and very low density lipoprotein (VLDL) cholesterol. It's nutrient-rich, especially in unfiltered and organic varieties, and contains acetic acid, pectin, potassium and calcium. It also controls the blood levels, loss weight, improves cardio-vascular health, regulate body pH & detoxify body. Two spoonfuls of Apple Cider Vinegar and mix it glass of water. Take this regularly before having a meal.

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#### INTRODUCTION

Apple cider vinegar otherwise known as cider vinegar or ACV, Is a type of vinegar made from cider or apple must and has a pale medium color. Unpasteurized or organic ACV contains mother of vinegar. Apple cider vinegar is fermented juice from crushed apples. Like apple juice, it likely contains some pectin, vitamin b1, vitamin b2, and vitamin b6, biotin, folic acid, niacin pantothenic acid and vitamin c. Preliminary research is being conducted to determine possible effects on blood glucose levels, satiety, anti-infective properties (either topically or orally) and hypertension or cancer, ingestion of the acetic acid in vinegar poses a risk of possible injury to soft tissues of the mouth, throat, and stomach. Uses for topical treatment, cleaning solutions, or eye accidents are included as warnings under poison advisories. In order to prevent diabetes, in addition to oral hypoglycaemic drugs the dietary component such as apple cider vinegar seems to be promising for glycolic control in patient with Type 2 diabetes as well as for diabetes related medical conditions (Khan *et al.* 2003, Anderson *et al.*, 1999 and Sultan *et al.*, 2012).

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Many medicinal components that are good for health have been reported in natural vinegar, such as carbohydrate, organic acid (acetic, formic, lactic, malic, citric, succinic and tartaric), alcohols and amino acid and peptides (Cocchia *et al.* 2006), vitamins and minerals salts, polyphenolic compounds (gallic acid, catechin, caffeic, ferulic acid). Different types of vinegar are produced from regional foods according to well established customs. Different types of vinegar are available in market. Traditional vinegar is produced from regional foods according to well established customs. The balsamic vinegar of Modena, Italy is made from the local white Trebbiano grapes. Traditional rice wine vinegar is produced in Asia, coconut and cane vinegar is common in India and Philippines and date vinegars are popular in the Middle East. Some scientific investigation clearly states the benefits of vinegar such as antimicrobial properties (Vijayakumar and Wolf Hall., 2002), prevent inflammation and hypertension (Murooka and Yamshita, 2008), lower serum cholesterol (Fushimi *et al.*, 2006), reduction in systolic blood pressure (Kondo *et al.*, 2000), enhanced calcium absorption and retention (Kishi *et al.*, 1999), decrease the glycemic index of carbohydrate food for people with and without diabetes (Sugiyama *et al.*, 2003; Johnston *et al.*, 2004). Antiglycemic effects of vinegar have been known for more than a century and have been demonstrated in animal as well as human studies (Salbe *et al.*,

2009). There is interest in using apple cider vinegar (ACV) to patients with the experimentally induce diabetes significantly reduces haemoglobin A1C (HbA1C), lower density lipoprotein (LDL), cholesterol and triglycerides and increase high density lipoprotein (HDL) cholesterol. Apple cider vinegar is made through the fermentation of apple. It's nutrient- rich, especially in unfiltered and organic varieties, and contains acetic acid, pectin, potassium and calcium. Honey can be added to apple cider vinegar drinks to improve the flavour without adding unnecessary calories. A small amount of apple cider vinegar, taken just prior to a meal, will stimulate production of digestive juices. Some alternative practitioners recommend using apple cider vinegar to restore alkaline acid balance. Apple cider vinegar plays an important role in controlling the sugar levels in the blood. It also controls the blood levels, which rises noticeably right after finish meal. Moreover, it helps to loss weight, which is Important, considering obesity drivers of diabetes. Two spoonfuls of —Apple Cider Vinegar and mix it glass of water. Take this regularly before having a meal.

## OBJECTIVE

- The nutritional properties of Apple Cider Vinegar.
- To know the level of awareness among the population about the use of Apple Cider Vinegar.

## Apple Cider Vinegar Production

Apple cider vinegar is product of fermentation. It is made by crushing apples and squeezing out the liquid. Bacteria and yeast are added to the liquid to start the alcoholic fermentation process, and the sugars are turned into alcohol. In a second fermentation process, the alcohol is converted into vinegar by acetic acid-forming bacteria (acetobacter). Acetic acid and malic acid give vinegar its sour taste.

## Nutritional and Medicinal properties of ACV

In ACV nutritionally contain pectin, vitamin b1, vitamin b2, and vitamin b6, biotin, folic acid, niacin pantothenic acid and vitamin c. New medical research also suggests that apple cider vinegar use can help cure acid reflux, lower blood pressure, improve diabetes, and support weight loss. The benefits of apple cider vinegar come from its powerful heading compounds which include acetic acid, potassium, magnesium, probiotics and enzyme. Acetic acid has the ability to kill dangerous —bad bacteria, and at the same time to foster the growth of beneficial —good bacteria. Because acetic acid kills unwanted bacteria when it comes into contact with it, it essentially acts as a natural antibiotic. Apple cider vinegar naturally provide numerous benefits related to skin, digestion, and immunity health without any side effects. Additionally, apple cider vinegar is a good source of polyphenols. Research supports the role of polyphenols in the prevention of cardiovascular diseases, cancers, neurodegenerative diseases like Alzheimer's, osteoporosis, and Diabetes. A study published in the Journal of Diabetes Care found that consuming apple cider vinegar could promote weight loss. There are several reasons ACV promotes fat loss but one of those reasons include that ACV reduces sugar cravings and improves detoxification. Another study found that supplementing with the acetic acid found in apple cider vinegar reduced body fat in mice by 10%.

A small amount of apple cider vinegar, taken just prior to a meal, will stimulate production of digestive juices. Some alternative practitioners recommend using apple cider vinegar to restore alkaline acid balance. Alkaline diet is that our blood is slightly alkaline (with a normal pH level of between 7.35 and 7.45) and that our diet should reflect this pH level. Propionates of the alkaline- acid theory believe that a diet high in acid- producing foods leads to lack of energy, excessive mucous production, infections, anxiety, irritability, headache, sore throat, a nasal and sinus congestion, allergic reactions, and increased risk of conditions such as arthritis and gout.

## Use of ACV

Use the cider vinegar and honey treatment for arthritis and also use ACV externally to painful joints. Drinking a glass of water with two teaspoons of cider vinegar and two teaspoons of honey three times a day, get relief in arthritis pain. Apple cider vinegar plays an important role in controlling the sugar levels in the blood. It also controls the blood levels, which rises noticeably right after finish meal. Moreover, it helps to loss weight, which is Important, considering obesity drivers of diabetes. Two fullspoons of Apple Cider Vinegar and mix it glass of water. Take this regularly before having a meal. When taken at bedtime, vinegar also lowers morning fasting blood sugar level. Simply drink a glass of water containing two teaspoon ACV before each meal. This concoction also known to relieve stomach ache. When it is used medicinally it helps the body rid itself to harmful toxins has wonderful disinfecting properties as a natural bad germ fighter, and is a very biodegradable substance that does not pollute the environment. With regular and continued use, this wonderful liquid helps restore and balance the body's pH, taking it from acidic to neutral in a short amount of time.

## CONCLUSION

It is great as a preventative and for maintaining good health. Each of these five ingredients (Ginger, Garlic, Lemon, Apple Cider Vinegar and Honey) have individual benefits on their own and in this mixture, a synergistic effect enhances the properties of each. It lowers blood pressure as well as cholesterol, it leads to fewer colds and infections, and is helpful in conditions such as gout, arthritis, and joint aches. It is also a good tonic for the digestive tract and benefits the skin, and is helpful in weight loss. consumption of apple cider vinegar can reduce the LDL, triglyceride, and cholesterol levels in patients with hyperlipidemia.

Besides, given that hyperlipidemia is a known risk factor for atherosclerosis, apple cider vinegar can be used to prevent and even treat this complication and probably other heart problems. Many recent scientific investigations have documented that vinegar ingestion reduces the glucose response to a carbohydrate load in healthy adults and in individuals with diabetes. There is also some evidence that vinegar ingestion increases short-term satiety. Future investigations are needed to delineate the mechanism by which vinegar alters postprandial glycemia and to determine whether regular vinegar ingestion favorably influences glycemic control as indicated by reductions in hemoglobin A1c. Vinegar is widely available; it is affordable and, as a remedy, it is appealing. But whether vinegar is a useful adjunct therapy for individuals with diabetes or pre Diabetes has yet to be determined.

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