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## **Paradigm Shift Summit – some key information to help cleanse the body, restore gut function, and attain high vibration bodily energy**

**T**hank you for attending my presentation at the Paradigm Shift Summit – it was an honour for me to be before so many aware and committed people. I would like to share with you some information, some will be reiteration of what I spoke about on the day, some will be new. I never prepare for talks, I prefer to go with the flow of the energy on the day (what I get from my audience), so by now have no clear idea about what came up except for generalities.

So, make yourself comfortable, and dive in. Welcome to ....

**Cultivating a High Vibration Body and Mind**

**Or ... how I learned to love my guts**



Firstly, let's start with two quotes, the first addressing the safety of fermented foods, the second looking at the exciting new area of fermented foods and mental and psychological equilibrium.

"As far as I know, there has never been a documented case of food-borne illness from fermented vegetables." – Fred Breidt, microbiologist for the US Department of Agriculture specialising in vegetable ferments.

“How (these) differences in our microbial world influence the development of brain and behavior will be one of the great frontiers of clinical neuroscience in the next decade.” - Thomas Insel, Director of the (US) National Institute of Mental Health.

And now, two snappy quotes:

“All disease begins in the gut” – Hippocrates

“The road to health is paved with good intestines” – Sherry A Rogers

The simple fact is that we have co-evolved with our inner communities of probiotic organisms to such an extent that every system in the body begins to break down when our internal ecosystem is out of balance. The human microbiota (what scientists call the totality of our inner communities) has been under an unsustainable level of attack in recent times, and the fermented food revival is one answer to this problem.

## **Fermentation 101**

There are four modes of fermentation, and these involve bacteria, yeasts, moulds, or chemicals. Furthermore, many ferments are hybrid ferments, relying on two or more pathways. Examples of these are tempeh, where both mould and bacteria are involved, and beet kvass, where bacteria and yeasts are involved. We are concerned here with what is called lactobacillic fermentation – the fermentation of a substrate (fancy term for ‘stuff the

microorganisms eat') by a procession of bacterial communities culminating in the climax community dominated by lactic acid bacteria (LAB for short). They are called lactic acid bacteria because as they consume the sugars in the substrate, their main output is lactic acid and carbon dioxide. LAB are not the only players in LAB fermentation though – for example, in the initial phase of fermentation of vegetable matter, enterobacteria (including probiotic strains of *E. coli*) and yeasts play their part. Just so you know this is a natural thing, the procession of bacteria we see as sauerkraut ferments is pretty much the same procession during the colonisation of the new born human gut. This in fact is crucial for my gut repopulation protocol, as found in my gut calming and repopulating ebook, and is a testament to the naturalness of fermentation as a food preservation and augmentation technique.

Vegetable ferments are salted for very good reason, and this is to create the correct environment for the bacteria we want, while excluding those we don't want. Food Standards Australia and New Zealand recognise the change in pH that occurs during fermentation as one of the fail-safe methods of safe food preservation, and this is the change that is mimicked by vinegar pickling, another approved method. If we salt our vegetables in accordance with the guidelines given here, what we are doing is setting the perfect environment for the primary fermentation species. Once favoured, these bacteria actively work to modify the environment to suit the secondary fermentation species, which at the same time excludes pathogenic species. This process is discussed in detail in the section on sauerkraut, all we need to say here is that good quality vegetables, good quality water (if needed), and good quality salt within a broad but well-defined range equals safe fermentation.

It goes without saying that all equipment wants to be sterile to begin with, and basic good hygiene as practised in the home kitchen is all we need. Anti-bacterial products are not only unnecessary for fermentation cleanliness, they can actually be counter-productive, because we are using wild bacteria to ferment our food. Talk of equipment leads us nicely to the brief discussion on fermentation equipment, so let's go there now.

## Equipment

Vegetable fermentation is easy! The fate of all organisms disconnected from the life-source is decay; it can be no other way. Lactobacillic fermentation of vegetable substrates is a human directed process that may be viewed as 'controlled spoilage', where our control achieves beneficial change (preservation and augmentation) rather than food spoilage. We direct this process with the addition of salt, which creates an environment that favours probiotic organisms while preventing colonisation by pathogenic organisms. Many vegetable ferments require no added brine – rather the vegetables are salted and massaged, pounded, or compacted until the salt draws moisture from the vegetables. With care, this brine rises to cover the vegetable matter. It is crucial that the vegetables are covered with brine to reduce oxidation and mould formation on matter exposed to the air. On occasion, not enough moisture is held within the substrate to produce sufficient brine, so we then make up brine to top up the fermenting vessel. Depending on taste and experience with different vegetable ferments, this brine will be between 1 – 3 tsp of salt per cup of water (1 tsp/cup for sauerkraut is best). The addition of salt makes vegetable fermentation not only easy, but safe.

Vegetables float, and there are strategies we may employ to keep them submerged. All these strategies involve weighing down the vegetables with some food and fermentation safe item. Glass, ceramic, hardwood, and stone are the most common, but stones must be smooth, non-porous, and well scrubbed and boiled. Items I use include: glass platters, lids, paperweights, jars, egg cups, shot glasses, ramekins, jugs and bowls; and good quality unchipped ceramic plates, saucers, and bowls. What I use depends on the fermenting vessel I am using, and I have found the perfect weight that fits each vessel snugly either in our cupboard, or from op shops.



Water moat crocks are available widely and consist of a glazed ceramic crock with a deep, enlarged lip in which the lid sits. The lip, or moat, is then filled with water, which prevents the entry of oxygen while allowing pressurised CO<sub>2</sub> to escape. In effect, the water moat is a simple airlock. These crocks are always supplied with weights – two half circular ceramic sections, sometimes glazed, that when lain carefully over the cabbage form a circle that snugly fits the diameter of the crock. As long as the crock is well set up, the only thing we need be concerned about is loss of the water in the moat which may occur in two ways. The first mystery of the disappearing water is one we can all guess with ease – evaporation. The second mystery is a little more tricky, and while the effect is the same, it gives us clues as to when it might occur, and how to prevent it. Gasses expand when heated, and contract when cool, and since our crock with moat maintains a facsimile of a one-way vacuum within it, if the crock cools substantially and quickly from a high temperature, the contracting force of the gasses can rarely draw water out of the moat, and into the crock. This most often retains a seal if the lid is a good fit to the moat via a thin film of water that adheres between the two, and we look out for this in the morning if the overnight temperature has been markedly cooler than the daytime temperature. Whenever we see a totally empty moat, we half fill it just to be safe. Most often water is held in suspension under the lid, and comes back into the moat with pressure normalisation – in that case, we spoon the excess out. Because water can be drawn into the crock from the moat, we fill it always with brine at roughly 2% or 1 teaspoon of salt (roughly 5 g) per cup (250 ml) of water. Strategies for reducing water loss are the laying of a damp cloth over

the lid and moat for loss via evaporation, and maintaining a more constant temperature with a heating pad or insulating jacket for loss via extreme pressure change.



An airlock jar is simply a glass jar with a lid that has a small airlock in it. The airlock is either an exaggerated sideways 'S' shape or a small cylinder nested within a larger one, both with chambers for water that again prevent oxygen entering, but allow CO<sub>2</sub> to escape. These may be purchased (e.g. Ball or Weck both do airlock jars), or a home version will suffice at a fraction of the cost. Simply find a suitable size repurposed jar with a metal lid, and purchase an airlock and bung from a home brew supplier. Drill a hole the diameter of the midpoint of the bung, sand and clean the hole so it is neat, then push in the bung and airlock. The airlock is held upright, and filled with water to the level of the line marked on the side. You will see bubbles coming out of the airlock as fermentation commences, and an indication that fermentation has neared completion is a slowing or apparent lack of activity in the airlock. A rolled cabbage leaf cap and some kind of weight are still necessary.

Rubber sealed jars come in several types; the kinds I use are Italian-made Fido jars with a rubber seal and a metal bail arm type clip, and Australian-made Fowlers Vacola preserving jars. Most Fido jars will off-gas under sufficient pressure, but a caution here – some jars, particularly with brand new seals, may not off gas. Excess CO<sub>2</sub> can lead to explosions, the way to check for off-gassing is to put a little pressure on the lid of a ferment that has been set a few days without removing the bail arm clip – if you hear a little hiss, the seal is



loose enough for our needs. Fowlers jars are straight sided and come in various sizes. They are very good quality glass, with a recessed groove which holds a rubber O-ring. A stainless steel lid covers the jar and comes down over the O-ring, and is held in place with a metal clamp. The ring is designed to create a vacuum when canning produce, after which the clip can be removed for storage in the pantry. For fermentation use the clip is left in place, and the ring effectively excludes oxygen while allowing off-gassing. The Fowlers No. 31 jar (with a 4 inch diameter

and comfortable 750 ml capacity plus headspace) is the size I use for small batch ferments. I use the cabbage leaf plug, and a stack of glass Mason jar lid inserts as the weight. Glass paperweights or candle holders can be used in the same way. I stack them until they are just proud of the rim of the jar then clamp the lid on, which pushes them down on the cabbage. I have never had kahm yeast, mould, or oxidised vegetable matter using this system, and I have never had a jar explode.

If fermenting in a Mason jar, or a repurposed jar, we will need to release pressure during the early stages of fermentation. The best way to do this is to open the lid carefully until we hear a hiss of escaping gas, then immediately closing the lid to prevent any air getting in. A plug and food-safe weight are still required for these ferments.

Open crock ferments, that is a crock without a moat but still with a lid, is fine for short ferments, but over the course of a six week sauerkraut ferment, the



likelihood of mould developing is high. Diverse moulds produce such a variable and potentially debilitating or fatal array of mycotoxins I long ago abandoned making sauerkraut in open crocks, and recommend the same to anyone who seeks my opinion on the matter. The chances of a mould that produces seriously debilitating mycotoxins inhabiting a vegetable ferment are pretty low though.

## Sauerkraut

Cabbage is a very low glycemic index (GI) food that is low in calories, and high in fibre. It is an excellent source of vitamins K, C, and B6, a very good source of manganese, potassium, B1, folate, and copper, and a good source of choline, phosphorous, B2, magnesium, calcium, selenium, iron, pantothenic acid, B3, E and A. Analyses reveal that while all cabbages are excellent foods from both a nutritional and functional food perspective, different varieties contain differing levels of some key nutrients and phytonutrient compounds. For example, Savoy cabbage is highest in the isothiocyanate compound sinigrin (shown to have potent preventative action against colon, bladder, and prostate cancers), white drum cabbages offer enhanced preventative and healing actions for breast cancer, bok choy has more beta-carotene and vitamin A than any other cabbage variety, and red cabbage is highest in both vitamin C, and in antioxidant and anti-inflammatory actions due to the anthocyanin polyphenols that provide the colour. So to get the most benefit from the mighty cabbage, utilise as many varieties as you can, and eat them either lightly steamed, gently sautéed in bone or vegetable broth, or fermented. Slicing your cabbage and letting it sit for five to ten minutes before cooking will enhance activation of all therapeutic compounds, and we will look at those now to encourage you to do this.



Cabbage contains appreciable levels of carbohydrates, crude fibres, proteins, lipids, and ash. The first and foremost effect of fermentation is that the carbohydrates are converted to lactic and acetic acids at the ratio of near enough 4:1 (and to a lesser extent succinic, malic, and propionic acids), carbon dioxide, ethyl alcohol, mannitol and dextrans. The total carbohydrate content is reduced by more than 80% in the finished product, with the sugars glucose, fructose, and sucrose being reduced by about 66%. The various components of the lipid fraction, though small, are metabolised to yield free fatty acids, glycerol, phosphates and free choline (more on choline later).

Digestive enzymes, vitamins, amino acids, glucosinolates, and antioxidant powerhouses (such as glucosinolate metabolites, superoxide dismutase and glutathione) are produced during the sauerkraut fermentation. The free-radical scavenging capacity of  $\beta$ -carotene, ascorbate, and  $\alpha$ -tocopherol (fundamentally vitamins A, C and E) remains intact in the finished kraut, and there is evidence that these (and we may assume other) antioxidants work synergistically together. The fermentation process produces vitamins B3 and B6, and converts vitamin K1 to K2 (which often does not happen in a compromised gut), making fermented products a good source of K2 for those who don't eat animal products. Bioavailable vitamin B12 is also produced by fermenting cabbage, and since vitamins K2 and B12 are so important, especially for vegans, everyone should make and eat sauerkraut regularly.

### **Basic Sauerkraut**

There are more probiotics in 2 tbsp of well-made sauerkraut than in a whole bottle of probiotic capsules, and there is much higher species diversity too.

1000 g of shredded, white cabbage

11 g of salt (2 rounded tsp)

Shred the cabbage to the preferred size, add to a large bowl, and then add the salt. Massage the salt in well, rubbing and wringing and squeezing the cabbage to break down the cell walls. The salt will draw out the moisture of the cabbage as we 'bruise' it, and open it up. When we can pick up a handful of cabbage and squeeze it so a good stream of moisture is expressed, we have massaged enough. Don't forget to put love in the food as you work if the thought of energetically enhanced food appeals to you.

Pack the cabbage down into your fermenting vessel as tightly as you can. Use your hands or a tool – purpose-built kraut pounders can be purchased or made (often out of an old rolling pin with one end cut off and sanded smooth). Wooden spoons or sanded dowel rods may also be used. Express all the air out of the cabbage as you pack. We want no air bubbles at all if we can help it. Leave enough room in the jar to allow for expansion of the cabbage, 35 – 40 ml (about an inch and a half) for a jar, 50 ml (2 inches) for a crock. Ideally the headspace is measured from the top of your weight, which is covered by brine. Use the outer cabbage leaves as a cap, whole leaves layered in a crock, rolled up leaves for a jar. Top this with your food safe weight, best materials are glass or ceramic (no external paint or metallic leaf), but food safe hardwoods and boiled and scrubbed smooth, hard, non-porous river stones are also used. Do not use metal or plastic please – the metal will corrode in the acid, and the plastic will leach toxins and oestrogen-like compounds into your food (yes, even 'food safe' plastics). Place the lid on your fermenting vessel, then put in a safe place for six weeks. Consult the sections above, and the equipment section for more detail on procedure and fermenting vessels.

If you have more or less cabbage than 1000 kg, use the simple calculation below to adjust the salt, we will assume the difference is 200 g, adjust to your circumstances.

$$200 \text{ g} \div 91 = 2.2 \text{ g}$$

If you have 800 g of cabbage, subtract 2.2 g of salt to give you 8.8 g, if you have 1200 g of cabbage, you will have 11 + 2.2 g of salt, or 13.2 g. This equation is found by dividing the cabbage by the salt to arrive at the factor. This factor is then applied to the cabbage to determine the salt. So,  $1000 \text{ g} \div 11 \text{ g} = 90.9$  (round up to 91). Our factor is 91, test this by dividing the cabbage with it:  $1000 \text{ g} \div 91 = 10.9 \text{ g}$  (round up to 11).

Any odd weight of cabbage may be likewise divided by our factor to find the salt in grams. For example:  $562 \text{ g} \div 91 = 6.2 \text{ g}$ . Or  $3675 \text{ g} \div 91 = 40 \text{ g}$ . Now that little bit of painless mathematics is out of the way, and we are armed with the ability to accurately determine the salt to add to any amount of cabbage, let's look at some variations based on 1 kg of cabbage and 11 g of salt. The amounts given produce a mild tasting kraut – adjust up for your taste preference.

### **Classic German sauerkraut**

1000 g shredded cabbage

11 g salt

$\frac{1}{4}$  tsp of caraway seeds

$\frac{1}{2}$  an apple, diced (optional)

Pinch of yellow mustard seed (optional)

One thing I got used to in the time I spent in Germany was the taste of caraway seeds – I consider this the classic German spice, added as it is to all kinds of dishes from the very sweet, to the very sour. Caraway is a great spice for digestion, with a particular effect against flatulence. Caraway is also a stimulant, and a synergist par excellence – it enhances the efficacy of other food medicines when combined with them. As well as these benefits, caraway

will work to prevent mould in the ferment, and proponents of love cooking will be pleased to hear that one magical use of caraway is as an agent to promote love and to ensure fidelity in love. Caraway and apple are a traditional combination, even Shakespeare mentions the offer of “a pippin and a dish of caraways” in *Henry IV*. Too much apple may tend the ferment to mush, and be careful with the mustard seeds as well – mustard has a strong taste that only becomes stronger with fermentation.

### **Classic East European sauerkraut**

1000 g shredded cabbage

11 g salt

7 juniper berries, crushed.

½ an apple, diced (optional)

Leaves of a small sprig of rosemary (optional)



Like caraway, juniper guards against mould, and is a synergistic herbal remedy with specific action as a diuretic, stomachic, and calmative. Like caraway as well, it is particularly effective against flatulence. We can see a common thread here of course – the two classic European spice additions both help digestion, ease flatulence, guard against mould, and have synergistic properties. We are safe to assume this is no accident. In fact, when we look into the common herbs and spices traditionally used to flavour our food, we find well documented medicinal benefits stemming from all of them. Magically, juniper can be used to focus intent or help achieve desired outcomes, and to remove barriers to higher consciousness.

### **Croatian sour cabbage (kiseli kupus)**

12 whole cabbages

2 cups of salt

1 head of garlic, cloves peeled but whole

1 horseradish root, diced

2 fresh red capsicums, cut into thin strips

7 dried whole red capsicums

7 bay leaves

These are whole cabbage heads, fermented for six weeks in a large crock or barrel. The recipe is adapted from “The Best of Croatian Cooking”, by Liliana Pavicic and Gordana Pirker-Mosher.

Remove the outer cabbage leaves, reserving all that are undamaged and unyellowed. Cut the core out of the cabbages, and fill each with salt. Lay 3 or 4 cabbages, cored side up, in the bottom of the crock, cover with a little of the

spices, and add layers until all the ingredients are used. Cover with the reserved outer cabbage leaves, then a fine weave cloth (muslin or linen) and fill the crock or barrel with water. Cover the whole thing with a board or food safe plate, and place sufficient weight on top of this to prevent the cabbages rising up during the fermentation process. Place a lid on the crock, a large, water moat crock would be the best choice of vessel. Let ferment for at least six weeks.

### **Hungarian sauerkraut**

“For the worm that lives in a horseradish root, all the world is horseradish” – Hungarian Yiddish proverb



The origin and exact recipe of Europe's first alcohol-based perfume are obscure, but the essence known as 'Hungary Water' most definitely featured rosemary. It seems likely that this 14<sup>th</sup> century concoction was devised as a response to the Black Death that ravaged Europe from 1346 – 1350, as punters were advised to not only wear it as perfume, but also to bathe in it, and drink it. As well as its well known anti-microbial properties, rosemary steeped water was used as a facial wash by the Queens of Hungary to reduce the ravages of age, and a rinse of rosemary tea will reduce and reverse that affliction known as greying of the hair in many instances. Regular culinary doses have a positive effect on memory and cognitive function, as Shakespeare's Ophelia confirms: "There's rosemary, that's for remembrance" (Hamlet, act 4, scene 5), and this quality is traditionally extended to include remembrance or fidelity in love.

On the other hand, we often have to travel a ways in the modern world before finding someone who loves the horseradish. This hot but humble root however is enjoying something of a renaissance of late, and there is good reason for that. The glucosinolates in cruciferous vegetables are known to increase human resistance to cancer formation and proliferation, and pound for pound the horseradish root is 10 times more potent than broccoli in this respect. On top of that, Russian researchers have discovered that horseradish extract has the ability to protect us from the mutagenic effects of environmental toxins. As a general antioxidant, horseradish is impressive too, strengthening the immune system, supercharging production and activity of white blood cells, and delivering a high dose of vitamin C to assist the body's action against free radicals. Antibiotic compounds in horseradish concentrate in the urine, making this root a useful aid in the treatment of urinary tract infections. It also contains enzymes that prevent toxins accumulating in the bladder, and its stimulating action on blood capillaries is a useful adjunct for resolving issues of water retention and erectile dysfunction. Horseradish is a good source of folate, B6, niacin, sodium, magnesium, potassium and zinc, and is used internally and as a poultice to treat respiratory tract infections and ailments. But whatever you do, don't feed it to your horse – it doesn't sit well with them.



1200 g shredded drumhead cabbage

300 g grated horseradish root

Leaves from a 7 inch sprig of rosemary

1 tsp smoked paprika (optional)

17 g salt

The usual sauerkraut making process follows – massage the salt into the ingredients well until a handful lifted triumphantly into the air and squeezed results in a good expression of brine. Pack into your jars, and leave in anaerobic conditions for 6 weeks minimum. The resulting kraut will have a good strong bite, will help clear congestion, will give you a greater protection against cancer than plain kraut, and will assist general bodily health through elevated antioxidant activity, potent natural antimicrobial action, and the natural synergy of rosemary and horseradish.

### **Aussie Kraut**

This kraut is a super immune booster, with natural antibacterial and antiviral protection from the lemon myrtle, garlic and ginger.

1 large green or red cabbage, shredded

7 lemon myrtle leaves, veins removed, finely chopped

2 thumbs of ginger, skin on, grated or finely chopped

6 cloves of Italian garlic, finely chopped (optional)

½ tsp caraway seed

Salt



This is my signature sauerkraut, and the one I make when I give sauerkraut making demonstrations at festivals, farmer's markets, workplaces and institutions. It also happens to be my wife's favourite, and since we used diet and fermented foods to halt and reverse her multiple sclerosis, I make sure the fridge is well-stocked with this beauty. We all know the drill by now – chop, salt, pack and wait.

## **A word on using natural antibacterial foods in fermentation**

How is it that natural antibiotics appear to kill pathogenic bacteria while leaving probiotic bacteria intact? How is it that we can initiate and complete a successful ferment by including ingredients with known potent antimicrobial action? Garlic is the most widely studied of these, and what has been found is that garlic, oregano, lemon myrtle, Dorrigo pepper, and lemon aspen (and we may assume most natural antibiotics that appear to have a selective bias) does have some inhibitory action on lactic acid bacteria, but this is small compared to its action against pathogens. In a ferment, when we set the ideal environment for lactobacillic proliferation, this slight inhibitory action is eventually overcome by rapid growth of our target bacteria. Meanwhile, pathogens are outcompeted even more effectively. When we deliver natural antibiotics via our ferments, we enter the realm of true functional food – the sauerkraut immediately above provides not only probiotics and natural antibiotics that affect pathogenic bacteria far more efficiently than they do probiotic bacteria, the fibre content of cabbage and the ginger skins are good prebiotics too. Lemon myrtle not only imparts a subtle lemon taste (due to the presence of the terpene limonene), but it is one of the few substances that can kill MRSA (golden staph). Most natural antibiotics also inhibit viral and fungal growth as well, and garlic in particular has been shown to be effective against *Candida* overgrowth. Garlic, ginger, caraway and lemon myrtle are all recognised immune system boosting and anti-inflammatory foods, which offers a natural support to the anti-pathogen actions they bring to our foods, particularly where there is a history of a compromised gut.

On top of all the internal benefits to be derived from eating this delicious, functional food ferment, the juice of this sauerkraut may be used topically to combat skin conditions such as school sores (MRSA infection) and ringworm. A reduced solution of boiled lemon myrtle leaves, or a 1% solution of the essential oil are also effective topically against school sores, ringworm, and the viral skin condition molluscum contagiosum.

## **Initial cleanse stages 1 and 2**

The first thing to do when looking to bring the body back into balance is to undertake a detox or cleanse. These can be harsh or gentle, like this one here. Liquid only vegetable broth, then steamed vegetables are the best foods for a cleanse that also seeks to restore balance to the microbiota of the gut. For example, this is the initial cleanse I recommend to my clients when dealing with overgrowth of *Candida albicans*.

### **Quick overview of the process**

- Duration from 3 to 8 days
- Uses non-starchy vegetables simply prepared
- Avoids alcohol, sugars and carbs
- Includes protein as needed
- Drink plenty of water
- Pau d'arco tea will assist
- Turmeric chai will assist
- Diatomaceous earth (or bentonite, or zeolite) will assist

### **Vegetable cleanse 1 – for 1 to 2 days**

This is a total liquid period, but is only for two days. I recommend making a big pot of organic vegetable broth concentrating on leafy greens of all kinds, celery, fennel, onion (omit if you like), garlic, turmeric, a little black pepper and herbs, especially oregano and thyme. If you have any lemon myrtle leaves, toss in a few of them too. In particular, leaves from the cruciferous family such as radish leaf or turnip leaf added will contribute much in the way of anti-inflammatory action, and anti-inflammatory foods should be utilised after the

cleansing period. For this and any other recipe soup you'd like to make, always start by gently heating the turmeric and black pepper in a little coconut oil before adding the other ingredients. Simmer well until the liquid is dark, then drain off all the liquid and refrigerate. Throughout the day, warm up small batches of the broth and drink it. Ensure you also drink lots of water during the day to assist the elimination of toxins. During the cleanse, because there is no sugar and minimal carbs, any candida or other pathogenic organism biofilm will be digested by the organisms as they seek the sugar they need, leaving them vulnerable to the food medicines and supplements that will decrease their numbers, and so restore balance.

If you really feel some protein is required, add some tempeh (not tofu please), or miso, sesame seeds, or hemp seeds to the broth, or some mung beans, but you should be OK for 1 or 2 days. Once this brief period is done, vegetables such as broccoli and cauliflower are added, a cup of each of these will give you 7% and 5% respectively of your normal RDI of protein. This broth recipe below includes ingredients to accelerate gut healing, especially when combined with regular sauerkraut eating, which should commence after the initial cleanse period.

Remember – assess your needs during this period to ensure you don't try to do more than the regimen allows. Eat more if you need more, and listen to your body (but not the bacteria and candida produced sugar cravings!)

### **Vegetable Broth for the Gut**

3 L of filtered water

1 red onion, chopped, with skin

½ cup red cabbage, chopped

½ cup shiitake mushrooms, chopped

½ cup spinach or chard, chopped

½ cup kale, chopped

1 stick celery, chopped, and the leaves if you have them

½ handful of chopped carrot leaves (if available)

1 small leek, chopped

20 g wakame, chopped

1 thumb of ginger, chopped

1 thumb of turmeric, chopped

3 cloves Italian garlic (1 Russian), chopped

1 tsp peppercorns

1 tsp ground black pepper

1 tsp salt (or to taste)

2 tbsp coconut oil (or evoo)

Fresh herbs for the broth (oregano, thyme, rosemary, sage, tarragon, dill, etc.)

Fresh herbs to garnish (coriander leaf, parsley, flat parsley, chives, etc.)

Add the coconut oil, turmeric and ground black pepper to a large pot and heat gently for a few minutes without burning or even over browning. Add all the other ingredients, except the garnish herb, simmer for at least an hour, then strain out the solids. Refrigerate, and heat a small amount often through the day, garnishing with fresh herb each time. Obviously use the ingredients you have to hand, and once the cleanse period is over, still make the broths to use as stock in regular meals. My motto (or one of them anyway) is why add water when you can add stock?

## **Vegetable cleanse 2 – for 3 to 6 days**

This stage relies on steamed, non-starchy vegetables, with a bitter green salad once a day if desired. Vegetables like carrots, beets, sweet potato, swede, turnip etc. are fairly carbohydrate rich, and since carbs are just sugars in another form, we want to avoid them. Vegetables you will include do contain carbs, but at low levels, and all have a very low glycemic index. Steaming has been shown to be the method of cooking which most preserves the nutritional and nutraceutical values of the food, and a short steam (no more than 5 minutes) is best. Good vegetables to utilise include broccoli, cauliflower, spinach, chard, collard greens, cabbage, celery, fennel, leek, kale, bok choy, snow peas, etc. Once a day, at lunch time preferably, you may have a bitter salad of fresh as possible leaves with a simple coconut oil and apple cider vinegar dressing. As with the first stage, include easily digestible proteins as you feel you need – things like tempeh, miso, or lightly spiced mung beans in a vegetable broth. Most importantly, if you require any food to see you through a particular task, your ability to comfortably and safely complete that task is a greater priority than the cleanse itself, which will not be overly affected should a surprise high-energy task crop up. Another way of saying this is, we have our immediate needs, and our long term goals, sometimes they may conflict, but immediate needs should always take precedence.

It goes without saying that alcohol be avoided during the cleanse and diet/rebalance period. All grains, seeds, carbs, sugars are off limits during the cleanse, and want to be either excluded or minimised during the rebalance diet. Two drinks will greatly help, they will assist clearance of pathogens, and both have multiple other benefits too.

**Pau d'arco**

First, source from a reputable supplier, the inner bark is the medicinal part, but often this is mixed with the outer bark, so reducing the potency. Take 2 tbsp of bark and boil in 2 litres of water. Once boiled, simmer for 20 minutes, then remove from the heat. Let it cool, then strain off the bark. Sip often during the day.

### **Turmeric chai**

1 tbsp fermented turmeric and black pepper, dried

1 tbsp grated ginger root

1 cinnamon stick

5 whole cloves

2 crushed cardamom, pods and seeds

1/4 tsp ground black pepper

1 cup water

1 cup coconut milk

1/2 tsp coconut oil





Add spices to the water and bring to a pre-boil. Simmer for 5 minutes and remove from heat for several minutes. Turn the heat up, put the pot back on the heat and bring to a rolling boil. Take off the heat immediately, then add the coconut milk. Bring slowly to a boil, remove from heat, stir in the oil, strain and serve.

The ginger needs to be fresh, otherwise there is minimal medicinal action, and the antiviral component is lost completely in dried material. Powdered turmeric, however, retains all its power. You won't be able to use fermented turmeric right now, so any powdered or dried or fresh turmeric will do. If using unfermented turmeric, sauté lightly in coconut oil and black pepper, then make the chai as above.

### **Fermented turmeric**

Meanwhile, ferment some turmeric for later.

1 kg grated turmeric root  
1 tbsp grated black pepper  
2 tbsp mature sauerkraut brine  
2 tsp salt

Mix and massage well and pack into a jar. Place a cabbage leaf plug over the top, then some food safe weights. If there is not enough liquid to cover the plug, add brine at the strength 1 tsp salt per 250 mL standard cup of clean water. No chlorine please, chlorine is in the water because it kills bacteria. Once fermented (about 2 weeks), dry, then pack in an airtight jar, and store out of sunlight.

## Some links

Raw food, detox juices, recipes etc.

<https://www.raw-foods-diet-center.com/vegetable-juicing-recipes.html>

The link above takes you to a page with some vegetable juice recipes. Plenty there to give you ideas, and the site also has a page for raw savoury vegetable stews, detox juices, benefits of raw food, etc.

100 most nutrient dense foods with full nutritional and medical info

<http://whfoods.org/foodstoc.php>

This is a page from a website I rate very highly. This not for profit foundation has compiled a list of the world's top 100 nutrient dense foods. Each food has a page where detailed nutritional and medicinal information is given. You can also search individual nutrients to find which foods are highest in them, and there are recipes and tips for cooking that preserve the most in the food.

Hypothyroidism

<https://www.facebook.com/doctor.health/posts/10153582043290590>

My article on hypothyroidism. This links to the post on Dr Mercola's facebook page, which links to the article. I link to Mercola's page first because there is extra info in the comments, but be aware some are from people who are not expert in this area.

Balancing the internal ecosystem

<https://wakeup-world.com/2016/06/17/antibiotics-and-intestinal-health-balancing-our-internal-ecosystem/>

An article written with my wife for Wake up World website giving a quick overview on how to address imbalance in the gut.

#### Antimicrobial resistance

<http://www.greenmedinfo.com/blog/antimicrobial-resistance-looming-medical-apocalypse>

My article for Green Med Info about the problem of antibacterial resistant strains of pathogenic bacteria. Green Med Info is a site I highly recommend for evidence-based natural medicine information.

#### Glyphosate dangers

<http://www.celestialroots.com/agriculturalchemicals.php>

Quick read from my website about the dangers to human and soil health from conventional farming techniques, concentrating on glyphosate, the active ingredient in 'Roundup' and similar products such as Weedmaster Duo.

#### Psychoneuroimmunology

<https://www.facebook.com/notes/celestial-roots/pyroluria-drugs-and-psychoneuroimmunology/1973113176268892/>

From my Celestial Roots facebook page, a discussion centring on pyroluria, but looking also at the importance of gut health for mental and emotional health.

#### My facebook pages

<https://www.facebook.com/tom.rothsey>

<https://www.facebook.com/celestialroots>

**You may consider also buying either or both of my books**

[Calming and Repopulating the Gut \(USD5.00 on Gumroad secure platform\)](#)

<https://gumroad.com/l/RsLZ>

“Modern life results in dysfunction of the gut. This information-packed mini book presents an original, unique, and tested protocol for calming, healing, and repopulating the gut based on the model of the colonisation of the infant gut. This natural approach addresses destruction of biofilms and removal of pathogenic bacteria, and explains how to repopulate the gut in the way that most resonates with the natural acquisition of probiotic bacteria in the human animal.

Contents of the book, which also contains colour photographs and two sample elimination diet tables.

1. What is fermentation? - A quick overview of fermentation
2. The ecology of fermentation - Ecosystems of the lactic acid vegetable ferment and the human gut are discussed
3. Probiotics - Probiotics, prebiotics, and metabiotics
4. Inflammation and resetting the gut - we look at the importance of inflammation in human disease, and introduce the concept of "resetting" the compromised gut
5. Calming the gut - trigger food elimination and other issues surrounding diet and reduction of inflammation
6. Starving out pathogenic and non-probiotic bacteria - to repopulate the gut, first we must clear it of pathogens that have co-opted probiotic bacteria niches

7. Natural antibiotics - man made antibiotics predispose us to gut dysbiosis by favouring pathogens. Natural antibiotics work differently. Find out how here

8. Healing the gut

9. Vegan gut healing

10. Gut repopulation protocol - this protocol of my own devising utilises the similarity between bacterial succession within a sauerkraut ferment and the natural acquisition of probiotic bacteria in the new born human

11. Replenish the gut

12. Final word - a final word, the very final word of which is 'love'”

[Vegetable Fermentation \(USD7.50 on Gumroad secure platform\)](#)

<https://gumroad.com/l/bgbrL>

“This 108 page book not only gives details on how to ferment vegetables, what equipment to use, and the recipes you will need to get started, it also covers everything you need to know if using fermented foods and functional foods for their healing or preventative actions. Issues such as mould, goitrogens, glutamate, histamine and agricultural chemicals are dealt with, the book has beautiful set piece and step-by-step photographs, and is fully referenced.

Contents

Introduction

Fermentation 101

Equipment

Sauerkraut preamble

Why sauerkraut?

Vitamin B12

Vitamin K2

Bacteria, neurotransmitters, and mental health

Making sauerkraut

The perfect cabbage

The problem with agricultural chemicals

Salt

Lactobacillic fermentation of cabbage

Recipes

Basic sauerkraut

Classic German sauerkraut

Classic East European sauerkraut

Cortido, or Latin American sauerkraut

Russian sauerkraut (kisla kapoosta)

Suan Cai

Croatian sour cabbage (kiseli kupus)

Hungarian sauerkraut

Sauerkraut with red cabbage, spring onions, and kale

Aussie kraut – lemon myrtle, garlic and ginger

A word on using natural antibacterial foods in fermentation

Traditional kimchi

Tongbaechu kimchi

Hobak kimchi

Yellow kimchi

White kimchi, Thai-style

Carrot, green mango and ginger

Onion, turmeric and yellow mustard seed

Kabu no sokuseki-zuke

Sauerruben

Classic sauerruben

Classic thick sauerruben

Kisla repa - Slovenian sour turnip

Fermented cauliflower

The trouble with mould

Goitrogens

Histamine

Glutamate

Colonisation of the newborn (neonate) gut

Brine

A final word

References

Donation”

## **In praise of dirt**

We are big fans of earth-based assistance in our home. We personally use diatomaceous earth because it is inexpensive, and the high silica to aluminium ratio gives DE a high Al adsorption potential, so it will assist removal of excess Al from the body. During the cleanse, any one of the earths will assist with the removal of toxins, and all do good things for the hair, nails and skin too! We take it in clean water, starting at 1 tsp/day, then gradually working up to 1 tbsp/day.

<https://www.facebook.com/photo.php?fbid=10156551167559880>

## **A Final Word**

Remember that all is frequency and vibration, and the highest states of consciousness require high vibrational body, mind, and spirit. Try to be pure of thought, word and deed. But most importantly, cultivate pure, ego-free self-love. If we don't love ourselves, then our love for others can only be but a pale shadow of what it could be.

magic is the intelligence of love