

Cancer - what to eat to slow and reverse cancer growth

Credit: This is based on the ideas of Dr Thomas Seyfried

<https://templetonwellness.com/articles/thomas-seyfried-the-diet-that-starves-cancer/>

Strategy

The overall strategy is:

- A- Starve cancer of sugar (to prevent and start to treat)
- B- Avoid growth promoting foods: milk proteins – so the only safe dairy is butter
- C- Switch on autophagy = this gobbles up cancer cells and is switched on after 16 hours of fasting.
- D- Starve cancer of protein (an amino acid glutamine can be used by “mature” cancer cells as a fuel)

A - Starve cancer of sugar (to prevent and start to treat)

Cancer cells initially can only fuel themselves with sugar. To PREVENT cancer the key point is a low carbohydrate diet - this is a PK diet. See

https://drmyhill.co.uk/wiki/The_Paleo_Ketogenic_Diet_-_a_diet_which_we_all_should_follow

For many, a meat, fish and eggs heavy diet works very well - being satisfying, easy and sustainable. See https://drmyhill.co.uk/wiki/The_Carnivore_Diet

We should all consume a low carb and ketogenic diet, most of the time. We can feast occasionally. But if you have cancer then you should not feast at all, as that simply feeds the cancer – and this is not a battle but a war – you have to keep the pressure up!

See section 2.4 of this page for medical studies supporting the use of a ketogenic diet for cancer - https://drmyhill.co.uk/wiki/Ketogenic_Diet_-_Medical_Papers

Further ways to reduce blood sugar, and thus starves the cancer:

1. Exercise. This immediately drops blood sugar levels. The best time to exercise is in the morning when blood sugar levels naturally rise.
2. AND try to avoid and reduce all forms of stress. This is because stress increases stress hormones and that stimulates glucose release from glycogen in the liver and muscles. When glycogen stores are depleted stress hormones stimulate gluconeogenesis (ie sugar production from protein), and this increases blood sugar levels and so feeds cancer cells.

To make sure that you have done the regimes sufficiently well you need to test both blood sugar levels AND ketones – The Glucose Ketone Index (GKI) is a key parameter Seyfried uses to measure the balance between glucose and ketones. A lower GKI is associated with better metabolic control and improved cancer outcomes.

This index is calculated by dividing the blood glucose level (in mmol/L) by the blood ketone level (in mmol/L). Ideally, a GKI value of two parts glucose to 1 parts ketones is aimed for, which is ideal. So:

- if you have a blood glucose of 4mmols/l then the ketones need to lie between 2 and 4mmols/l
- if you have a blood glucose of 5mmol/l then the ketones need to lie between 2.5 and 5mmols/l

It will usually be a battle to increase ketone levels.

How to increase your ketones:

Consume medium chain triglycerides such as MCT oil (or MCT powder). MCTs are naturally present in coconut oil, butter and meat fats. They are also the perfect fuel for mitochondria, and so these afford an energy boost especially if you find you are becoming fatigued with a strict ketogenic diet. They require no digestion in the gut, are well absorbed and go straight to the liver where ketones are readily synthesised to provide energy. Use MCT oil (carbon 8 and 10).

The best ways to consume these are:

- In the morning: "Bullet proof" coffee – add 1-2 dessertspoons of MCT oil and/or butter and/or coconut oil to coffee. This does not break a fast!
- Drizzle MCT oil over green vegetables or a PK cracker
- Use MCT oil in salad dressing

Test to make sure that you are battling effectively

The bare minimum is a glucose AND ketone monitor of blood levels.

You need a Bluetooth Glucose & Ketone Testing Kit (mmol/L)

See

[https://www.amazon.co.uk/Keto-Mojo-GKI-Bluetooth-Glucose-Testing-Solutions/dp/B084P6ZDTG/ref=sr_1_9?](https://www.amazon.co.uk/Keto-Mojo-GKI-Bluetooth-Glucose-Testing-Solutions/dp/B084P6ZDTG/ref=sr_1_9?_q=)

In the early days, continuous glucose monitoring is very helpful because we are all different. For example, allergy reactions to food may spike blood sugar, you can see how much exercise you need to do to drop your blood sugar, you can see the effects of stress on your glucose levels and the effect of relaxation techniques. Abbot Freestyle continuous monitoring kits are very useful here -

See

[https://www.amazon.co.uk/2_Abbott-Freestyle-Sensor-diabetes-monitoring/dp/B0FCYD1LWZ/ref=sr_1_6_pp?](https://www.amazon.co.uk/2_Abbott-Freestyle-Sensor-diabetes-monitoring/dp/B0FCYD1LWZ/ref=sr_1_6_pp?_q=)

B- Avoid growth promoting foods: milk proteins – so the only safe dairy is butter

Insulin is also growth promoting - so all the above and below is additionally helpful because insulin levels fall on a ketogenic diet with fasting.

See also https://www.drmyhill.co.uk/wiki/The_Paleo_Ketogenic_Diet_-_PK_Dairy

C - Switch on autophagy (self-eating)

This is the mechanism by which the immune system kills cancer cells and mops up the mess that this creates. Autophagy is switched on after 16 hours of fasting.

Fasting requires much self-discipline - so do get motivated by watching some videos on You Tube! Dr Mindy Peltz is always inspiring - see

<https://www.youtube.com/@DrMindyPelz/search?query=keto%20snacks>

So I suggest:

- Time restrict eating every day. The best meal to skip is breakfast because there is a natural spike of sugar in the morning due to stress hormones (adrenalin and cortisol) that wake us up. Consume all food within a 6-hour window eg lunch at 12.30 midday, with supper at 6pm (so supper is finished by 6.30). This gives 2 hours every day of autophagy.
- Once a week also skip lunch. This affords 7-8 hours of autophagy – between breakfast and supper. If you can do this daily so much the better, but some people cannot maintain their weight on one meal a day
- Dr Mindy Peltz reckons that there are some keto snacks that do not break a fast – they must have less than 200Kcals - she recommends either a cup of bone broth OR one hardboiled egg OR half an avocado.
- THEN do longer fasts – this very much depends on if your cancer is progressing or is in check. This is where tumour markers are so helpful because these tell us if you are winning or losing the war

What happens and when

Fasting for		Why is this good?
4-8hours	blood sugar falls	Sugar feeds cancer cells
	insulin levels fall	Insulin is growth promoting to cancer cells
12 hours	Human growth hormone (HGH) spikes	This builds muscle and regenerates cells
16 hours	Fat burning really takes off	However, if you are already keto adapted you will be burning fat most of the time
		Brain function improves (taking extra MCT oil often helpful)
16 hours	Autophagy starts	Gobbles up cancer cells AND gobbles up dead tissue together with old useless immune cells
		Cells detoxify and repair Improved immune function Cancer prevention
24 hours	Gut stem cells regenerate	So, you start to get a new gut lining
	GABA and dopamine spike	The “happy” neurotransmitters
	Healing and repair occur as.....	 inflammation is reduced

36 hours	Autophagy increases 300%	Helps body to detoxify and kill off cancer cells and dead tissue. Think of this as a “Spring clean”
48 hours	HGH increases 500%	You build more muscle, repair your gut and immune system
54 hours	Insulin sensitivity increases	So, you can better control your blood sugar without getting the growth promoting effects of insulin
72 hours	Autophagy peaks	I suggest all do a 72 hour fast in Spring Summer Autumn and Winter This makes one realise that the greatest joy in life is food! Yes, it is not easy but there is a great sense of achievement and self-esteem once done
	Stimulation of immune stem cells, musculoskeletal stem cells	Accelerated healing with brand new “de novo” cells

D - Starve cancer of protein (an amino acid glutamine can be used by “mature” cancer cells as a fuel)

However, with ESTABLISHED cancer, as cancer cells “mature” they can switch to fuelling themselves with glutamine (an amino acid from protein) and glutamate. This is called anaplerosis.

See ‘Targeting glutamine metabolism as a therapeutic strategy for cancer’
<https://www.nature.com/articles/s12276-023-00971-9>

The problem is that the immune system also needs glutamine – so cutting out protein altogether is not an option! We do need some. The problem is that no -one knows what that balance is, so I suggest:

- Limit “unami” foods that are high in glutamate such as seaweeds, fermented soya, aged cheeses, kimchi, seafood, cured meats, tomato, marmite, oyster sauce
- Eat a “normal” amount of protein daily. The only really safe foods are fat and fibre (but some protein is essential). Remember fat is your friend, fibre is your friend.

Protein – not too little, not too much – protein leverage

The body cannot store protein, but daily protein is essential for survival. We have a protein appetite which will make us crave food until that appetite has been satisfied. If you are eating a low protein diet, you will be driven to eat more food. In that process you overeat carbs and fat and so expect to gain weight. Conversely, eat a high protein diet and you tend to undereat and lose weight. Get your protein intake right to help maintain a normal weight. (Note a high protein diet is not desirable as

the body then has to deal with the toxic consequences of too much protein! Listen to your body and appetite - it will tell you how much you need!)

How to calculate your protein requirement

	Worked example -- me
FIRST work out your daily energy expenditure as above	Use the Mifflin-St Jeor Equation - put your vital statistics into - https://www.calculator.net/bmr-calculator.html and that will get your basal metabolic rate (how much energy you use daily)
	My daily energy expenditure is 1,843 kcs
Then divide by 4 to give your daily protein need in grams (this need includes recycled protein from self PLUS protein you eat)	1,843 divided by 4 is 461
Then adjust for age protein requirements as % of daily energy requirement Baby to adolescent 15% Young adult to age 30 18% Pregnancy and breast feeding 20% Thirties 17% Age 40-60 15% 60-65 18% Above age 65 20%	I am 67 so I need my diet to be 20% protein $461 \times 20/100 = 92$ So, I need 92 grams of protein a day

What and how much to eat to satisfy your protein requirement

Food	Protein content in gms per 100gms	On the plate looks like.....approx	What do I eat	Protein content approx
Eggs	13	Two eggs	Lunch 2 eggs	13
Beef	26	A medium beef burger		
Pork	31	Small pork chop	Supper main course – pork chop With lots of fat on it!	31 - 50
Bacon	Up to 39 depending on how fat! One slice 8 grams			
Lamb	26	One lamb chop		
Chicken, duck	20	Whole breast or whole leg Eat the skin of the fowl – this is rich in fat		
Fish	29	A good chunk!		

Prawns	25	A prawn 'cocktail' starter	Supper starters – pate or fish -	25 -30
Brazil nuts	15		Snacks	10-15
				My total 80-95

Once you have things roughly balanced out your body will do the rest - appetite and desire for food is remarkably accurate once you have addiction out of the way! Interestingly before I did this calculation, the above was what I ate – so my brain and body had worked it out already.

AND consume glutamine blockers such as basil, quercetin, ginger, berberine, bay leaves, green tea and turmeric. See 'Prevail over Cancer' website - https://www.prevailovercancer.com/blog/herbs-for-l-glutamine-and-cancer#_edn13

Drink these as teas and purchase as capsules – I suggest consuming these with protein meals. Use basil pesto from The Real Olive company – delicious! See <https://therealolivecompany.co.uk/>

So, what to eat?

Fat is key. Fat ticks all the boxes by dint of being carbohydrate and protein free. This hard bit is consuming sufficient fat to satisfy and prevent weight loss. Many find that as they increase fat intake then get diarrhoea.

This can be mitigated by taking pancreatic enzymes such as polyzyme forte 1-3 with food - see <https://www.salesatdrmyhill.co.uk/polyzyme-90-capsules-52-p.asp>

Some also are helped by bile acids 1 with a meal - see

<https://www.salesatdrmyhill.co.uk/bile-advanced-formula-60-caps-49-p.asp>

But the pancreas and liver do step up to the mark so you should not need these long term

If you are losing weight then have more MCT oil – this is calorie rich, requires no digestion, passes straight to the liver and instantly generates those lovely ketones.

THREE great recipes that all must make:

1. PK bread or crackers - -this is 2% carbs and a staple for meals as things can be spread on it.

How to make PK buns or flat bread or crackers in minutes.

Please forgive the tiresome detail, but you must succeed with your first batch because then you will be encouraged to carry on. I can now put this recipe together in 5 minutes (proper minutes that is – not the “and this is what I did earlier” TV version!). You can see me preparing this on You Tube

Equipment needed:

- Weighing scales, measuring jug, Nutri bullet (or similar effective grinding machine - do not attempt to do this with a pestle and mortar – I know – I have tried and failed).
- Cup in which to weigh the linseed.
- Mixing bowl
- Wooden spoon

- Greased baking sheet (for buns and flat breads). These days I always make flatbreads as they cook reliably well.
- One teaspoon of sunshine salt
- Dollop of coconut oil or lard
- Cooking oven that gets to 220 degrees
- Paper towels
- Wire rack for cooling

Actions	Notes
Take 250gms whole linseed	You could purchase in 250gm packs and that saves weighing it! Use golden grains not brown grains. Do not buy linseed that has already been ground because the grinding may not be fine enough, it may have absorbed some water already and this may stop it adhering and rising. If you purchase linseed in bulk, then you must weigh it really accurately in order to get the proportion of water spot on!
Pour half the linseed into the Nutri bullet together with one rounded teaspoon of sunshine salt. Grind into a fine flour	Grind until the machine starts to groan and sweat with the effort! You need a really fine flour to make a good loaf. This takes about 30 seconds. The finer you can grind the flour the better it sticks together and the better the bread or crackers. I have a small Nutri-bullet, so I do this in 2 batches or the blades "hollow out" the mix so that half does not circulate and grind fully AND you risk burning out the motor (and I have!)
Pour the ground flour into a mixing bowl	
Repeat the above with the second half of seeds and add to mixing bowl.	Whilst this is grinding, measure the water you need
Add seeds for flavour	My daughters complained the bread tasted fishy, so I now add a generous teaspoonful of caraway or cumin or fennel seeds
	If you wish to make a whole loaf, Sarah White advises a more reliable result by adding in $\frac{3}{4}$ tsp of baking powder and 1 $\frac{1}{2}$ dessertspoons of psyllium husks. Then bake at 200 degrees C fan oven for 60-70 mins (it's quite oven specific).
Add in exactly 270ml water (not a typo – 270 it is!). Chuck it all in at once, do not dribble it in. Stir it with a wooden spoon. Keep stirring. It will thicken over the course of 30 seconds. Keep stirring until it becomes smooth and holds together in a lump	The amount of water is critical! When it comes to cooking, I am a natural chucker in of ingredients and hope for the best. But in this case – you must measure! Initially this will look as if you have added far too much water! Keep stirring.

Wait 15 mins to allow the ground linseed to fully absorb the water	I often make up the dough the night before so I can have fresh bread for breakfast
Use your fingers to scoop up a dollop of coconut oil or lard. Use this to grease the baking tin.	Your hands will be covered in fat which means you can pick up your dough without it sticking your hands.
Use your hands to shape the dough until it has a smooth surface.	Spend about 30 seconds doing this. Do not be tempted to knead or fold the loaf or you introduce layers of fat which stop it sticking to itself. This helps prevent the flat bread cracking as it rises and cooks (although I have to say it does not matter two hoots if it does. It just looks more professional if it does not!)
FOR THE LOAF - Drop it into a small "one pound of bread " sized greased baking tin Put into the hot oven – at least 220°C (430°F) – for 60 minutes I rarely make loaves these days	Set a timer or you will forget – I always do! I do not think the temperature is too critical – but it must be hot enough to turn the water in the loaf into steam because this is what raises it. I cook on a wood-fired stove and the oven temperature is tricky to be precise. That does not seem to matter so long as it is really hot. Indeed, I like the flavour of a slightly scorched crust.
FOR THE BUNS - Mould the dough into the shape of a rolling pin, then use a sharp knife to cut 12 discs Place into a greased baking tray and cook in over at 220°C (430°F) for 40 mins	Ditto above. These buns cook reliably well. Yes, you can make a whole loaf but so many have had disasters either with a soggy middle or a bucket handle hole in the top of the loaf
FOR FLAT BREADS – roll the dough out between two sheets of greasy grease proof paper until about 1/2 inch thick, peel off the top paper, then flop them into a greasy tin and peel off the second paper	I love to cook these in a pan with the juices and fat from a roast joint or bacon rashers. Cook for 15-20 mins, then turn over when stiff and cook for a further 5-10 mins until brown and sound hollow to the tap. Never fails to cook well. I reuse the grease proof paper several times

You can see me make a loaf and buns at these YouTube links:

LOAF – <https://www.youtube.com/watch?v=bjwjUXxELb0>

BUNS -

https://www.youtube.com/watch?v=YKP13aWYw_8&list=PLJGxkcH41f8m9HwHIDor56bpd4E44fynS&index=4

2. Energy bars – these are a staple and very easy to make. I consider these an essential for a cancer diet because they are so rich in calories:
Coconut oil, possibly combined with coco butter (a bit expensive). Melt this and add in ground up low carb seeds and nuts such as linseed, Brazil nuts, macadamias, almonds, desiccated coconut and sunshine salt to taste

Sweeten with allulose. This is a sugar that tastes like sugar but cannot be metabolised by cancer cells AND it inhibits glucose uptake by cancer cells - a great

double whammy. See 'D-Allose Inhibits Cancer Cell Growth by Reducing GLUT1 Expression' https://www.jstage.jst.go.jp/article/tjem/238/2/238_131/html/-char/en

You can buy this from iherb - see

<https://uk.iherb.com/pr/wholesome-sweeteners-allulose-zero-calorie-sweetener-12-oz-340-g/104197?>

Mix ingredients, pour into flat bowl and refrigerate- - eat direct from the fridge

3. Pork scratchings from your pork joint – buy the fattiest joint you can find!

The problem here is that pork skin needs a hot oven to crackle, but the meat needs a cool oven to stop it drying out. Here is how to make the perfect roast.

First cut all the skin off the joint with a good sharp knife. Boil the skin in water for at least 3 hours until it is soft and friable. Pour the water and cooked skin into a colander - save the water for your bone broth. Then tip the cooked skin onto a tray, salt it with sunshine salt and roast for 60 mins at 200 degrees. Even the toughest skin never fails to produce delicious, tender BUT crunchy crackling!

Put the skinned joint into a roasting pot, cover with salt and greaseproof paper and roast for about 1-2 hours at 200 degrees depending on the size of the joint. Then leave it in a warm place, covered with a cloth to keep it warm – it goes on cooking and tenderising – for a further 1-2 hours.

Staple foods, as from above

- Lardo – this is a delicious salami that melts on the tongue
https://www.amazon.co.uk/Spicy-Delicate-Italian-Salumi-Pasini/dp/B0196KLPZl/ref=sr_1_5?
- MCT oil – just drink it!
- Hard fats: Lard, Butter
- Bone marrow and brains (my good friend Hannibal Lecter tells us this is delicious)
- Pork scratchings
- Oils: olive oil, nut oils (eg Brazil, walnut) - but these MUST be cold pressed
- Avocado and avocado oil
- Mayonnaise and French dressings (oil, vinegar lemon juice, garlic salt) eg “Hunter and Gather” mayonnaise
- Mushrooms
- Olives and olive pesto (Real Olive Company)
- Cocos - coconut yoghurt – this is pricey, shop around for others.
- Salad stuff: lettuce, tomato, celery, peppers
- Coleslaw with lots of Hunter mayonnaise – crunchy and satisfying
- Green vegetables: cabbage, sprouts, broccoli, kale
- Alliums: Leeks, garlic onions fried in lard or coconut oil
- Linseed crackers – the recipe is exactly the same as for linseed bread, but roll this out as thinly as possible and cook in the oven until crisp. Then you have something on which to spread your butter!
- Low carb nut butters: almond, coconut, macadamia, pecan, hazelnut, Brazil nuts - double check the carb content when you purchase

Typical daily menu

	What	How	Why
On rising	A basic package of supplements	Multivitamin Vitamin D 10,000iu	For good physiological function Vitamin D also blocks glutamine
		Vitamin C 5 grams – dissolve 1 tspn of ascorbic acid in warm water	Vitamin C is anti-cancer Kills all cancer cells
Through the day	Green tea Ginger	Green tea Ginger tea	Blocks glutamine and starve the cancer cells
Breakfast	Bullet proof coffee	Real coffee with generous dollop of butter or MCT oil or coconut oil	Does not break a fast
Mid-morning	Cup of bone broth OR one hardboiled egg OR half an avocado	This is when I have my bone broth	This is a good time to add in MSM powder to the bone broth Possibly a tspn of creatinine to build muscle And pinch of sunshine salt
Lunch	2 boiled eggs Mushrooms and bacon fried in butter Whole avocado with mayonnaise Green salad Linseed bread or crackers and butter	Or tin anchovies, sardines, mackerel Corned beef	
		If tolerated have another tspn of ascorbic acid in warm water	As you starve the cancer cells of sugar, they upgrade the absorption of vitamin C. This “looks” like sugar –

			and this kills the cancer cells
	Turmeric, ginger, green tea, berberine	As a tea or capsules	Further starves cancer cells of glutamate and glutamine blockers AND help to lower blood sugar
Mid-after noon	Energy bars – good chunks of Pork scratchings Coconut flakes Lardo (delicious- - melts on the tongue) Linseed crackers with nut butters Slice of salami or biltong	See recipe above	Not all nuts are low carb!
Supper - starters	Linseed crackers with basil pesto Olives Olive pesto	Use generous dollops of basil pesto on your linseed crackers (2% carb)	Basil blocks glutamine
		Fu:di Norwegian crispbreads are 1.4 % carb	Delicious but pricey
		You may get away with organic oat cakes- I have to say I do not - these are 8% carbs and you can buy these instead of having to make linseed	Check your glucose/ketone reading
Main	Meat or fish or eggs Green vegetables – cabbage Green salad	See amount from above	
Pudding	Berries with coconut cream 100% dark choc eg Montezuma 100% Black - contains 9% carbs, of which 3% is sugar. See https://www.montezumas.co.uk/collections/absolute-black/produ	You could melt this, add in allulose and allow to solidify OR make your own chocolate by mixing	Allulose has no impact on blood sugar or insulin levels, very few calories, does not feed cancer cells –

	cts/100-cocoa-chocolate-bar-ab solute-black	cocoa butter with allulose and a small amount of cocoa powder	a perfect sweetener
Alcohol	No wine beer cider cocktails (all full of sugar and yeast)	Alcohol does not feed cancer directly but is a risk factor for. Many cancers have a yeast driver	Only drink spirits as an occasional treat - -eg gin, ice, lemon and fizzy water is carb free. This is my favourite – I find it less addictive as it is not sweet
Night	Lugol's iodine 15% 3-10 drops in water	Iodine kills cancer cells	Some find that iodine disturbs sleep – if so, then take iodine midday (away from vit C)

Finally use my addiction test for foods – if I can have a small portion and not need more then that food has passed the test. Eg Brazil nuts, almonds, walnuts

BUT give me a bar of 70% choc – and the whole lot disappears! Ditto cashew nuts, peanuts, figs, dates – these turn on the sugar craving and I am away! I do not even stock these foods in my pantry because:

I can resist everything except temptation.

In this world there are only two tragedies. One is not getting what one wants, and the other is getting it.

Oscar Wilde 1854-1900