

Horticulture Australia Project CT 04027 (completed January 17, 2005)

**Extending the health benefits study by
promoting orange juice based recipes for
particular health problems**

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Statement about the purpose of the report

To discuss the benefits and nutritional qualities of citrus fruits, present general population health problems, such as weight control or heart disease and provide healthy and therapeutic citrus based fruit and vegetable juices to support recovery from those health concerns.

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Contents page

The Health Benefits of Citrus	4
Vitamin C – Citrus is still the best!	
Beyond Vitamin C: Flavonoids, antioxidants and phytochemicals	
Nutrient synergy	
Low carbohydrate	
Why Juice?	6
Why orange?	
Tips for making fresh juice a regular part of your life	
Beginner Juice Recipe	7
Juice Recipes for every Condition	7
References	23
Juice Recipes for every Condition (table)	24

The Health Benefits of Citrus

Citrus has a long history of saving lives. Preserved lemons were used to prevent scurvy in sea-faring explorers in the 18th century, 200 years before vitamin C was even discovered.

Today, citrus is still one of the healthiest foods and the research is growing every day. Oranges and other citrus fruits are now recognized by the CSIRO for their power to prevent degenerative diseases such as cancer and stroke. Citrus provides high levels of vitamin C as well as a powerful synergy between hundreds of antioxidants and phytochemicals.

Benefits of Citrus

- Vitamin C
- Vitamin A
- Folate
- Flavonoids
- Antioxidants
- Phytochemicals
- Low in calories
- Low in carbohydrate & fat
- Low GI

Vitamin C – Citrus is still the best!

Vitamin C deficiency is still a problem in Australia. According to reports from the Prince of Wales hospital in Sydney, 30% of new admissions had scurvy levels of vitamin C, while 73% had sub-optimal levels of vitamin C ⁽¹⁾. Symptoms of scurvy include joint swelling, fever and oedema which occur when vitamin C intake is less than 10mg per day. Do not assume, however that 10mg, or even the RDI 35mg of vitamin C is enough for every person. Vitamin C requirements increase with stress and illness. Sub-optimal vitamin C intake results in delayed healing, frequent infections, bleeding gums, muscle pain and easy bruising.

All fresh fruits and vegetables contain vitamin C, but citrus is one of the best. With 62 mg per orange, citrus beats out pineapple, peaches and apples.

	Mg vitamin C per serving
Kiwifruit	70
Orange	62
Lemon	48
Grapefruit	36
Pineapple	32
Banana	17
Peach	14
Watermelon	11
Apple	8
Grapes	4

Beyond Vitamin C: Flavonoids, antioxidants and phytochemicals

Citrus contains over 170 different phytochemicals that promote health. Phytochemicals are the pigments responsible for the natural colour of fruit and vegetables. Phytochemicals protect against heart disease, degenerative disease and damage by ageing. They act as antioxidants and improve immunity. One class of phytochemicals, the liminoids, are particularly abundant in

citrus, and are highly protective against many types of cancer. Other important phytochemicals in citrus are carotenes and flavonoids, such as hesperidin. Hesperidin is anti-inflammatory and has been shown to lower cholesterol and blood pressure.

Phytochemicals found in Citrus:

Flavonoids	Carotenes	Coumarins	Terpenes
Hesperidin	Alpha-carotene	Auraptene	Limonene
Naringin	Beta-cryptoxanthin	Natsudaikai	Perillyl alcohol
Tangeritin	Lutein		Liminoids
Quercitin	Zeaxanthin		
	Lycopene		

Zest is the Best:

While appreciable amounts the flavonoids are found in the juice itself, the highest concentration of flavonoids is located in the white pith and the peel. Include a little bit of orange peel or zest in your diet to significantly increase your daily anti-oxidant intake.

Phytochemicals are proven to protect against:

- Heart disease and stroke
- Cancer
- Macular degeneration
- Liver problems
- Obesity
- Diabetes
- Alzheimer's and Parkinson's disease
- Asthma
- Arthritis

Nutrient synergy

Citrus contain substantial amounts of essential nutrients such as vitamin C, folic acid and calcium. The citric acid and vitamin C in citrus also help with absorption of minerals such as iron, zinc and magnesium from leafy green vegetables. Combine citrus with green vegetables for a unique nutrient synergy!

Low carbohydrate

The World Health Organisation recognises that fruits and vegetables are important for the prevention of disease and obesity. This is because fruit and vegetables are high in nutrients, but low in carbohydrate and fat. Citrus fruit are the perfect example. Lemons, limes and grapefruits have the lowest carbohydrate content of any fruit.

	Grams of carbohydrate per serving
Lime	0.6
Lemon	1.8
Grapefruit	4.8
Rockmelon	7.5
Kiwifruit	7.8
Orange	9.5
Grapes	11.9
Mango	18.9

Apple	20.0
Banana	27.9

A different kind of carbohydrate

There is another reason why citrus is suitable for people watching their carbohydrate intake. Fruit sugar or fructose, is the main carbohydrate in citrus fruit. Fructose acts very differently in the body compared to refined sugar or starch. Fructose enters the blood stream slowly, and, because it is mostly water, citrus has a low glycemic index. Oranges, grapefruit, lemons and limes are good foods for diabetics who need to maintain a stable blood sugar and for people trying to lose weight.

Why Juice?

Most Australians' fruit intake is well below the 5 recommended servings. Juices are a tasty and efficient way to increase fruit and vegetable intake, and they are the best way to capture the full nutrition of those fruits and vegetables. Many nutrients, including vitamin C, disappear quickly when fruit is cooked or left to sit. Fresh juice contains a full range of active nutrients, as well as beneficial enzymes. Combining citrus with other fruits and vegetables delivers a powerful synergistic cocktail of vitamin C, folate, antioxidants and phytochemicals. The juice recipes in the book should be consumed immediately after juicing. Most recipes will produce 1-2 cups of juice.

Why orange?

Oranges add a sunny taste to any vegetable juice. The natural acid also helps to preserve the juice's natural colour and essential nutrients. With the exception of cabbage or turnip, oranges combine very well with any vegetable. Experiment a little with a bag of oranges and the green vegetables in your fridge!

Include some peel!

Citrus peel has the highest concentration of the super-flavonoids, such as tangeretin, and coumarins such as limonene. New research shows that these phytochemicals may be effective for lowering cholesterol⁽²⁾, dissolving gallstones⁽³⁾ and cancer prevention. The smell of citrus peel oil is also very uplifting and is used as an aromatherapy for depression and anxiety.

Although citrus peel is strong tasting and has been traditionally removed before juicing, it is possible to use some of the peel. When the peel is mixed with sweet ingredients such as carrots, apples, pineapple and other sweet ingredients, the taste is really very nice. Start slowly by leaving 1/8 to 1/4 of the orange unpeeled. Be sure to also leave plenty of the white pith directly below the peel, because it is also a major source of flavonoids and is not bitter, but makes a creamy, frothy juice.

Tips for making fresh juice a regular part of your life:

Many people start out juicing with good intentions, but lose interest over time. They have not lost interest in the fresh taste of juice, or in its countless health benefits. Most people stop juicing because it feels like an effort. Here are a few tips to take the work out of juicing.

- **Choose a time of day when you can enjoy juicing.** Juice is lovely in the morning, but if you are too busy in the morning, choose another time! A fresh fruit and vegetable juice is nice in the afternoon when you get home from work, or even after dinner.

- **Buy a juicer that is easy to clean.** The biggest reason that people stop juicing is that they do not want to clean the juicer. A good juicer takes just 3-4 minutes to clean. Time yourself and then consider: How much time is your health worth? You can also try cleaning it immediately after juicing, and *then* sit down to enjoy your juice. End with the reward.
- **Buy a juicer with a large feed chute.** This means less chopping. For many fruits and vegetables, you can simply wash and go. Oranges should usually be peeled and that's it!
- **Experiment a little with the contents of your fridge.** If you do not have all of the ingredients for the juice recipe, then improvise! Citrus juice combines very well with almost any fruit or vegetable.
- **Keep the juicer on the bench.** It may be tempting to hide it away, but if you store the juicer where you will see it every day, you are more likely to use it every day.

Beginner Juice Recipe

The juice recipes in this book combine citrus with other fruits and vegetables. The ingredients have been chosen for taste as well as therapeutic benefit, but if you are new to the taste of vegetable juice, it may seem like a challenge. This is where the sunny taste of orange can help. Oranges combine well with almost any vegetable, especially carrot. Orange-carrot juice or orange-pineapple-carrot juice is the perfect way to explore the wonderful world of juicing. You can then expand your juice to include celery, fresh mint, and other greens.

Beginner Juice

- 2 **oranges**, peeled
- 2 carrots
- 2cm slice fresh pineapple

Oranges are recognised by CSIRO for prevention cancer and other degenerative disease. A daily orange juice provides vitamin C, anti-oxidants and other important phytochemicals. Carrots contain vitamin A, as well as other phytochemicals for general health. Pineapple enzymes assist with digestion and immune function.

Juice Recipes for every Condition

Allergies (see Asthma or Sinus & Hay fever)

Anaemia

Red blood cells contain haemoglobin, which carries oxygen to the body and provides energy. Anaemia is a condition of too little haemoglobin and it usually caused by deficiencies of iron, folic acid, vitamin B12 or zinc. It is common during pregnancy. Symptoms of anaemia include fatigue and breathlessness, and can be diagnosed by a simple blood test. Citrus and dark green leafy vegetables are the perfect combination to prevent and treat anaemia. Oranges provide folic acid and improves the absorption of iron and zinc from the leafy greens.

Anaemia Juice

- 2 **oranges**, peeled
- 2 spinach leaves
- ½ beetroot & tops
- 2 apricots, pitted
- Add 10ml of fresh wheatgrass juice (optional)

Wheatgrass requires a slow juice extractor. Alternatively, it can be purchased.

Orange provides folic acid and improves absorption of iron and zinc from the leafy greens

Spinach and beetroot provide iron and zinc

Apricots reduce anaemia

Wheatgrass build blood with iron, folic acid, and vitamin B12

Antioxidant/Anti-ageing (see Skin)

Anxiety (see Depression and Period Problems)

Arthritis

Inflammation in the joints can be due to simple wear-and-tear or due to a more serious underlying source of inflammation, such as an autoimmune disease. Juices are a good treatment for arthritis, no matter what the cause. Raw juices can be used on a daily basis to remove toxins from the joint space and to reduce inflammation.

Osteoarthritis Juice (also for Gout)

1 **Grapefruit**, peeled

1 cup cherries, pitted

4 stalks celery, with leaves removed

1 sprig parsley

2 carrots

Grapefruit contains organic salicylic acid, a natural painkiller and dissolves calcium deposits in joints.

Cherries lower uric acid

Celery and Carrots contains phthalides, which inhibit inflammation

Parsley assists the kidneys to remove toxins

Rheumatoid Arthritis Juice

½ **Lemon**, peeled

6 cm slice fresh pineapple

1 clove garlic

2 stalks celery, with leaves removed

1 apple

1 cm slice ginger root

Lemon stabilises the immune system

Pineapple enzymes help to break up inflammatory immune complexes.

Garlic provides allicin, which decreases deposits in the joints.

Celery is alkaline and contains phthalides, which inhibit inflammatory products.

Apple improves levels of good bacteria in the digestion, which affect immune function.

Ginger is anti-inflammatory

Asthma (See also Sinus & Hay fever)

Asthma is caused by spasm of the airways, or by excessive mucous. Symptoms of asthma include episodes of wheezing and difficulty breathing, and can be chronic. Citrus juice helps by providing vitamin C and flavonoids, which prevent mucous, as well as histamine release and

spasm. Combine oranges with other anti-inflammatory fruits and vegetables and a daily juice can decrease the frequency of asthma attacks. Do not change the dose of your asthma puffer without consulting your doctor.

Asthma juice

- 1 **orange**, peeled
- 2 apricots, pitted
- 2 carrots
- 2 stalks celery, with leaves removed
- 2 leaves spinach
- ½ cm ginger root

Orange provides vitamin C and flavonoids

Carrots and Apricots provide vitamin A levels to sooth mucous membranes

Celery contains phthalides, which reduce the histamine response

Spinach is a good source of magnesium to relax the bronchioles

Ginger root in anti-inflammatory

Body Shape (See Weight Loss)

Cancer

Both the CSIRO and the American National Cancer Institute (NCI) recognise citrus for its anticancer activity⁽⁴⁾. Citrus, especially the peel and pith, provides vitamin C, carotene, flavonoids and an essential oil called limonene, which has demonstrated effectiveness against some types of cancer⁽⁵⁾. When citrus is combined with cancer-fighting vegetables, raw juice is a powerful way to protect DNA and to help the immune system. Juice also provides an easy to digest, concentrated nutrition. This is especially important during chemotherapy, when appetite may be poor. Raw juice will reduce side effects, but will not interfere with the effectiveness of chemotherapy.

Cancer Prevention Juice

- 1 **orange**, with some peel
- ½ **lemon**, with some peel
- 2 carrots
- 2 stalk celery, with leaves removed
- 1 clove garlic
- 3 florets broccoli
- Dilute with ½ cup of strong green tea

Juice for Chemotherapy

- 2 **oranges**, peeled
- ½ papaya
- ¼ beetroot & tops
- 1cm slice ginger root
- 2 carrots
- 2 stalks celery, with leaves removed

Cancer Juice

- 1 **orange**, with some peel
- 2 carrots

2 stalks celery, with leaves removed
1 clove garlic
1 cm slice ginger root
1 sprig fresh oregano
Dilute with ½ cup hot water steeped with 3 dried, chopped Shiitake mushrooms

Oranges and lemons provide concentrated flavonoids and limonene to help the body fight cancer, and to prevent metastases⁽⁶⁾.

Carrots and celery are rich in phthalides, a proven anti-cancer phytochemical^(7, 8)

Garlic, especially when raw, provides important allyl sulphur compounds for the immune system and liver.

Ginger root contains gingerol, a proven anti-cancer phytochemical⁽⁹⁾

Broccoli and other cruciferous vegetables provide indole-3-carbinol, a phytochemical that protects against oestrogen-sensitive cancers.

Beetroot assists with liver detoxification and provides anthocyanadin, an important anti-oxidant.

Papaya provides vitamin C and soothes and aids digestion.

Oregano and other kitchen herbs such as rosemary, basil and thyme are high in antioxidants.

Green tea is high in the flavonoid catechin, which is proven to prevent cancer.

Shiitake mushrooms provide the polysaccharide lentinan, which has been licensed in Japan as an anti-cancer drug.

Cellulite (see Weight Loss)

Cold and Flu

Research shows that vitamin C may reduce cold frequency by an average of 50%⁽¹⁰⁾. It does this by stimulating the immune system. One orange provides 62 mg vitamin C, as well as other phytochemicals essential for immune function.

Cold and Flu Juice

Take every 2-3 hours at the first sign of a cold or flu

½ **lemon**, peeled

1 clove garlic

1 cm slice ginger root

1 apple with skin

Add 1 cup hot water and 1 tbsp honey

Sprinkle with cayenne pepper (optional)

Lemon provides vitamin C and flavonoids

Garlic and ginger have natural antibiotic properties and reduce congestion

Apple contains pectin, which removes toxins from the body

Honey is antibiotic and soothing for a sore throat

Cayenne is antiseptic

Immune Booster Juice

If you are always getting a cold, your immune system may need a boost. To prevent the next cold, try this tasty juice every day.

2 **oranges**, peeled

3cm slice fresh pineapple

2 stalks celery, with leaves removed

½ beetroot

1 cm slice ginger root

Orange provides vitamin C and flavonoids for immune function

Pineapple contains natural enzymes that support the immune system

Celery and beetroot improve elimination through the kidney and liver

Ginger is a natural antibiotic

Depression and Anxiety

Although depression can have many causes, you can improve the health of your nervous system with a tonic of fruits and vegetables. Depression is also helped by regular exercise and by talking about your feelings. Use citrus juice as a natural mood lift after a walk together with a friend.

The depression juice recipes will not interact in any way with anti-depressant medication.

Juice for a 'Flat Depression'

2 **oranges**, with some peel

1 carrot

¼ beetroot & tops

4 cm slice watermelon

Sprinkle with cayenne or Tabasco (optional)

Juice for an "Anxious Depression"

2 **oranges**, peeled

1 carrot

6 strawberries

2 stalks celery, with leaves removed

3 lettuce leaves

Oranges provide a sunny, uplifting taste, and if you include some peel, you will get the benefit of anti-depressant aromatherapy.

Carrot provide B-vitamins for a healthy nervous system

Beetroot helps with liver detoxification and provides iron to build blood and energy

Watermelon lifts mood.

Cayenne causes the release of endorphins, which are brain chemicals that improve mood and reduce pain.

Celery contains potassium and magnesium, which calm the nervous system and help with sleep.

Lettuce contains lactucarium, a natural sedative

Diabetes (See also Syndrome X under Weight Loss)

Unlike Type 1 diabetics, who are dependent on insulin injections, adult-onset diabetics may have insulin levels that are normal or even high. Their bodies simply do not respond to the insulin effectively anymore. In the early stages, this condition may be reversible. The treatment is to lower blood sugar and to improve insulin function. The juice recipes apply to adult-onset diabetes only. Type 1 diabetics should use the whole fruit or vegetable, rather than juice.

Diabetes Juice

½ grapefruit, peeled but with pith

¼ Bitter melon (if available)

1 carrot

2 dandelion leaves

1 spring onion or ½ clove garlic

½ cup green string beans

¼ cup fennel

Mix with ½ tsp fenugreek powder steeped in ¼ cup hot water

Grapefruit provides phytochemicals, which improve insulin sensitivity⁽¹¹⁾, and antioxidants, which protect the kidneys and eyes.

Bitter melon (*Momordica charantia*), also known as Balsam pear, is a tropical vegetable, native to Asia. Clinical research has shown it to be effective for lowering blood sugar. It is available in many Asian food stores.

Carrot acts as an insulin mimic to improve insulin sensitivity

Dandelion leaves support for the liver's role in regulating blood sugar

Garlic, Green beans, and Fenugreek lower blood sugar

Fennel is beneficial to the pancreas

Eye Problems (see Macular degeneration)

Fatigue (see Anaemia, Depression, Fibromyalgia, Slow metabolism or Thyroid)

Fibromyalgia

Fibromyalgia is a painful condition that affects about 600,000 Australians. The cause is unknown but may be related to a dysfunction of the immune system. The main symptom of fibromyalgia is muscle spasm and pain, due to the loss of magnesium and potassium from the muscle cells.

Other symptoms include headaches, poor sleep, anxiety and fatigue. Fresh fruit and vegetable juices provide fluid and minerals to reduce muscle spasm and is an effective treatment for fibromyalgia. This juice also provides vitamin C, flavonoids and raw enzymes to help with immune function.

Fibromyalgia Juice

1 **orange**, peeled

1 carrot

3 stalks celery

4 leaves spinach

1 small Lebanese cucumber, peeled

½ cm slice fresh ginger root

4cm slice fresh pineapple

Orange improves immune function, and enhances magnesium absorption from leafy greens

Carrot and celery contain phthalides, which provide an effective pain relief⁽¹²⁾

Spinach provides magnesium

Cucumber reduces lactic acid in the muscles

Ginger and Pineapple enzymes are anti-inflammatory

Headaches

Headaches have many causes including stress, migraines, hormone imbalance, sinus, low blood sugar, neck tension and dehydration. A daily juice provides vital fluid, as well as anti-inflammatory compounds to battle the many causes of headache. For best results, you should also treat the underlying cause.

Headache Juice

½ **lemon**, peeled
4 leaves lettuce
1 bunch purple grapes
3 carrots
1 cm slice ginger root

Lemon removes toxins from the blood and reduces mucous congestion
Lettuce contain magnesium and lactucarium to relax the nervous system
Grapes lift blood sugar, stabilise blood vessels in migraines and are alkalising
Carrots improve liver detoxification and hormone balance
Ginger is anti-inflammatory

Heart Disease and Stroke (see also Syndrome X under weight loss)

Heart disease and stroke is the leading cause of death in Australia. It is caused mainly by the blockage of arteries by cholesterol plaques and by damage to heart and arteries from high blood pressure. Syndrome X, or insulin resistance is a very common cause of elevated cholesterol and other risk factors for heart disease. If you have apple shaped obesity and high triglycerides, please see Syndrome X in the weight loss section.

According to the World Health Organization, regular consumption of fruits and vegetables significantly reduce the risk of heart disease. Citrus, in particular, may reduce the risk of stroke by 25%⁽¹³⁾. The effect of citrus is attributed in part, to potassium, folic acid and fibre. New research suggests that the benefit may also be due to the presence of potent flavonoids, such as hesperidin, tangeretin and nobiletin, which have been shown to lower LDL, or bad cholesterol as effectively as cholesterol-lowering medication⁽²⁾. Citrus also provides folic acid and assists with magnesium absorption, both of which are important nutrients for cardiovascular health.

The following juice recipes can be used safely for any heart condition, and will not interfere with blood pressure and cholesterol lowering medications. (Consult with your GP before adding grapefruit juice, as it can alter the effect of some medications.)

Heart Disease Juice

2 **oranges** or **tangerines**, peeled
3 sticks celery, with leaves removed
1 tomato
1 red onion
1 clove garlic (optional)

Cholesterol Juice

1 **orange** or **tangerine**, with some peel
1 **grapefruit**, peeled
1 tomato
1 clove garlic
2 dandelion or rocket leaves
1 radish & tops

High Blood Pressure Juice

2 **oranges**, peeled
3cm slice of watermelon

2 sticks celery, with leaves removed
½ cup chopped parsley
½ cup chopped fennel
4 leaves lettuce

Oranges and tangerines contain the flavonoid hesperidin and the super-flavonoids, tangeretin and nobiletin, which have been shown to reduce lower bad cholesterol (2). Citrus also provides potassium, which lowers blood pressure, and folic acid, which reduces homocysteine, an important risk factor for heart disease.

Dark greens such as Dandelion or Rocket leaves provide over 50 mcg of folic acid, as well as potassium and magnesium, which lower the risk of heart disease.

Onion and garlic contain natural sulphur compounds, which reduce cholesterol synthesis by the liver.

Tomato contains nicotinic acid to reduce cholesterol

Celery contains phthalides, a group of phytochemicals proven to lower blood pressure⁽¹⁴⁾

Watermelon, Celery, Parsley and Fennel act as natural diuretics to reduce blood pressure.

Lettuce provide magnesium, and lactucarium, a natural sedative

Hepatitis (See Liver and Gallstones)

Irritable Bowel Syndrome

IBS is a condition when the intestines do not function in the normal, rhythmic manner but instead spasm, causing pain, gas, constipation and diarrhoea. It is most common in young women and is usually the result of stress, food sensitivities, and poor intestinal flora after repeated antibiotics.

Fresh juices are the ideal food for IBS because they are easily digested and help to regulate peristalsis. Avoid gas-producing vegetables such as broccoli and onions.

Irritable Bowel Juice

1 **orange**, peeled
2 apples
1cm slice ginger root
2 stalks celery
2 sprigs fresh mint
Add ⅛ cup aloe vera juice

Aloe juice should be purchased, or prepared with care. The outer leaf is a strong laxative.

Orange is easily digested

Apple contains the soluble fibre pectin, which soothes the intestinal wall, and improves levels of good intestinal bacteria.

Ginger is a natural carminative, to reduce gas

Celery restores electrolytes lost with diarrhoea

Mint alleviates intestinal cramps

Aloe vera juice or gel slows peristalsis and clears the intestinal walls of mucous. Avoid the outer part of the leaf, which is a strong laxative.

Liver and Gallstones

The liver is the largest and hardest working organ in the body. It is responsible for removing toxins, burning fat, balancing cholesterol and hormones and for converting food into energy.

Liver problems result in fatty liver, cirrhosis, gallstones and in a variety of other symptoms.

Regular consumption of both lemon and grapefruit has proven benefits for the liver. For more information, see my book *The Liver Cleansing Diet*.

Symptoms of liver problems:

- Fatty liver
- Gallstones
- Abdominal obesity
- High cholesterol and triglycerides
- Haemorrhoids
- Digestive bloating
- Over-heating
- Skin problems such as liver spots and rashes
- Bad breath, coated tongue, dark circles under eyes and itchy eyes
- Allergies and autoimmune conditions

Daily lemon cleanse

- ¼ - ½ **lemon** – freshly squeezed
- 500ml warm water

Fresh lemon juice contains the phytochemical limonene, which improves liver activity and is used in Japan to dissolve gallstones⁽³⁾. Morning is the best time for lemon because it is also a natural decongestant and gentle laxative.

Liver Cleansing Juice

- ½ **lemon**, with some peel
- 1 apple
- 2 dandelion or rocket leaves
- ½ cup broccoli florets
- 1 clove garlic
- ½ cup parsley

This is a strong mixture and may be diluted with 1 cup water or dandelion root tea.

Fatty Liver Juice

- ½ whole **lemon** or **grapefruit**, peeled
- 2 carrots
- 1 clove garlic
- 1cm round fennel
- ¼ beetroot
- 2 dandelion leaves or rocket leaves
- 1 small apple may be added for taste

Gallbladder Juice

- ½ **lemon**, with some peel
- 2 fresh dandelion or rocket leaves
- ¼ beetroot
- 1 medium apple
- 2 brussels sprouts
- 1 large tomato

If you have gallstones, start slowly with this juice. You can dilute it with water or dandelion root tea. Drink 2-3 litres of water per day and avoid fatty foods.

Lemon and **grapefruit** improve liver function and healing

Lemon peel contains limonene, which improves liver activity, and is used in Japan to dissolve gallstones⁽³⁾.

Carrots are a good source of raw enzymes and phthalides to increase the activity of detoxification enzymes in the liver.

Broccoli and brussels sprouts provide natural sulphur compounds to enhance detoxification pathways in the liver.

Beetroot has a strong regenerative effect on the liver.

Fennel is a digestive aid and improves fat metabolism.

Dark greens such as dandelion or rocket contain chlorophyll for liver function and flavonoids to work synergistically with the flavonoids in the lemon.

Tomato contains lycopene, a strong antioxidant.

Dandelion root is a liver tonic

Hepatitis Juice

1 **orange**, peeled

2 carrots

1 apple, with skin

1-2 cloves garlic

½ beetroot & tops

½ cup watercress

Orange provides vitamin C and flavonoids to fight infection

Carrots provide vitamin A for immune function, and to protect the liver

Apples improve levels of good intestinal bacteria

Garlic contains allicin, which is a natural infection fighter

Beetroot has a strong regenerative effect on the liver

Watercress provides sulphur, which is a natural antibiotic and cleanser

Macular Degeneration

Macular degeneration is the leading cause of blindness in Australia, affecting more than 800,000 Australians per year. It is the breakdown of the retina or the back of the eye, and occurs with ageing and smoking.

Optometrists around the world now recognise the important role that antioxidants and carotenoids play in protecting the retina. Citrus is one of the best sources of carotenoids such as lutein and zeaxanthin, which are proven to reduce the risk for macular degeneration⁽¹⁵⁾.

Eye Juice

1 **orange** or **mandarin**, with some peel

1 **blood orange** or **grapefruit**, peeled

1 carrot

¼ beetroot & tops

2 spinach leaves

½ glove garlic (optional)

Oranges, mandarin, and grapefruit provide carotenoids such as lutein and zeaxanthin, important for eye health

Blood oranges contain anthocyanadin, a potent flavonoid that is also found in blueberries and bilberries. It protects the retina by absorbing light and UV radiation.

Carrots and beetroot contain vitamin A, another carotenoid for protection of the retina.

Spinach is another good source of lutein and zeaxanthin, and also contains chlorophyll, an antioxidant for the eyes.

Garlic thins the blood, and improves circulation to the retina.

Menopause

Oestrogen drops at menopause which is a natural process and if the body is healthy, the symptoms can be mild. Phytochemicals in a daily juice can help the body to adapt to a lower level of oestrogen. Citrus provides flavonoids to calm hot flushes and to improve the absorption of calcium from leafy greens. The addition of bean sprouts to the juice provides valuable phytoestrogens for vaginal dryness and mood swings. Menopausal women must also manage their stress and get regular exercise.

Hot Flush Juice

- 2 **oranges**, peeled but with pith
- ½ cup alfalfa or bean sprouts
- 2 lettuce leaves
- 4cm slice watermelon
- 1 small Lebanese cucumber
- ¼ beetroot

Oranges provide flavonoids to calm hot flushes

Sprouts provide gentle phytoestrogens

Lettuce is cooling and contains lactucarium, a natural sedative

Watermelon and cucumber are cooling

Beetroot helps the liver to maintain hormone balance

Osteoporosis Juice

- 2 **oranges**, peeled
- 6 spinach leaves
- 4 string beans
- ½ cup alfalfa or bean sprouts
- 1 apple

Oranges provide calcium and assist with calcium and magnesium absorption from the greens.

Spinach and string beans provide calcium, magnesium and vitamin K

Sprouts are a good source of phytoestrogens, to prevent bone loss

Apple is high in calcium and silica

Metabolism Booster (see Weight Loss)

Period Problems

Premenstrual tension and period pain are usually the result of excessive prostaglandins, which are inflammatory compounds produced by changing hormones. Prostaglandin levels are affected by stress and by diet. Orange and vegetable juice provides flavonoids and minerals to regulate prostaglandins, to reduce blood loss and to soothe painful menstrual cramps.

PMT Juice

2 **oranges**, peeled but with pith
2 spinach leaves
¼ beetroot & tops
2 lettuce leaves
½ cup chopped parsley

Period Pain Juice

1 **orange**, with some peel and pith
½ cup raspberries
2 spinach leaves
2 carrots
¼ beetroot
1cm slice ginger root
Add 1 tbsp of flaxseed oil, which reduce prostaglandins.
For maximum benefit, use the juice every day during the week before the period.

Oranges provide vitamin C and flavonoids which are anti-inflammatory and improve the strength of blood vessels to prevent excessive bleeding. They also provide vitamin A to prevent excessive blood loss and calcium, which acts with magnesium as a muscle relaxant.

Spinach and beetroot tops provide magnesium which relaxes the uterine muscles as well as vitamin K, to prevent heavy blood loss, and iron, to build blood.

Lettuce contains lactucarium, a natural sedative

Raspberries relieve menstrual cramps

Carrots and beetroot help the liver to maintain hormone balance, as well as providing vitamin A

Ginger is a natural anti-inflammatory

Pregnancy

Pregnancy increases the requirement for calcium, iron, and folic acid. Folic acid is especially important as it reduces the risk for birth abnormalities such as neural tube defects by 70%.

Oranges are an excellent nutrition source during pregnancy. A single orange contains 30mcg of folic acid and 35mg calcium and its high vitamin C content assists with the absorption of iron and zinc from other sources. The pregnancy juice combines orange with mineral rich vegetables such as spinach and broccoli. It also provides antioxidants and supports liver and kidney function, which will reduce the risk of toxemia. Vitamin K from the greens in the juice can prevent bleeding from the placenta and premature labour.

Pregnancy Juice

2 **oranges**, peeled
2 spinach leaves
½ cup broccoli
½ beetroot & tops
2 carrots
½ cm ginger root can be added if morning sickness is present
1 pear or apple may be added for taste and the juice can be diluted with water or cold peppermint tea.

Oranges provides energy, calcium and folic acid. It also improves absorption of iron and zinc from the leafy greens.

Spinach provides iron and vitamin K, as well as flavonoids and antioxidants for a healthy placenta.

Broccoli contains natural sulphur compounds, which help the liver to cope with pregnancy, and to prevent toxemia.

Beetroot and Carrot help with liver function.

Ginger root is effective for the treatment of nausea, and is safe during pregnancy⁽¹⁶⁾

Sinus and Hay fever

Infection or allergy can result in a painful congestion behind the face and eyes. When citrus is combined with natural infection fighters, it is an effective decongestant.

Sinus Juice

1 **orange**, peeled

3-4 small red radishes

1cm ginger root

1 clove garlic, or ½ small red onion, or 1cm slice horseradish

4 cm slice fresh pineapple

1 carrot

This juice will be spicy. If necessary, dilute with water or cold herbal tea.

Orange provides vitamin C and flavonoids for fighting infection and as a natural antihistamine. Radish, ginger root, garlic, onion and horseradish are natural antibiotics and eliminate mucus from the nasal passages.

Pineapple provides enzymes break up tenacious mucus.

Carrot provides vitamin A for mucous membrane integrity.

Skin

The appearance of your skin reflects your inner health. Instead of using expensive face creams, protect your skin from the inside with citrus. Citrus provides important antioxidants, as well as significant amounts of vitamins A and C for skin renewal. When it is combined with vegetable juices for healthy toxin elimination, citrus is a powerful remedy for skin problems such as acne, eczema, rashes and premature ageing.

Acne Juice

1 **orange**, peeled but with pith

1 carrot

½ beetroot & tops

2 stalks of celery, with leaves removed

1 sprig fresh basil

Orange and carrot contain vitamin A for skin renewal

Beetroot and celery improve liver and kidney function for toxin removal

Basil aids in digestion and has a cleansing action on the skin

Rash juice

2 **oranges**, peeled but with pith

1 cup strawberries (organic is preferable)

1 sprig fresh mint

1 tsp of honey, and crushed ice, if desired

Orange provides vitamin C and flavonoids, which are natural anti-histamines
Strawberries are an excellent skin cleanser
Mint is cooling for hot skin eruptions

Super-antioxidant Anti-ageing Juice

- 1 **orange**, with peel
- 1 pomegranate seeds and flesh
- 6cm slice fresh pineapple
- 2 apricots, pitted
- Add 1 cup pureed blueberries

Orange provides potent antioxidants and they are most concentrated in the peel and pith. Start with a small amount of the peel and work up. If you sweeten the juice other fruit, you can enjoy the benefits of the peel of an entire orange.

Pomegranates are high in ellagic acid, one of the most potent antioxidants

Pineapple and apricots detract from the bitter taste of the orange peel and provide enzymes, vitamin C and carotenes for the skin.

Blueberries are classified by the Nutrition Research Center on Aging at Tufts University in Boston as one of the highest sources of anti-ageing phytochemicals.

Stomach ulcer or Helicobacter

Stomach ulcers are caused by excessive stomach acid, or infection by the bacteria, *Helicobacter pylori*. Conventional treatment includes antibiotics and acid-inhibiting medication, which may have the undesirable effect of decreasing mineral absorption.

Fruit and vegetable juices have been shown to inhibit growth of *Helicobacter*⁽¹⁷⁾, and are also soothing to the stomach lining. With regular consumption of fresh vegetable juice, you may be able to come off your acid-inhibiting medication.

Stomach Ulcer Juice

- 1 whole **lime**, with peel
- 2 large cabbage leaves
- 1 pawpaw (papaya), without seeds
- 1 pear
- 1 sprig fresh basil

Lime juice is a natural antibiotic for the digestive tract^(18,19)

Cabbage and pawpaw reduce inflammation of the digestive tract

Pear reduces acidity, and is soothing to the stomach lining

Basil is a natural antibiotic and aids in digestion

Syndrome X (see Weight Loss)

Thyroid Problems

Thyroid hormone controls the metabolic rate, rate at which food is converted into physical energy. An underactive thyroid is a common problem and causes symptoms such as weight gain, low body temperature, constipation, hair loss, poor concentration and fatigue. Citrus-based juices can gently stimulate thyroid activity and are safe when used together with thyroid medication.

Thyroid juice

1 **orange**, peeled
1 red radish
2 carrots
¼ beetroot & tops
2 lettuce leaves
1cm ginger root
1 tsp kelp powder (optional)

Orange contains antioxidants to reduce inflammation (Autoimmune inflammation, or Hashimoto's disease, is a common cause of underactive thyroid.)
Radish, carrot, lettuce and kelp provide iodine, necessary for the production of thyroid hormone. Beetroot improves liver function for the conversion of T4 to the active thyroid hormone, T3. (Important if you are taking thyroxine as this is T4).
Ginger is thermogenic to increase basal body temperature.
Kelp is high in iodine, but be cautious because excessive amounts can actually suppress thyroid function. Do not exceed 1 tsp kelp powder per day.

Weight Loss - Think Citrus, for all the right reasons!

Low Carbohydrate

If you are avoiding citrus because it is a carbohydrate, think again! Citrus is actually lower in carbohydrates than many vegetables and it has a low glycemic index. An orange has only 9.5 grams of carbohydrate and is nutrient dense, providing minerals and antioxidants important for weight loss.

Low carbohydrate juice

1 **orange** – 11 gm carb
2 sticks celery – 2.2 gm carb
½ cucumber, peeled 3.6 gm carb
½ green string beans– 2.0 gm carb
2 sprigs parsley – 0.3 gm carb
Total carbohydrate: 19.1 gm carb

Orange is naturally low in sugar
Cucumber, celery and parsley are natural diuretics
Green beans lower blood sugar

Metabolism Booster

A slow metabolism needs food that will increase the rate that energy is dissipated as heat. Thermogenic foods can do this⁽²⁰⁾. Research shows that the fructose, vitamins, and phytochemicals in citrus work together to stimulate metabolism and to increase energy expenditure.

Thermogenic juice

1 **orange**, peeled
1 **grapefruit**, peeled
1 carrot
2 stalks celery, with leaves removed
1cm slice ginger root

2 radishes
Pinch cayenne
Dilute 50% with strong green tea.

Orange and **grapefruit** contain fructose, vitamin C and phytochemicals which increase thermogenesis.

Carrot stabilises blood sugar and turns food energy into heat.

Celery is a natural diuretic

Ginger, radish and cayenne increase basal metabolic rate.

Green tea contains catechin and a mild caffeine, which increase metabolic rate⁽²¹⁾.

Syndrome X and Pre-Diabetic conditions (See also Diabetes)

Recent research on grapefruit has shown that citrus phytochemicals improve insulin sensitivity⁽¹¹⁾. Insulin resistance or syndrome X, is the insensitivity of the body to the sugar-storage hormone insulin. Insulin resistance is the precursor to adult onset diabetes and is also a common reason for obesity, high blood pressure and high cholesterol. Insulin resistance is on the rise in Australia, affecting at least 25% of the population.

For more information on how to overcome Syndrome X, see my book titled “Can’t lose weight? You could have Syndrome X – the chemical imbalance that makes you store fat”.

Syndrome X Juice

1 **grapefruit**, peeled but with pith
½ cup green string beans
3 broccoli florets
4 Brussels sprouts
Dilute 50% with water

Grapefruit provides phytochemicals, which improve insulin sensitivity.

Green beans lower blood sugar

Broccoli and Brussels sprouts contain sulphur, which improves liver detoxification.

Cellulite

The bumpy look of cellulite is caused by fat cells showing through a thinning layer of skin. The situation is made worse by toxins or inflammation in the fat and lymphatic tissue. The raw, fresh enzymes of juice are the perfect solution. Enzymes and other phytochemicals in citrus juice help to remove toxins from the fat itself and to reduce inflammation which assists with weight loss.

Cellulite Juice

1 **orange**, with some peel
1 apple, with skin
2 sprigs fresh mint
2 stalks of celery, with leaves removed

“Detox the Fat” Juice

1 **orange**, with some peel
1 **grapefruit**, with pith
2 stems parsley or coriander
1 radish
5cm slice of beetroot
1 spring onion

Orange and **grapefruit** provide flavonoids to support the blood supply to the skin, and to act as natural anti-inflammatories.

Grapefruit and radish simulates fat-burning.

Mint helps to remove toxins from the fat tissue.

Celery, apple and parsley move fluid through the lymphatic system and kidney.

Spring onions contain sulphur to assist liver detoxification.

Beetroot assists liver detoxification.

Body Shape

Weight loss plans can be tailored to individual metabolism and body shape. My “Body Shaping Diet” book gives an eating plan for each of the 4 different Body Types. This eating plan enables you to lose weight from the part of your body where you need to lose weight and it helps to correct the underlying hormone imbalance.

There is also a citrus recipe unique to every body type!

1) Android Body Type

Android body types have broad shoulders and narrow hips, and do not have a narrow waist, but are prone to an “apple” shape. Hormonally, Android Body Types are more prone to insulin resistance and higher levels of male hormones, both of which may make it very difficult to lose weight. Because of their tendency to high cholesterol Android Body Types require more support for their liver function.

A-Body Type Juice

- ½ **grapefruit**, peeled
- 1 red apple
- 1 dandelion leaf or broccoli floret
- 1 tomato
- 2 slices red onion
- 2 brussels sprouts
- 2 beet leaves

Grapefruit is low in carbohydrates and contains phytochemicals, which improve insulin resistance.

Raw apple and onion cleanse the liver and reduce cholesterol.

Tomato contains nicotinic acid, which reduces cholesterol and is excellent for weight loss.

Dandelion and brussels sprouts contain sulphur to cleanse the liver and improve the flow of bile.

Android Body Types would also benefit from the Daily Lemon Cleanse (see Liver and Gallstones section)

If you know that you have Syndrome X, you can alternate **A-Body Type Juice** with **Syndrome X Juice**.

2) Gynaecoid Body Type

Gynaecoid type women have a relatively high level of oestrogen compared to progesterone, which causes weight gain in the hips and buttocks, as well as a tendency to cellulite. They crave fat and refined sugar, both of which can aggravate weight gain, by increasing the body’s sensitivity to oestrogen. Increasing dietary fibre improves oestrogen clearance from the body.

G-Body Type Juice

- 2 **oranges**, peeled
- ¼ rockmelon
- ½ cup bean sprouts (alfalfa or snowpea)
- 1 dandelion leaf or broccoli floret
- 1 spinach leaf
- 1 carrot

Orange and rockmelon provide natural energy to stimulate the metabolism.
Bean sprouts provide phytoestrogens, which reduce the effect of oestrogen excess.
Spinach and dandelion provide iron and zinc for thyroid function.
Broccoli provides sulphur to help the liver clear oestrogen.

3) Lymphatic Body Type

Lymphatic Body Types have weight gain that is evenly distributed over the entire body, including the wrists and ankles. They are prone to fluid retention and have a very sluggish metabolic rate that is often associated with underactive thyroid activity. L- Body Types crave dairy products but should avoid them, as it will overload their lymphatic system, can aggravate weight gain.

L-Body Type Juice

- ½ **grapefruit**, peeled
- 1 **lemon**
- 2 sticks celery, with leaves removed
- ½ lebanese cucumber
- ½ red radish
- 5cm slice fresh pineapple
- 1cm ginger root

Grapefruit and ginger increase metabolic rate.
Lemon, celery and cucumber have diuretic properties and reduce fluid retention.
Pineapple is also a diuretic and contains enzymes which improve the flow of lymph.
Radish contains iodine to stimulate thyroid function and metabolism.

4) Thyroid Body Type

Thyroid body types do not gain weight easily because they have a relatively high metabolic rate. They are prone however, to adrenal exhaustion and low blood sugar, and may use sugar, caffeine and other stimulants to maintain their energy. When they do gain weight, it will be on their lower abdomen, which is the pattern for low adrenal hormones in women.

T-Body Type Juice

- 2 **oranges**, peeled
- 4 leaves spinach
- 2 carrots
- 4 green string beans

Orange provides a low GI, stable source of energy for those prone to low blood sugar.
Spinach benefits circulation, improving T-Type's tendency for low blood pressure.
Carrot is high in calcium and improves endurance.
Green beans reduce sugar cravings.

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Juice Recipes for every Condition

Condition	Description	Juice	Therapeutic Value
Allergies (see Asthma or Sinus & Hay fever)			
Anaemia	Poor production of haemoglobin possibly due to iron, folic acid, vitamin B12 or zinc deficiencies. Symptoms include fatigue and breathlessness. Can be diagnosed by a simple blood test.	2 oranges, peeled 2 spinach leaves ½ beetroot & tops 2 apricots, pitted Add 10ml of fresh wheatgrass juice (optional) Wheatgrass requires a slow juice extractor. Alternatively, it can be purchased.	Oranges provide folic acid and improve absorption of iron and zinc from the leafy greens Spinach and beetroot provide iron and zinc Apricots reduce anaemia Wheatgrass build blood with iron, folic acid, and vitamin B12 Citrus and dark green leafy vegetables are the perfect combination to prevent and treat anaemia.
Antioxidant/Anti-ageing (see Skin)			
Anxiety (see Depression and Period Problems)			
Arthritis	Inflammation in the joints possibly due to simple wear-and-tear or a more serious underlying condition, such as an autoimmune disease.	Osteoarthritis Juice (also for Gout) 1 Grapefruit, peeled 1 cup cherries, pitted 4 stalks celery, with leaves removed 1 sprig parsley 2 carrots	Grapefruit contains organic salicylic acid, a natural painkiller and dissolve calcium deposits in joints. Cherries lower uric acid Celery and Carrots inhibit inflammation Parsley assists the kidneys to remove toxins
		Rheumatoid Arthritis Juice ½ Lemon, peeled 6 cm slice fresh pineapple 1 clove garlic 2 stalks celery, with leaves removed 1 apple 1 cm slice ginger root	Lemon stabilises the immune system Pineapple enzymes break up inflammatory immune complexes. Garlic decreases deposits in the joints. Celery is alkaline and contains phthalides, which inhibit inflammatory products. Apple improves digestion, which affects immune function. Ginger is anti-inflammatory
Asthma (See also Sinus & Hay fever)	The spasm of the airways caused by excessive mucous. Symptoms include wheezing and difficulty breathing, and can be chronic. Do not change the dose of your asthma puffer without consulting your doctor.	Asthma juice 1 orange, peeled 2 apricots, pitted 2 carrots 2 stalks celery, with leaves removed 2 leaves spinach ½ cm ginger root	Orange provides vitamin C and flavonoids Carrots and Apricots provide vitamin A to soothe mucous membranes Celery contains phthalides, which reduce the histamine response Spinach is a good source of magnesium to relax the bronchioles Ginger is anti-inflammatory
Body Shape (See Weight Loss)			

The Health Benefits of Citrus

<p>Cancer</p>	<p>The destructive overgrowth or degradation of cells which invade body tissue. Raw juice will reduce side effects, but will not interfere with the effectiveness of chemotherapy.</p>	<p>Cancer Prevention Juice 1 orange, with some peel ½ lemon, with some peel 2 carrots 2 stalk celery, with leaves removed 1 clove garlic 3 florets broccoli Dilute with ½ cup of strong green tea</p> <p>Juice for Chemotherapy 2 oranges, peeled ½ papaya ¼ beetroot & tops 1cm slice ginger root 2 carrots 2 stalks celery, with leaves removed</p> <p>Cancer Juice 1 orange, with some peel 2 carrots 2 stalks celery, with leaves removed 1 clove garlic 1 cm slice ginger root 1 sprig fresh oregano Dilute with ½ cup hot water steeped with 3 dried, chopped Shiitake mushrooms</p>	<p>Oranges and lemons provide flavonoids and limonene to help the body fight cancer, and to prevent metastases⁽⁶⁾. Carrots and celery are rich in phthalides, a proven anti-cancer phytochemical^(7, 8). Garlic, especially raw, provides important compounds for the immune system and liver. Ginger root contains gingerol, a proven anti-cancer phytochemical⁽⁹⁾. Broccoli and other cruciferous vegetables provide indole-3-carbinol, a phytochemical that protects against oestrogen-sensitive cancers. Beetroot assists with liver detoxification and provides anthocyanadin, an important anti-oxidant. Papaya for vitamin C, soothes and aids digestion. Oregano (and other kitchen herbs, i.e. rosemary, basil and thyme) is high in antioxidants. Green tea is high in the flavonoid catechin, which is a proven cancer preventative. Shiitake mushrooms contain lentinan that is licensed in Japan as an anti-cancer drug.</p>
<p>Cellulite (see Weight Loss)</p>			
<p>Cold and Flu</p>	<p>A viral or bacterial infection of the upper respiratory tract characterised by fever, chills, excessive mucous, muscular pain and weakness.</p> <p>If you are always getting a cold, your immune system may need a boost. To prevent the next cold, try this tasty juice every day.</p>	<p>Cold and Flu Juice Take every 2-3 hours at the first sign of a cold or flu ½ lemon, peeled 1 clove garlic 1 cm slice ginger root 1 apple with skin Add 1cup hot water and 1 tbsp honey Sprinkle with cayenne pepper (optional)</p> <p>Immune Booster Juice 2 oranges, peeled 3cm slice fresh pineapple 2 stalks celery, with leaves removed ½ beetroot 1 cm slice ginger root</p>	<p>Lemon provide vitamin C and flavonoids. Research shows vitamin C may reduce cold frequency by an average of 50%⁽¹⁰⁾. Garlic and ginger have natural antibiotic properties and reduce congestion. Apple contains pectin, which removes toxins from the body. Honey is antibiotic and soothing for a sore throat. Cayenne is antiseptic.</p> <p>Orange provide vitamin C and flavonoids for immune function. Pineapple enzymes support the immune system. Celery and beetroot improve elimination through the kidney and liver. Ginger is a natural antibiotic.</p>

The Health Benefits of Citrus

<p>Depression and Anxiety</p>	<p>Combination of physical symptoms such as insomnia, poor appetite, combined with emotional and psychological feelings such as guilt, extreme sadness and hopelessness.</p> <p>Anxiety may present as excessive fear, apprehension or uncertainty to a situation or concern.</p> <p>The depression juice recipes will not interact in any way with anti-depressant medication.</p>	<p>Juice for a 'Flat Depression'</p> <ul style="list-style-type: none"> 2 oranges, with some peel 1 carrot ¼ beetroot & tops 4 cm slice watermelon Sprinkle with cayenne or Tabasco (optional) <p>Juice for an "Anxious Depression"</p> <ul style="list-style-type: none"> 2 oranges, peeled 1 carrot 6 strawberries 2 stalks celery, with leaves removed 3 lettuce leaves 	<p>Oranges provide a sunny, uplifting taste, and including some peel to get the benefit of anti-depressant aromatherapy.</p> <p>Carrot provide B-vitamins the nervous system</p> <p>Beetroot helps with liver detoxification and provides iron to build blood and energy</p> <p>Watermelon lifts mood.</p> <p>Cayenne causes the release of endorphins to improve mood and reduce pain.</p> <p>Celery contains potassium and magnesium, which calm the nervous system and help with sleep.</p> <p>Lettuce contains lactucarium, a natural sedative</p>
<p>Diabetes (See also Syndrome X under Weight Loss)</p>	<p>Unlike Type 1 diabetics, who are dependent on insulin injections, adult-onset diabetics may have insulin levels that are normal or even high. Their bodies simply do not respond to the insulin effectively anymore. In the early stages, this condition may be reversible. The treatment is to lower blood sugar and to improve insulin function. The juice recipes apply to adult-onset diabetes only. Type 1 diabetics should use the whole fruit or vegetable, rather than juice.</p>	<ul style="list-style-type: none"> ½ grapefruit, peeled but with pith ¼ Bitter melon (if available) 1 carrot 2 dandelion leaves 1 spring onion or ½ clove garlic ½ cup green string beans ¼ cup fennel Mix with ½ tsp fenugreek powder steeped in ¼ cup hot water 	<p>Grapefruit provides phytochemicals to improve insulin sensitivity⁽¹¹⁾, and antioxidants to protect the kidneys and eyes.</p> <p>Bitter melon, also known as Balsam pear has clinical research to show effectiveness for lowering blood sugar.</p> <p>Carrot to improve insulin sensitivity</p> <p>Dandelion leaves support the liver's role in regulating blood sugar</p> <p>Garlic, Green beans and Fenugreek lower blood sugar</p> <p>Fennel is beneficial to the pancreas</p>
<p>Eye Problems (see Macular degeneration)</p>			
<p>Fatigue (see Anaemia, Depression, Fibromyalgia, Slow metabolism or Thyroid)</p>			
<p>Fibromyalgia</p>	<p>Presents with severe muscle spasm and pain, due to the loss of magnesium and potassium from the muscle cells. Other symptoms include headaches, poor sleep, anxiety and fatigue. Fibromyalgia is a painful condition from an unknown cause but may be related to a dysfunction of the immune system.</p>	<ul style="list-style-type: none"> 1 orange, peeled 1 carrot 3 stalks celery 4 leaves spinach 1 small Lebanese cucumber, peeled ½ cm slice fresh ginger root 4cm slice fresh pineapple 	<p>Orange improves immune function, and enhances magnesium absorption from leafy greens</p> <p>Carrot and celery contain phthalides, which provide an effective pain relief⁽¹²⁾</p> <p>Spinach provides magnesium</p> <p>Cucumber reduces lactic acid in the muscles</p> <p>Ginger and Pineapple enzymes are anti-inflammatory</p>
<p>Headaches</p>	<p>Headaches have many causes including stress, migraines, hormone imbalance, sinus, low blood sugar, neck tension and dehydration. A daily juice provides vital fluid, as well as anti-inflammatory compounds to battle the many causes of headache. For best results, you should also treat the underlying cause.</p>	<ul style="list-style-type: none"> ½ lemon, peeled 4 leaves lettuce 1 bunch purple grapes 3 carrots 1 cm slice ginger root 	<p>Lemon removes toxins from the blood and reduces mucous congestion</p> <p>Lettuce contain magnesium and lactucarium to relax the nervous system</p> <p>Grapes lift blood sugar, stabilise blood vessels in migraines and are alkalising</p> <p>Carrots improve liver detoxification and hormone balance</p> <p>Ginger is anti-inflammatory</p>

The Health Benefits of Citrus

<p>Heart Disease and Stroke (see also Syndrome X under weight loss)</p>	<p>Mainly caused by the blockage of arteries by cholesterol plaques and damage to heart and arteries from high blood pressure. Syndrome X, or insulin resistance is a very common cause of elevated cholesterol and other risk factors for heart disease. If you have apple shaped obesity and high triglycerides, please see Syndrome X in the weight loss section. The following juice recipes can be used safely for any heart condition and will not interfere with blood pressure and cholesterol lowering medications. (Consult with your GP before adding grapefruit juice, as it can alter the effect of some medications.)</p>	<p>Heart Disease Juice 2 oranges or tangerines, peeled 3 sticks celery, with leaves removed 1 tomato 1 red onion 1 clove garlic (optional)</p> <p>Cholesterol Juice 1 orange or tangerine, with some peel 1 grapefruit, peeled 1 tomato 1 clove garlic 2 dandelion or rocket leaves 1 radish & tops</p> <p>High Blood Pressure Juice 2 oranges, peeled 3cm slice of watermelon 2 sticks celery, with leaves removed ½ cup chopped parsley ½ cup chopped fennel 4 leaves lettuce</p>	<p>Oranges and tangerines contain the flavonoid hesperidin and the super-flavonoids, tangeretin and nobiletin to lower bad cholesterol⁽²⁾. Citrus also provides potassium to lowers blood pressure and folic acid, which reduces homocysteine Dark greens such as Dandelion or Rocket leaves provide folic acid, potassium and magnesium, which lower the risk of heart disease. Onion and garlic contain natural sulphur compounds, which reduce cholesterol synthesis by the liver. Tomato contains nicotinic acid to reduce cholesterol Celery contains phthalides, a group of phytochemicals proven to lower blood pressure⁽¹⁴⁾ Watermelon, Celery, Parsley and Fennel act as natural diuretics to reduce blood pressure. Lettuce provide magnesium, and lactucarium, a natural sedative</p>
<p>Hepatitis (See Liver and Gallstones)</p>			
<p>Irritable Bowel Syndrome</p>	<p>IBS is a condition when the intestines do not function in the normal, rhythmic manner but instead spasm, causing pain, gas, constipation and diarrhoea. It is most common in young women and is usually the result of stress, food sensitivities, and poor intestinal flora after repeated antibiotics. Avoid gas-producing vegetables such as broccoli and onions.</p>	<p>1 orange, peeled 2 apples 1cm slice ginger root 2 stalks celery 2 sprigs fresh mint Add ¼ cup aloe vera juice Aloe juice should be purchased or prepared with care. The outer leaf is a strong laxative.</p>	<p>Orange is easily digested Apple contains soluble fibre pectin, which soothes the intestinal wall and improves levels of good intestinal bacteria. Ginger is a natural carminative to reduce gas Celery restores electrolytes lost from diarrhoea Mint alleviates intestinal cramps Aloe vera juice or gel slows peristalsis and clears the intestinal walls of mucous</p>
<p>Liver and Gallstones</p>	<p>Symptoms of liver problems include digestive bloating, skin problems such as liver spots and rashes, bad breath or allergies and may result in fatty liver , gallstones, obesity or high cholesterol For more information, see my book <i>The Liver Cleansing Diet</i>.</p>	<p>Daily lemon cleanse ¼ - ½ lemon – freshly squeezed 500ml warm water</p>	<p>Fresh lemon juice contains the phytochemical limonene to improve liver activity and in Japan is used to dissolve gallstones⁽³⁾. Carrots contain raw enzymes and phthalides to increase the detoxification processes.</p>

The Health Benefits of Citrus

	<p>If you have gallstones, start slowly with this juice. You can dilute it with water or dandelion root tea. Drink 2-3 litres of water per day and avoid fatty foods.</p>	<p>Liver Cleansing Juice ½ lemon, with some peel 1 apple 2 dandelion or rocket leaves ½ cup broccoli florets 1 clove garlic ½ cup parsley This is a strong mixture and may be diluted with 1 cup water or dandelion root tea.</p> <p>Fatty Liver Juice ½ whole lemon or grapefruit, peeled 2 carrots 1 clove garlic 1cm round fennel ¼ beetroot 2 dandelion leaves or rocket leaves 1 small apple may be added for taste</p> <p>Gallbladder Juice ½ lemon, with some peel 2 fresh dandelion or rocket leaves ¼ beetroot 1 medium apple 2 brussels sprouts 1 large tomato</p> <p>Hepatitis Juice 1 orange, peeled 2 carrots 1 apple, with skin 1-2 cloves garlic ½ beetroot & tops ½ cup watercress</p>	<p>Broccoli and brussels sprouts provide natural sulphur compounds to enhance detoxification pathways in the liver. Beetroot has a strong regenerative effect on the liver. Fennel is a digestive aid and improves fat metabolism. Dark greens such as dandelion or rocket contain chlorophyll for liver function and flavonoids to work synergistically with the flavonoids in the lemon. Tomato contains lycopene, a strong antioxidant. Dandelion root is a liver tonic</p> <p>Orange provides vitamin C and flavonoids to fight infection Carrots provide vitamin A for immune function and to protect the liver Apples improve levels of good intestinal bacteria Garlic contains allicin, which is a natural infection fighter Beetroot has a strong regenerative effect on the liver Watercress provides sulphur, which is a natural antibiotic and cleanser</p>
<p>Macular Degeneration</p>	<p>It is the breakdown of the retina or the back of the eye, and occurs with ageing and smoking.</p>	<p>Eye Juice 1 orange or mandarin, with some peel 1 blood orange or grapefruit, peeled 1 carrot ¼ beetroot & tops 2 spinach leaves ½ glove garlic (optional)</p>	<p>Oranges, mandarin, and grapefruit provide carotenoids that are important for eye health Blood oranges contain anthocyanadin, a potent flavonoid that protects the retina from UV radiation. Carrots and beetroot contain vitamin A, another carotenoid for retina protection. Spinach is another good source of lutein and zeaxanthin, and also contains chlorophyll, an antioxidant for the eyes. Garlic thins the blood and improves circulation to the retina.</p>

The Health Benefits of Citrus

<p>Menopause</p>	<p>Oestrogen drops at menopause which is a natural process and if the body is healthy, the symptoms can be mild. Symptoms of hormonal changes may include hot flushes, vaginal dryness and mood swings. Menopausal women must also manage their stress and get regular exercise.</p>	<p>Hot Flush Juice 2 oranges, peeled but with pith ½ cup alfalfa or bean sprouts 2 lettuce leaves 4cm slice watermelon 1 small Lebanese cucumber ¼ beetroot</p> <p>Osteoporosis Juice 2 oranges, peeled 6 spinach leaves 4 string beans ½ cup alfalfa or bean sprouts 1 apple</p>	<p>Oranges provide flavonoids to calm hot flushes Sprouts provide gentle phytoestrogens Lettuce is cooling and contains lactucarium, a natural sedative Watermelon and cucumber are also cooling Beetroot helps the liver to maintain hormone balance</p> <p>Oranges provide calcium and assist with calcium and magnesium absorption from the greens. Spinach and string beans provide calcium, magnesium and vitamin K Sprouts are a good source of phytoestrogens, to prevent bone loss Apple is high in calcium and silica</p>
<p>Metabolism Booster (see Weight Loss)</p>			
<p>Period Problems</p>	<p>Premenstrual tension and period pain are usually the result of excessive prostaglandins, which are inflammatory compounds produced by changing hormones. Prostaglandin levels are affected by stress and by diet. For maximum benefit, use the juice every day during the week before the period.</p>	<p>PMT Juice 2 oranges, peeled but with pith 2 spinach leaves ¼ beetroot & tops 2 lettuce leaves ½ cup chopped parsley</p> <p>Period Pain Juice 1 orange, with some peel and pith ½ cup raspberries 2 spinach leaves 2 carrots ¼ beetroot 1cm slice ginger root Add 1 tbsp of flaxseed oil, which reduce prostaglandins.</p>	<p>Oranges are anti-inflammatory and improve the blood vessels to prevent excessive bleeding. They also provide vitamin A to prevent excessive blood loss and calcium, which acts with magnesium as a muscle relaxant. Spinach and beetroot tops provide magnesium to relax the uterine muscles, vitamin K to prevent heavy blood loss and iron to build blood. Lettuce contains lactucarium, a natural sedative Raspberries relieve menstrual cramps Carrots and beetroot help the liver to maintain hormone balance and provide vitamin A Ginger is a natural anti-inflammatory</p>
<p>Pregnancy</p>		<p>Pregnancy Juice 2 oranges, peeled 2 spinach leaves ½ cup broccoli ½ beetroot & tops 2 carrots ½ cm ginger root can be added if morning sickness is present 1 pear or apple may be added for taste and the juice can be diluted with water or cold peppermint tea.</p>	<p>Oranges provides energy, calcium and folic acid and improve absorption of iron and zinc from the leafy greens. Spinach provides iron and vitamin K, as well as flavonoids and antioxidants for a healthy placenta. Broccoli contains natural sulphur compounds, which help the liver to cope with pregnancy, and to prevent toxemia. Beetroot and Carrot help with liver function. Ginger root is effective for the treatment of nausea and is safe during pregnancy ⁽¹⁶⁾</p>

The Health Benefits of Citrus

<p>Sinus and Hay fever</p>	<p>Infection or allergy can result in a painful congestion behind the face and eyes. When citrus is combined with natural infection fighters, it is an effective decongestant.</p>	<p>Sinus Juice 1 orange, peeled 3-4 small red radishes 1cm ginger root 1 clove garlic, or ½ small red onion, or 1cm slice horseradish 4 cm slice fresh pineapple 1 carrot This juice will be spicy. If necessary, dilute with water or cold herbal tea.</p>	<p>Orange provides vitamin C and flavonoids for fighting infection and as a natural antihistamine. Radish, ginger root, garlic, onion and horseradish are natural antibiotics and eliminate mucous from the nasal passages. Pineapple provides enzymes break up tenacious mucous. Carrot provides vitamin A for mucous membrane integrity.</p>
<p>Skin</p>	<p>The appearance of your skin reflects your inner health. Instead of using expensive face creams, protect your skin from the inside with citrus. Citrus provides important antioxidants, as well as significant amounts of vitamins A and C for skin renewal. When it is combined with vegetable juices for healthy toxin elimination, citrus is a powerful remedy for skin problems such as acne, eczema, rashes and premature ageing.</p>	<p>Acne Juice 1 orange, peeled but with pith 1 carrot ½ beetroot & tops 2 stalks of celery, with leaves removed 1 sprig fresh basil</p> <p>Rash juice 2 oranges, peeled but with pith 1 cup strawberries (organic is preferable) 1 sprig fresh mint 1 tsp of honey, and crushed ice, if desired</p> <p>Super-antioxidant Anti-ageing Juice 1 orange, with peel 1 pomegranate seeds and flesh 6cm slice fresh pineapple 2 apricots, pitted Add 1 cup pureed blueberries</p>	<p>Orange and carrot contain vitamin A for skin renewal Beetroot and celery improve liver and kidney function for toxin removal Basil aids in digestion and has a cleansing action on the skin</p> <p>Orange provides vitamin C and flavonoids, which are natural anti-histamines Strawberries are an excellent skin cleanser Mint is cooling for hot skin eruptions</p> <p>Orange provides potent antioxidants and they are most concentrated in the peel and pith. Start with a small amount of the peel and work up. If you sweeten the juice other fruit, you can enjoy the benefits of the peel of an entire orange. Pomegranates are high in ellagic acid, one of the most potent antioxidants Pineapple and apricots detract from the bitter taste of the orange peel and provide enzymes, vitamin C and carotenes for the skin. Blueberries are classified by the Nutrition Research Center on Aging at Tufts University in Boston as one of the highest sources of anti-ageing phytochemicals.</p>
<p>Stomach ulcer or Helicobacter</p>	<p>Stomach ulcers are caused by excessive stomach acid, or infection by the bacteria, Helicobacter pylori. Conventional treatment includes antibiotics and acid-inhibiting medication, which may have the undesirable effect of decreasing mineral absorption.</p> <p>Fruit and vegetable juices have been shown to inhibit growth of Helicobacter⁽¹⁷⁾, and are also soothing to the stomach lining. With regular consumption of fresh vegetable juice, you may be able to come off your acid-inhibiting medication.</p>	<p>Stomach Ulcer Juice 1 whole lime, with peel 2 large cabbage leaves 1 pawpaw (papaya), without seeds 1 pear 1 sprig fresh basil</p>	<p>Lime juice is a natural antibiotic for the digestive tract ^(18,19) Cabbage and pawpaw reduce inflammation of the digestive tract Pear reduces acidity, and is soothing to the stomach lining Basil is a natural antibiotic and aids in digestion</p>
<p>Syndrome X (see Weight Loss)</p>			

The Health Benefits of Citrus

<p>Thyroid Problems</p>	<p>Thyroid hormone controls the metabolic rate, rate at which food is converted into physical energy. An underactive thyroid is a common problem and causes symptoms such as weight gain, low body temperature, constipation, hair loss, poor concentration and fatigue. Citrus-based juices can gently stimulate thyroid activity and are safe when used together with thyroid medication.</p>	<p>Thyroid juice 1 orange, peeled 1 red radish 2 carrots ¼ beetroot & tops 2 lettuce leaves 1cm ginger root 1 tsp kelp powder (optional)</p>	<p>Orange contains antioxidants to reduce inflammation (Autoimmune inflammation, or Hashimoto's disease, is a common cause of underactive thyroid.) Radish, carrot, lettuce and kelp provide iodine, necessary for the production of thyroid hormone. Beetroot improves liver function for the conversion of T4 to the active thyroid hormone, T3. (Important if you are taking thyroxine as this is T4). Ginger is thermogenic to increase basal body temperature. Kelp is high in iodine, but be cautious because excessive amounts can actually suppress thyroid function. Do not exceed 1 tsp kelp powder per day.</p>
<p>Weight Loss</p>	<p>Low Carbohydrate If you are avoiding citrus because it is a carbohydrate, think again! Citrus is actually lower in carbohydrates than many vegetables and it has a low glycemic index. An orange has only 9.5 grams of carbohydrate and is nutrient dense, providing minerals and antioxidants important for weight loss.</p>	<p>Low carbohydrate juice 1 orange – 11 gm carb 2 sticks celery – 2.2 gm carb ½ cucumber, peeled 3.6 gm carb ½ green string beans– 2.0 gm carb 2 sprigs parsley – 0.3 gm carb Total carbohydrate: 19.1 gm carb</p>	<p>Orange is naturally low in sugar Cucumber, celery and parsley are natural diuretics Green beans lower blood sugar</p>
	<p>Metabolism Booster A slow metabolism needs food that will increase the rate that energy is dissipated as heat. Thermogenic foods can do this⁽²⁰⁾. Research shows that the fructose, vitamins, and phytochemicals in citrus work together to stimulate metabolism and to increase energy expenditure.</p>	<p>Thermogenic juice 1 orange, peeled 1 grapefruit, peeled 1 carrot 2 stalks celery, with leaves removed 1cm slice ginger root 2 radishes Pinch cayenne Dilute 50% with strong green tea.</p>	<p>Orange and grapefruit contain fructose, vitamin C and phytochemicals which increase thermogenesis. Carrot stabilises blood sugar and turns food energy into heat. Celery is a natural diuretic Ginger, radish and cayenne increase basal metabolic rate. Green tea contains catechin and a mild caffeine, which increase metabolic rate⁽²¹⁾.</p>
	<p>Syndrome X and Pre-Diabetic conditions (See also Diabetes) Recent research on grapefruit has shown that citrus phytochemicals improve insulin sensitivity⁽¹¹⁾. Insulin resistance or syndrome X, is the insensitivity of the body to the sugar-storage hormone insulin. Insulin resistance is the precursor to adult onset diabetes and is also a common reason for obesity, high blood pressure and high cholesterol. Insulin resistance is on the rise in Australia, affecting at least 25% of the population.</p> <p>For more information on how to overcome Syndrome X, see my book titled "Can't lose weight? You could have Syndrome X – the chemical imbalance that makes you store fat".</p>	<p>Syndrome X Juice 1 grapefruit, peeled but with pith ½ cup green string beans 3 broccoli florets 4 Brussels sprouts Dilute 50% with water</p>	<p>Grapefruit provides phytochemicals, which improve insulin sensitivity. Green beans lower blood sugar Broccoli and Brussels sprouts contain sulphur, which improves liver detoxification.</p>

The Health Benefits of Citrus

	<p>Cellulite The bumpy look of cellulite is caused by fat cells showing through a thinning layer of skin. The situation is made worse by toxins or inflammation in the fat and lymphatic tissue. The raw, fresh enzymes of juice are the perfect solution. Enzymes and other phytochemicals in citrus juice help to remove toxins from the fat itself and to reduce inflammation which assists with weight loss.</p>	<p>Cellulite Juice 1 orange, with some peel 1 apple, with skin 2 sprigs fresh mint 2 stalks of celery, with leaves removed</p> <p>"Detox the Fat" Juice 1 orange, with some peel 1 grapefruit, with pith 2 stems parsley or coriander 1 radish 5cm slice of beetroot 1 spring onion</p>	<p>Orange and grapefruit provide flavonoids to support the blood supply to the skin, and to act as natural anti-inflammatories. Grapefruit and radish stimulates fat-burning. Mint helps to remove toxins from the fat tissue. Celery, apple and parsley move fluid through the lymphatic system and kidney. Spring onions contain sulphur to assist liver detoxification. Beetroot assists liver detoxification.</p>
	<p>Body Shape Weight loss plans can be tailored to individual metabolism and body shape. My "Body Shaping Diet" book gives an eating plan for each of the 4 different Body Types. This eating plan enables you to lose weight from the part of your body where you need to lose weight and it helps to correct the underlying hormone imbalance.</p> <p>There is also a citrus recipe unique to every body type!</p> <p>1) Android Body Type Android body types have broad shoulders and narrow hips, and do not have a narrow waist, but are prone to an "apple" shape. Hormonally, Android Body Types are more prone to insulin resistance and higher levels of male hormones, both of which may make it very difficult to lose weight. Because of their tendency to high cholesterol Android Body Types require more support for their liver function.</p> <p>2) Gynaecoid Body Type Gynaecoid type women have a relatively high level of oestrogen compared to progesterone, which causes weight gain in the hips and buttocks, as well as a tendency to cellulite. They crave fat and refined sugar, both of which can aggravate weight gain, by increasing the body's sensitivity to oestrogen. Increasing dietary fibre improves oestrogen clearance from the body.</p>	<p>A-Body Type Juice ½ grapefruit, peeled 1 red apple 1 dandelion leaf or broccoli floret 1 tomato 2 slices red onion 2 brussels sprouts 2 beet leaves</p> <p>G-Body Type Juice 2 oranges, peeled ¼ rockmelon ½ cup bean sprouts (alfalfa or snowpea) 1 dandelion leaf or broccoli floret 1 spinach leaf 1 carrot</p>	<p>Grapefruit is low in carbohydrates and contains phytochemicals, which improve insulin resistance. Raw apple and onion cleanse the liver and reduce cholesterol. Tomato contains nicotinic acid, which reduces cholesterol and is excellent for weight loss. Dandelion and brussels sprouts contain sulphur to cleanse the liver and improve the flow of bile.</p> <p>Android Body Types would also benefit from the Daily Lemon Cleanse (see Liver and Gallstones section)</p> <p>If you know that you have Syndrome X, you can alternate A-Body Type Juice with Syndrome X Juice.</p> <p>Orange and rockmelon provide natural energy to stimulate the metabolism. Bean sprouts provide phytoestrogens, which reduce the effect of oestrogen excess. Spinach and dandelion provide iron and zinc for thyroid function. Broccoli provides sulphur to help the liver clear oestrogen.</p>

The Health Benefits of Citrus

	<p>3) Lymphatic Body Type Lymphatic Body Types have weight gain that is evenly distributed over the entire body, including the wrists and ankles. They are prone to fluid retention and have a very sluggish metabolic rate that is often associated with underactive thyroid activity. L- Body Types crave dairy products but should avoid them, as it will overload their lymphatic system, can aggravate weight gain.</p> <p>4) Thyroid Body Type Thyroid body types do not gain weight easily because they have a relatively high metabolic rate. They are prone however, to adrenal exhaustion and low blood sugar, and may use sugar, caffeine and other stimulants to maintain their energy. When they do gain weight, it will be on their lower abdomen, which is the pattern for low adrenal hormones in women.</p>	<p>L-Body Type Juice ½ grapefruit, peeled 1 lemon 2 sticks celery, with leaves removed ½ lebanese cucumber ½ red radish 5cm slice fresh pineapple 1cm ginger root</p> <p>T-Body Type Juice 2 oranges, peeled 4 leaves spinach 2 carrots 4 green string beans</p>	<p>Grapefruit and ginger increase metabolic rate. Lemon, celery and cucumber have diuretic properties and reduce fluid retention. Pineapple is also a diuretic and contains enzymes which improve the flow of lymph. Radish contains iodine to stimulate thyroid function and metabolism.</p> <p>Orange provides a low GI, stable source of energy for those prone to low blood sugar. Spinach benefits circulation, improving T-Type's tendency for low blood pressure. Carrot is high in calcium and improves endurance. Green beans reduce sugar cravings.</p>
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