

Apple Cider Vinegar



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Apple cider vinegar has been used for centuries as a medicine, a preservative and in cooking. As far back as 2,500 years ago Hippocrates prescribed apple cider vinegar for various ills such as colds and coughs. It was not until 1865 that we understood the process that turned cider into apple cider vinegar when Louis Pasteur showed it was bacteria in the presence of oxygen that turned alcohol into vinegar.

Traditionally, apple cider vinegar (ACV) is made through a long, slow fermentation process, leaving it rich in bioactive components including acetic acid, gallic acid, catechin, chlorogenic, & caffeic acid, giving it potent antioxidant, antimicrobial, and many other beneficial properties. The longer fermentation allowed the accumulation of a yeast and acetic acid bacteria mat known as the mother of vinegar. Short fermentations do not necessarily produce a mother.

Benefits of apple cider vinegar - raw, unpasteurised, with mother

Many of the benefits of ACV are anecdotal however it is known to be used medicinally since 400BC with claims that ACV benefits a myriad of problems including heartburn, hair loss/growth, detoxing, acid reflux, colds, warts, candida, arthritis & gum disease. There have been a handful of studies in recent years that support the benefits of ACV in treating diabetes, heart health & weight loss. Bioactive components such as the polyphenols and vitamins in ACV protect the body from damage due to their significant antioxidant activity.

Diabetes

ACV seems to have a beneficial effect on blood sugar levels, the theory is that vinegar slows digestive enzymes from breaking down carbs and slows release of sugar into the bloodstream. 1,2,3,4,5

Heart health

Apple cider vinegar contains chlorogenic acid which has been shown to protect LDL cholesterol particles from becoming oxidized, a key part of the heart disease process. Recent research has shown that ACV improved total cholesterol levels, especially for people with type 2 diabetes. 6

Weight loss

Vinegar may help you lose weight, as it appears to have an anti-obesity effect by increasing satiety and reducing the total amount of food consumed.

A study in obese individuals showed that daily vinegar consumption led to reduced belly fat, waist circumference, lower blood triglycerides and weight loss 8,9

Anti-microbial properties

ACV has multiple antimicrobial properties. Studies have found that apple cider vinegar, either neat* or diluted with water, can restrict the growth of *Escherichia coli*, *Staphylococcus aureus*, and *Candida albicans*. 7

* When consumed undiluted ACV can erode enamel on your teeth. ACV can also cause skin irritation when applied neat.

The best way to use apple cider vinegar

On rising add 1 - 2 tablespoons of ACV to a glass of warm water. Weight loss can be assisted by drinking 1 tablespoon ACV in warm water before meals.

The traditional way to make ACV is to ferment apple juice into hard apple cider and then allow acetic bacteria to turn the cider into vinegar. But there are many variations. You can use windfalls, freshly picked apples or just left over peels and cores! You can use eating, cooking, crab or cider apples. The basic apple cider vinegar process is
apple + yeast makes cider
cider + oxygen + bacteria make vinegar

Here is the basic method to make apple cider vinegar

organic apples -single such as Gala or a mixture, windfalls or apple scraps.
1 tablespoon sugar for every 6 apples or equivalent in scraps
non chlorinated water

Chop your apples - remove any mold or rot from windfalls and check carefully for apple maggot flies in cores.

Fill your chosen container a jar/ fermenting crock/plastic bucket (depending on the volume you want to make) three-quarters full with chopped fruit or scraps add the sugar and cover with water, and use some sort of weight to keep the apples submerged (a jar, pebble or small plastic bag filled with water, fastened securely.)

Ensure there is nothing floating which will attract mould.

Cover with muslin or any fine material and secure with a band.

Leave in a warm, dark place for about two weeks. It will bubble as the sugars begin to ferment. Check the apple stays submerged and give a stir from time to time.

After two - four weeks the apple pieces will begin to fall to the bottom of the jar. Strain and toss the apple onto the compost. . Return the liquid to the same jar and cover it again. Place in a warm dark place and it will transform over the next 4–6 weeks into vinegar. This may take longer especially if you are making a large quantity.

You can tell by the taste when the vinegar is ready – you do not want it to taste alcoholic it should be pleasantly acidic. Strain and bottle the vinegar. If you bottle too quickly it may become fizzy. Save any ‘mother’ that might have formed to use on the next batch as it will help speed up the process.



Infused apple cider vinegar

Infused ACV has additional medicinal benefits

fresh material of choice. (see medicinal properties below)

wide necked jar with lid – kilner jar works well. Do not use metal lids.

apple cider vinegar

loosely fill a jar with bruised herb or fruit

pour the vinegar over the herbs

fasten the lid and gently shake

place the jar in a cool dark place for 4 – 6 weeks shaking occasionally.

Strain, bottle & label.

Different herbs can be used for personal taste or to meet your health needs

Basil – anti-inflammatory, mental agility

Blackberry – eases coughs & colds

Sage – liver stimulant, reduces blood sugar

Rosemary – stimulating, anti microbial, improves memory

Chamomile flowers – anxiety & stress

Thyme leaves - soothes colds, flu, lung infections

Yarrow flower – upper respiratory catarrh

Hawthorn flower – improves circulation

Meadowsweet flower – rheumatic pain

Lemon balm - depression, nervous exhaustion

Elderberry – immune system, UTI, flu

Raspberry - anti-oxidant

Oxymel

The oxymel - from the Latin oxymeli meaning ‘acid & honey’ is an ancient Greek drink. Traditionally, an Oxymel recipe would be used to administer beneficial herbs that might not be so pleasant to take on their own.

There are different ways to make an oxymel but the simplest method I find is to take infused apple cider vinegar and mix with honey, I generally use 1/3rd honey 2/3rds infused vinegar but 50:50 is often recommended, experiment and see what works for you. Both honey and vinegar act as preservatives, so you’re not going to ruin the mixture by altering the ratios. Bottle and store in a cool place.

Shrubs

Shrubs are made with fruit, ACV & honey

Fruit – berries like strawberries, raspberries, blueberries, loganberries & blackberries work particularly well, stoned fruits like plums & apricots need to be really ripe to work - make sure your fruit is organic.

Raw infused apple cider vinegar

Organic honey

250g chosen fruit

250ml infused apple cider vinegar

200ml organic runny honey

Put the fruit into a bowl, pour over the infused vinegar and muddle together.

Alternatively, if you have no infused vinegar put the fruit and herb in a bowl pour over the vinegar and muddle well together.

Cover with muslin and leave in a cool place for 24 hours. Tip the mixture into a sieve and press the pulp through. Add the honey (more or less to taste is fine). Pour into a glass bottle. Store in the fridge for up to 6 months. Dilute to taste with cold or warm water, sparkling or soda water.

my favourite combinations are

strawberry/basil

raspberry/thyme

blackberry/sage

plum/horseradish/chilli



Carrot chutney

2 tsp mustard seeds	1 - 2 chillies, seeded or not, finely diced
1 tsp cumin seeds	chunk of ginger grated
2 tsp nigella seeds	1 tsp cardamom seeds crushed
2 red onions finely sliced	300ml apple cider vinegar
500g carrots, coarsely grated	200g demerara sugar
2 bramley apples peeled & grated	level tsp sea salt
4 - 6 garlic cloves, finely diced	

In a large pan lightly toast the mustard, cumin and nigella seeds.

Add the remaining ingredients along with 200ml water.

Gently simmer, stirring frequently, for about an hour, until the liquid has nearly all evaporated.

Spoon the chutney into sterilised warm jars, seal with lids and store in a cool dark place. Once open keep in the fridge.

Mushroom Ketchup

700g field mushrooms	4 star anise
1 dstsp salt	¼ tsp ground cloves
small handful dried ceps	½ teaspoon ground black pepper
3 shallots - chopped	1" piece of ginger cut in slices
2 cloves garlic - chopped	225ml apple cider vinegar
10 juniper berries	125ml medium dry sherry

Dust any earth from the mushrooms but do not wash. Slice finely and put into a bowl. Sprinkle over the salt and mix well. Cover with muslin and leave for 24 hours.

Pour 600ml of hot water over the ceps and leave to soak for 2 hours.

Tip the salted mushrooms and all the dark brine into a pan.

Scoop the ceps from their soak water and add them to the pan

Strain the soak water through muslin to remove any grit & add to the pan.

Add the remaining ingredients with the exception of the sherry and simmer for ½ hour. Add the sherry and simmer for 2 minutes.

Strain through muslin squeezing well to extract all of the juice

Bottle and store in fridge for up to 3 months.

Around the house and garden

Kitchen

Apple cider vinegar is a natural alternative to chemical cleaning products which can be pollutants and also trigger allergies. ACV is an effective safe option.

Make by combining ACV with water on a 1:1 ratio.

Use to remove stains on work surfaces, wiping down appliances and keeping dishwashers free from bacteria.

Bathroom

The same 1:1 ratio makes a good bathroom cleaner and will remove mildew.

Vegetables

ACV with its potent antioxidant and antibacterial properties is the best natural way of removing bacteria from fresh produce. Simply rinse produce in a 10% ACV water solution.

Windows & glass

A solution of $\frac{1}{3}$ ACV to $\frac{2}{3}$ water will clean windows and mirrors as well as greenhouse glass.

Acid loving plants

If you have neutral soil, add 250ml ACV to 5 litres of water and mix to the soil around acid-loving plants. Plants that might like this treatment include blueberries & camelias.

Rusty garden tools

Spray ACV on the rusty areas and wipe clean with a cloth. Stubborn rust may need an overnight soak in ACV.

Cleaning patio paving

Mix ACV and water in a 1:1 ratio. Using a watering can sprinkle over the paving. Scrub well with a hard brush and rinse well with fresh water

Notes

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Daphne Lambert is an eco-nutritionist focusing on the interactions between agriculture, ecology and human nutrition.

Greencuisine Trust works to bring about a transformation in the way we eat. Through practical food experiences the Trust highlights the connections between our well-being, natural resources, the environment, and our planet.



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