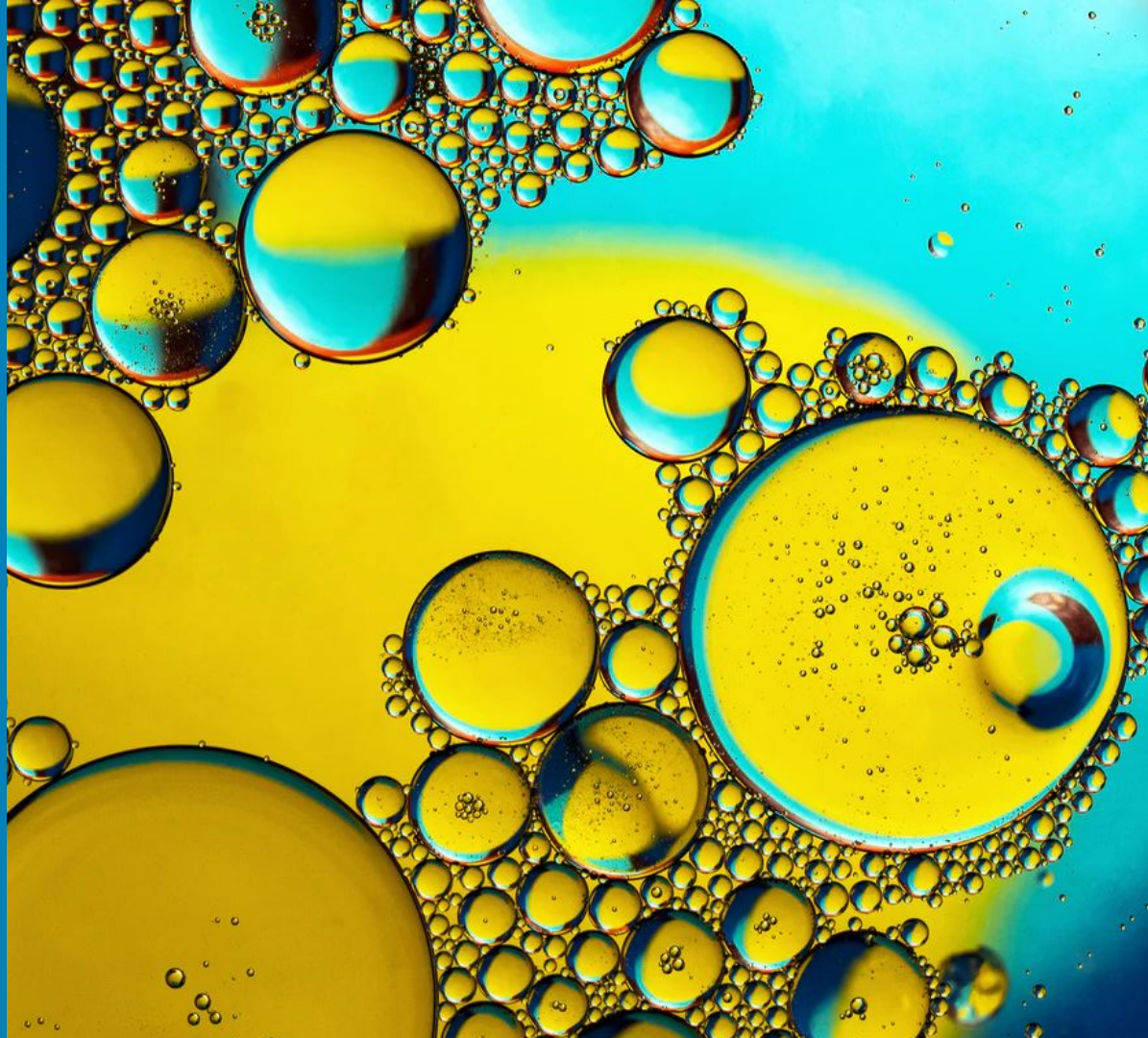


# DECODE

The key to unravel your health & wellness

## OILS & FATS



## INSIGHTS

Long before I ever thought of working in the health & wellness industry, I dreamed of living in Italy, growing old, and spending my days eating fresh pasta all day long!

I was wrapping up this edition of **DECODE** and happened to stumble upon the Netflix show “Fat, Salt, Acid, Heat”. I watched it because it was talking about the very subject I have been researching for a while, fat! Also it featured the chef and food writer Samin Nosrat who began her culinary career at Berkeley's Chez Panisse, a place dear to my heart and right around the corner from where I opened my former restaurant, Mission Heirloom. What I loved most about the episode on fat was the simplicity of how Chef Samin used Italian cuisine to illustrate the very essence of why fat is so important in the kitchen and how it defines different cuisines around the world. Her words truly said it best:

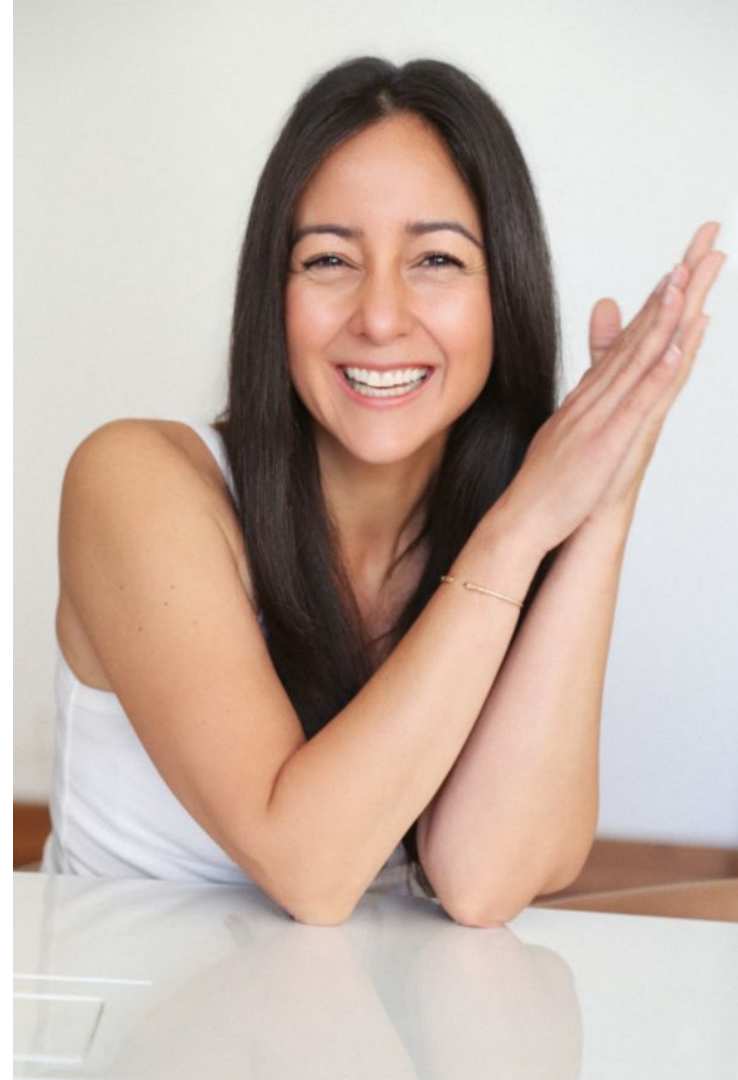
*“It's nothing short of a miracle. Fat is flavor. Fat is texture.  
Fat adds its own unique flavor to a dish”*

*“Italians have perfected the art of using fat to transform  
the simplest ingredients into a great meal.”*

Oh and watching the episode on fat rekindled my dream of growing old in Italy! For someone gluten free like me, realizing that the best kept secret was not gluten but how Italians use fats in their meals rekindled my dream again.

The subject of fats has been one of much debate, confusion, and misinformation that often lacked the data or science. I worry that once the wrong information and perceptions are accepted it is rarely possible to undo them. Our hope is that the facts, science, and fun tips we share with you in this issue will truly change the way you think and feel about oils & fats. If that doesn't convince you, I am sure their flavor will.

**Cheers to healthy feasting on oils & fats!**



## CONTENT

- Match the oil & fats to the cooking temp
- Matching oils & fats in your kitchen with cooking methods
- Cooking methods, temperatures, & typical dishes
- Let's go shopping! - shopping guides
- Recipes



## BONUS

Let's shine the light on oils & fats that deserve a little more attention!



## LET'S NERD OUT...

1

### THE EXTRACTION PROCESS

Refined versus unrefined  
Why do we avoid refined oils?

2

### THE PROPER USE OF OILS & FATS

Oxidation of oils & fats  
Smoking point and composition of oils & fats

3

### SOURCING QUALITY

How to source your oils & fats - key qualities  
Extra virgin olive oil scam

4

### BE STRATEGIC

Simple swaps and strategies to make the best Choices. Dietary requirements, allergies, and sensitivities

# WELCOME TO THE FIRST DAY OF YOUR NEW REWARDING RELATIONSHIP WITH OILS & FATS!

The nutritional benefits of oils & fats  
and their performance in your kitchen is  
mainly determined by:

1. THE EXTRACTION PROCESS
2. THE PROPER USE
3. THE SOURCE AND QUALITY
4. BE STRATEGIC

The key is not just selecting the right product but also  
learning how to use them properly as this can be one of  
the easiest steps you can take to reduce exposure to  
harmful chemicals and greatly impact your health &  
wellness!

Here are our handy references, product  
guides, & recipes just for you!  
Then we can nerd out on oils & fats.





PRINT AND CUT ALONG LINE!

# OILS & FATS SMOKING POINT

## PRINTABLE GUIDE



\*These are refined oils

ALL  
BLACK  
SHEEP

Remember that smoking point can vary depending on the source, brand, and quality. The above provides a guide based on compiled information from various sources including <https://www.masterclass.com/articles/cooking-oils-and-smoke-points-what-to-know-and-how-to-choose#chart-of-oil-smoke-points>, <http://www.healthyealthyandwiser.com.au/cooking-with-oils-know-their-smoke-points/>, <https://thrive-magazine.co.uk/the-smoke-point/>, <https://www.healthline.com/health/health-benefits-cooking-oil-guide#Cooking-oils-Health-benefits-smoke-points-and-best-uses>

ALL  
BLACK  
SHEEP

# MATCHING OILS & FATS IN YOUR KITCHEN WITH COOKING METHODS

## HIGHEST HEAT OILS & FATS 425°F & ABOVE

Use for any high heat such as for deep frying, stir frying, or broiling. Do be careful as some cooking methods such as stir frying in commercial kitchens can reach up to 600°F! Think about what you choose to eat in restaurants and ask questions such as, does the oil they use stand up to the cooking temperatures for the dish?

## MEDIUM TO HIGH HEAT OILS & FAT UP TO 425°F

Use for medium heat to high heat such as for sauteing at higher heat, most baking, and simmering. Air fryers usually reach 360-400°F and do not require the use of oils & fats. However, you don't necessarily need to avoid the oil as it may sometimes help add texture, flavor, and nutrition if you are careful with your oil selection.

## LOW TO MEDIUM HEAT OILS & FATS UP TO 350°F

Use for low to medium heat such as for sauteing (pan frying on stove top reaches 248°F), sauces, or finishing dishes. Cooking in a skillet, most baking and grilling. Use for braising meat and vegetables. Braising is essentially simmering in a small amount of liquid and best results are achieved at temperatures between 330-350°F.

## NO HEAT TO LOW OILS & FATS UP TO 92°F

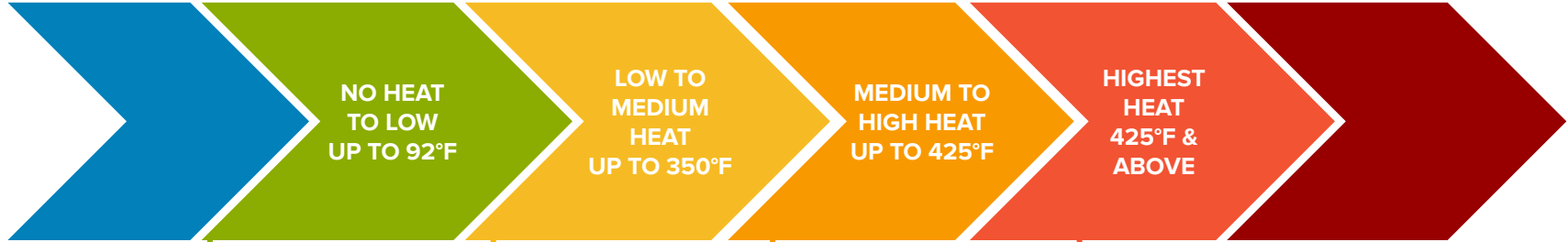
Use without heating for dressings, salad, dips, finishing dishes, and experimenting with fun techniques such as sous-vide. These oils regardless of their smoking points should not be heated as variability in their composition can cause degradation of the oil and destroy their beneficial components such as antioxidants if heated.

## PRINTABLE GUIDE

PRINT AND CUT ALONG LINE!

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BLACK  
SHEEP

# COOKING METHODS, TEMPERATURES, & TYPICAL DISHES



### Raw foods:

- ° Emulsions (dips, salad dressings, mayo)
- ° Spice & herbal oil extractions (mortar & pestle)
- ° Ceviches, fermented & pickled foods (acid cooking)
- ° Sun dried olives
- ° Sprouted nuts
- ° Avocado ice cream
- ° Cold smoked foods
- 92°F Dehydrated foods

- 140°F Sous-vide eggs
- 180°F-190°F Poached eggs
- 185°F Simmered water
- 185°F Blanched greens
- 190°F Slow cooked lamb
- 200°F Confit duck
- 212°F Boiled water
- 220°F Smoked meats
- 325-350°F French fries
- 320°F Caramelized sugar
- 350°F Cakes
- 350°F Grilled eggplant

- 350-400°F Stir fried veggies
- 350-375°F Deep fried chicken
- 350-375°F Battered fried fish

- 425°F Traditionally roasted potatoes
- 450°F-500°F Oven baked pizza
- 600°F Stir fried food (commercial wok)



We dare you to experiment and try cooking at lower temperatures!

We are talking about cooking temperatures being used to cook and not the internal temperature that the food item must reach. Always refer to food safety guidelines to ensure your food reaches appropriate internal cooking temperatures required for food safety, e.g. chicken should reach an internal temperature of 165°F and pork 145°F.

ALL  
BLACK  
SHEEP

## ARE YOU COOKING YET?

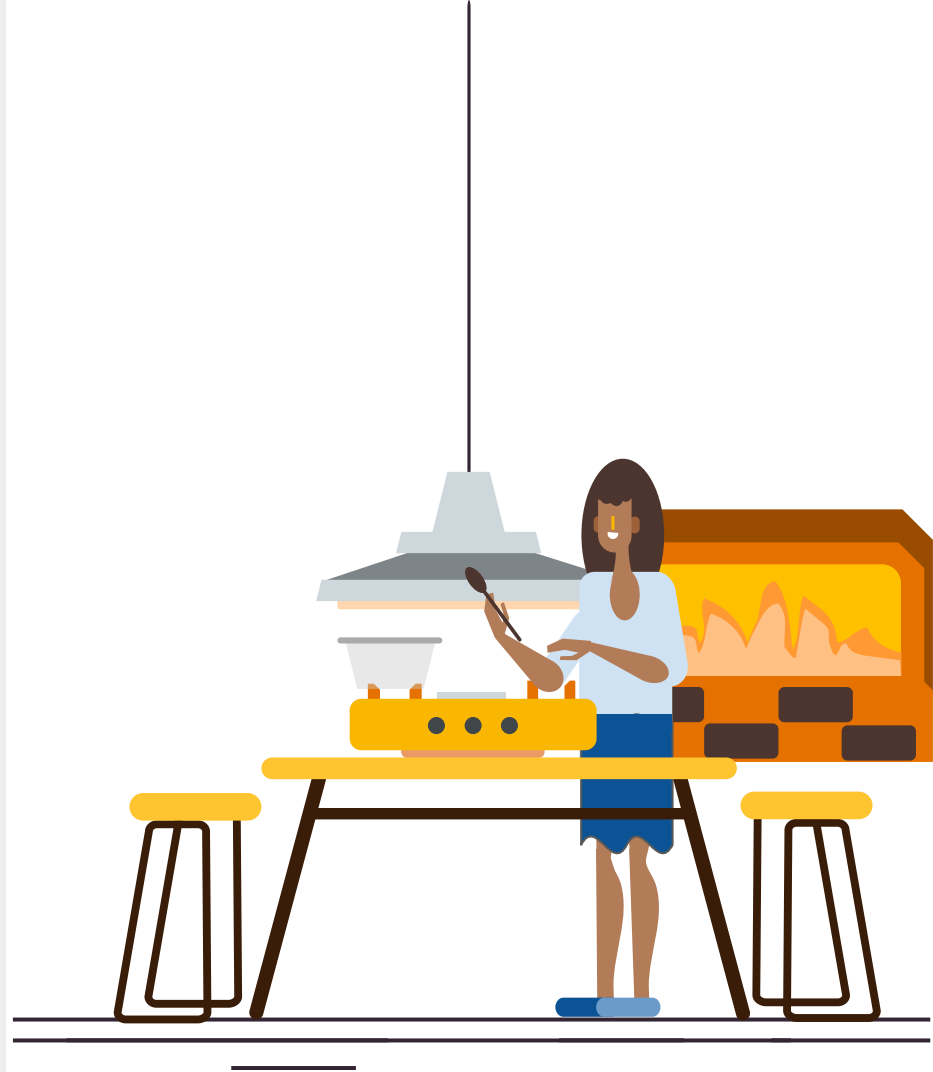
While this edition of **DECODE** solely focuses on oils & fats and not on the health benefits of different cooking methods, we would still like to challenge you to experiment with lower cooking temperatures in your kitchen.

When you use lower cooking temperatures and longer cooking times you can get great results, for example, baking cakes longer at 300°F instead of 350°F for a more moist end result. When you smoke meats at lower temperatures, say at 220°F, for longer times the result is a delicious, tender, and juicy piece of meat. This approach also reduces the risk of overheating and burning your food which can create toxic chemicals.

A good rule of thumb is that when in doubt lower your heat and add some extra time. You can also use flash broiling if you want to add some browning and crunchiness at the end. But watch your dish carefully so you avoid accidentally incinerating your dish!

So what do you do if your oil begins to smoke? Don't worry... just start again by safely discarding the oil (pour it into a container - stainless steel, glass, or ceramic), turn down the heat to let your pan cool down, and add fresh oil. A trick to prevent burning oils is to add it to a preheated pan as it is less likely to get too hot and start to smoke.

Pay attention when you are cooking it will pay off!





LET'S GO SHOPPING!

# 3 KEY COOKING OILS & FATS IN MY KITCHEN

IF I HAD TO CHOOSE ONLY 3 PRODUCTS TO DO IT ALL THAT CAN BE HEATED...

1



## GHEE

When in doubt, I go with ghee for many of my dishes, because it enhances the texture and flavor. The higher smoking point makes it a safe choice for most dishes

2



## SCHMALTZ

I always have an animal rendered fat handy. Chicken fat is my favorite because it has a mild, not imposing flavor that makes it ideal for a variety of dishes and palates

3



## MACADAMIA OIL

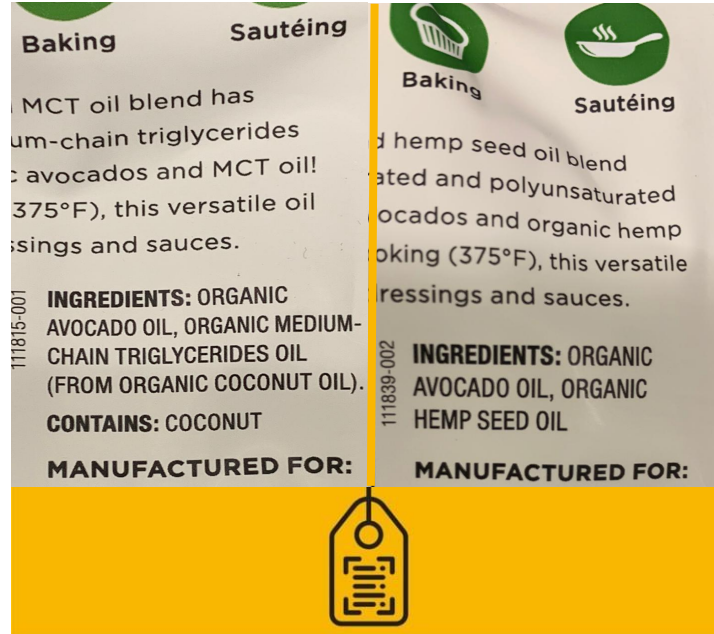
People are currently obsessed with coconut oil (I love it too), but macadamia has recently become my most versatile oil. Flavor blends in with most dishes and its high smoking point makes it one of the safest oils to use



## MIXED OILS ARE TROUBLESOME

### BE CAREFUL AS SOME COMMERCIAL OILS & FATS GET ALTERED AND MIXED

While there are lots of buzz words when it comes to oils & fats, don't fall for it. Even if it says organic, don't go for mixed oils... single ingredient is the way to go!



## #LABELSMATTER

When purchasing oils & fats, remember what we learnt in the sourcing section! **Pure is best.**

When you have a mixture of oils like in the two cases pictured here, we are no longer sure of its actual smoking point and you run the risk of heating an oil to too high. You may also not be aware of hidden refined oils that may have been added to the mix.

# SHOPPING GUIDE - OILS

WALNUT OIL



OSTRO ORGANICS



VIGEAN

HEMP OIL



NUTIVA

FLAXSEED OIL



MAISON ORPHEE

OLIVE OIL



KASANDRINOS



CASTILLO DE CANENA

RED PALM OIL



WILD ORGANICS

COCONUT OIL



NUTIVA

MACADAMIA OIL



MOUNTAIN ROSE

AVOCADO OIL



AVOHASS

# SHOPPING GUIDE - FATS

GHEE



[FOURTH & HEART](#)



[FATWORKS](#)

BUTTER



[VITAL FARMS](#)



[ORGANIC VALLEY](#)

LARD



[FATWORKS](#)

CAMEL FAT



[DESERT FARMS](#)

BISON TALLOW



[EPIC](#)

WILD BOAR FAT



[FATWORKS](#)



Having the right pots & pans for the cooking technique and recipe is another great tool you have in your kitchen to make the best use of your oils & fats and master different types of dishes.

But did you know that your pots and pans can also be a potential source of toxic chemicals? That non-stick coating that is so convenient could be leaching toxic substances into your food!

Want to learn how to make the best choices for your kitchen and avoid toxicity? We did the research and decoded through the myriad of information and products for you.

All you need to know in a quick and easy guide:

Go ahead, grab our edition of  
**ON THE HOUSE on Pots & Pans**

[DOWNLOAD HERE](#)

# RECIPES

Let's showcase your new knowledge of oils & fats!

**WE WANT TO INSPIRE YOU  
TO EXPERIMENT & PLAY WITH  
THESE YUMMY RECIPES**





## DRAGON FRUIT DRESSING

### INGREDIENTS

240g (1 cup) applesauce  
150 ml (1 1/2 bag) frozen Pitaya puree  
50 ml (1/4 cup) juice from jar of pickles  
15 ml (1/4 cup) olive oil or walnut oil  
2g (1/4 tsp.) sea salt

### YIELD

16 oz jar / 450 ml

### PREP TIME

15 minutes

### DIRECTIONS

- Place all ingredients into the blender and blend until smooth.

That is it - you are ready to enjoy!

Pour over any salad to bring a touch of color, amazing flavor, and enjoy a dressing bursting with antioxidants and other powerful nutrients.

You can store this dressing for 2 wks refrigerated in a glass jar with a lid.

### NOTES

I like to make my own applesauce when I have time or buy it from a trusted local farm. If you prefer to buy it ready-made, I like using this biodynamic [applesauce](#) that has a great flavor with no chemicals in it.

If you can't find frozen Pitaya (red dragon fruit) puree at your local store, you can make the puree at home using the fresh fruit or you can use 2 tablespoons of powdered [Pitaya](#) as a substitute.

If you don't have pickles in your pantry you can substitute the pickle juice with juice from sauerkraut or vegetable kvass.

# MAYONNAISE FLIGHT

## INGREDIENTS FOR THE BASES

Each base (x 3 different bases) requires:

1 whole egg + 1 egg yolk

1 tsp. meyer lemon juice

1 cup of a high quality flavorful oil - like olive oil, avocado oil, macadamia, or walnut oil. You can explore different oils per flavor!

Salt to taste

## INGREDIENTS FLAVOR 1

1 tsp. Dijon mustard, or 1/2 tsp. dry mustard powder

## INGREDIENTS FLAVOR 2

2 Tbsp. beet puree

2 Tbsp. orange or purple carrot puree

## INGREDIENTS FLAVOR 3

2 tsps. aji amarillo paste

2 Tbp. mango puree

1 tsp. chopped cilantro

½ tsp. yacon root syrup or honey

## SERVES

4 to 6

## PREP TIME

35 minutes

## DIRECTIONS

- First prepare each of the 3 mayo bases following these instructions each time: Whip the egg and yolk, mustard, and lemon juice with the hand held immersion blender or other equipment options listed. Pulse a few times so it's mixed but not aerated.
- With the blender on, slowly add the oil in a thin stream (if you are using a food processor, the food tube insert will dribble it in for you). If you are using a hand held blender I like to set up the holder attachment to allow me to focus on the pouring of the oil.
- At first it always look like a yellow disaster, keep calm and press on. Soon enough you'll have a creamy emulsion that gets thicker and more delicious the more oil you add. Patience is key!
- Once all the oil is added, scrape the mayonnaise to concentrate it in the center of the bowl.
- While blending in the slower setting, add the additional ingredients to make each of the 3 colorful and flavorful variations. If you have them already premixed, you can slowly fold them in to the mayo base with a spoon, until they are evenly blended.

Drool responsibly! Grab a generous spoon and try it, your brain will love a shot of a healthy fat. I like my food with very little salt, so don't be shy, after tasting it you can always add more salt to meet your personal taste. Enjoy this yummy and colorful treat that is not just delicious but also nutrient rich!



## NOTES

Recipe works with any of these: hand held immersion blender, blender, or food processor.

Store this mayo tightly covered, always in a glass jar, in the refrigerator for up to 4 days if you manage to make it last that long without consuming it all.... We love these so much they never last that long!

**Tip 1** - Never double dip or freeze it. Freezing emulsions will cause them to separate and appear curdled.

**Tip 2** - Zocalo Peru Organic Aji Amarillo Chili Paste uses great ingredients, organic, and it is simply yummy - this is the only one I buy.

# SOUS-VIDE SARDINES

USING UNREFINED, LOW SMOKING POINT OIL

## INGREDIENTS

- 1 lb small, wild caught sardines
- 1 large bottle of organic olive oil
- 1 bunch of tarragon (thyme works great too)
- 1 pinch of salt
- 4 medium, wide mouth mason jars (16 oz jars)
- Lemon juice optional to top them up when serving

## SERVES

2 to 4

## COOK TIME

60 minutes

## PREP TIME

10 minutes

## DIRECTIONS

- Fill a large container with water, then insert your sous-vide circulator and preheat the water to 140°F
- Wash the sardines and pat dry with a paper napkin
- Place the sardines standing in the jars, add the herb branches, sprinkle sea salt, and add any other optional seasoning you might enjoy
- Fill up the jars with olive oil and make sure there are no air bubbles left then close the jars their lids (lids should be a little loose but tight enough so they water does not go into the jars)
- Immerse the jars standing in the preheated water (lids should be above the waterline) and let them sit there to slow cook for 1 hour. After the hour is done, remove the jars from the water and serve to enjoy warm or let them chill and serve cold.

## NOTES

The very low temperature of sous-vide allows us to use oils that are reserved for no heat to low heat range. My sous vide circulator was definitely worth the investment as it is so versatile. I recommend [Anova](#) Culinary Sous Vide Precision Cooker. **I never use plastic bags in order to avoid the hormone disrupting chemicals found in plastics. But that does not deter me from cooking this way. On the contrary, I do it the old fashion way, french style, the way it was done before plastics ever existed... I simply use glass jars!** All you need is liquid inside the jar to help transfer the heat from the water in the container to whatever you are cooking. I encourage you to get creative and have fun with it.





# LET'S NERD OUT ...ON OILS & FATS!

1. THE EXTRACTION PROCESS
2. THE PROPER USE
3. THE SOURCE AND QUALITY
4. BE STRATEGIC



1

## THE EXTRACTION PROCESS

## UNREFINED

The process to make these oils & fats uses low-temperatures and controlled mechanical methods, like pressure, in order to extract the oils from their source. In their labels, you can read terms like cold-pressed or expeller-pressed. They are often referred to as 'virgin' or 'extra virgin'.

When it comes to buying cooking ingredients, we should always give **priority to nutrient density** and focus on ingredients with the utmost nutritional value, while avoiding products that could cause toxicity.

Oils & fats can contain beneficial nutrients such as antioxidants and phytonutrients. Therefore, we should give priority to unrefined oils as these nutrients have are best preserved when the oils are less processed or raw. We are talking about oils from sources such as hemp seed, flaxseed, macadamia, walnut, coconut, and olive.

**Depending on the way you use them and their quality, unrefined oils are your best option for nutrient-rich, flavorful oils, with less potential to contain toxic chemicals from the manufacturing process.**

However, nothing is ever perfect! Unrefined oils & fats can be less stable than refined ones, so they could go rancid quicker, which means you may need to consume them faster to enjoy their freshness and some will require refrigeration in order to properly store them.



## UNREFINED CONTINUED...

The most common processing techniques out there are **cold pressed and expeller-pressed**. In both cases, the oil is extracted from its source (a seed, a fruit, a bark, a grain, etc.) using friction created by mechanical pressure.

Without going into much detail, the main difference in the cold pressed process vs. the expeller-pressed is the temperature that is needed to facilitate the oils to flow. During a cold-press extraction temperatures can range between 80-90°F, while during expeller-pressing processing the industry standard uses what is considered medium heat 120-200°F.

These oils are then filtered with a fine screen to remove any significant solids or undesired impurities from the oils. This step is beneficial because such solids burn badly when you cook and we want to avoid this from happening.

Some people have expressed concerns, claiming that cold-press is a misnomer, that it is not a raw oil, and that the temperatures used may damage nutrients. Yes, it is true that cold-pressing is not as “cold” as we would have thought, but rather low-heat. The raw food movement standards require temperatures below 92°F to 118°F, and some unrefined oils go above this temperature to 120-200°F. However, lab tests show that oils processed at these low temperatures remain nutrient rich - furthermore, the data shows that the fact that there is low heat does not impact their nutritional value.

**We like these oils because they contain no toxic chemical solvents and no further refining is used to alter their natural characteristics. Ultimately, we want their natural color, scent, and flavors!**



Expeller pressing olive fruits to make olive oil.  
Olivicula Laur - Argentina



## REFINED

These are oils that have been extracted by an array of physical or chemical methods, highly processed, and often mass manufactured using industrialized methods.

The process “purifies” the oils, makes them more shelf stable and increases the smoking point as they become more heat stable. It also changes the color, or removes “unpleasant” smells or flavors. The refining processing makes them a lower quality product, yet commercially more attractive as they become cheaper.

The main problem is that during this processing the oils get bleached and are treated with an array of potentially toxic chemicals such as petroleum-based solvents like hexane. They could have been neutralized, filtered, or deodorized... Each step potentially altering the nutrient content and introducing toxic chemicals.

### WHICH REFINED OILS & FATS SHOULD BE AVOIDED?

REFINED SAFFLOWER OIL

REFINED SOYBEAN OIL

REFINED SESAME OIL

REFINED GRAPESEED OIL

REFINED CANOLA OIL

REFINED CORN OIL

REFINED SUNFLOWER OIL

VEGETABLE SHORTENING

REFINED ANIMAL FATS

# WHY SHOULD WE AVOID REFINED OILS?

Refined oils often get a bad rap... and for many good reasons!  
Here are some of them:

Highly processed by large scale, mass manufacturing practices

The industrialized processes introduce potentially toxic chemicals like petroleum-derived solvents that can be toxic

They are often heated to very high temperatures that could compromise and reduce their nutritional value

They are often derived from mass produced genetically modified crops likely treated with fertilizers and pesticides

Commonly re-used in commercial kitchens for frying. Repeated heating causes oils to break down and introduces more toxic chemicals

## DO I REALLY WANT TO CONSUME SUCH A HIGHLY PROCESSED FOOD? NOT IN MY CASE!

Here is where we make a personal choice, not one based on complete scientific facts, but one based on our own criteria, our own comfort zone, our body's feedback. We are weighing between potential risks vs. benefits

In my kitchen oils & fats are considered an important nutritional group and so we are careful with our choices

I go for the unrefined options that might require more care and attention but at the same time give me peace of mind and a higher nutritional value



# NEGATIVE HEALTH EFFECTS OF REFINED OILS & FATS

There is an active debate as to the impact of refined oils & fats on our health. Also, many competing interests on opposing sides (e.g. powerful seed oil industry vs. health groups), both trying to sell you their different “health” products.

But... if you unbiasedly dig into the science, we see that the data available is currently conflicting and it is difficult to determine the cause and effect. So we wonder... where are the reported negative health effects coming from?

**Many claim to have the answers... but the truth is that the reported negative effects of the refined products could be caused by one or more of the factors listed here:**

We simply need more scientific research and data. Until then, I personally choose to avoid refined oils & fats and focus on using good alternatives that are less risky and likely safer choices for us and for the environment. Let's take full advantage of the fact that we have fabulous alternatives to choose from!

We can all agree that the science and the data are there on the health effects of clean, fresh, non-processed foods. But if you still need a refined oil, we recommend you scrutinize the brand, the extraction processes, the quality, and always go for the organic alternative.

**SO WE WONDER...  
ARE THE REPORTED NEGATIVE HEALTH EFFECTS  
COMING FROM:**

**THE OILS THEMSELVES?**

**THE PROCESSING?**

**THE WAY THEY ARE HANDLED IN OUR KITCHENS?**

**THE FOOD THEY ARE EATEN WITH?**

**THE CREATION OF TRANS FATS DURING  
PROCESSING OR REFRYING  
IN COMMERCIAL KITCHENS?**

**COOKING THEM PAST THEIR SMOKING POINTS?**

**THE UNBALANCED RATIOS OF  
POLYUNSATURATED FATTY ACID OMEGA-3  
OMEGA-6 AND OMEGA-9 OF  
THE FOOD ON OUR PLATES?**

## SIMPLE SWAP

SOMETIMES WE CAN FIND A SIMPLE SWAP FOR A BAD CONTENDER THAT MAKES IT NOT SO BAD AFTER ALL!

Normally we avoid oils such as canola and sesame as they are highly processed. But sometimes we can find the unrefined version of a bad contender.

### THESE UNREFINED OILS ARE A LITTLE GEM!

I found them on a scavenger hunt for good products in Vancouver, Canada. Loved the brand ever since! Although I haven't personally used the canola oil I loved the sesame oil and I can attest to the brand transparency. I've enjoyed finishing my favorite Asian dishes (my son is half Taiwanese!) by seasoning with their wonderful sesame oil - tastes so good!

As you can see these are organic, unrefined, and have no other ingredients or chemicals used in their extraction. They also come in a dark glass bottle to protect them. The brand covers pretty much all my requirements very well.

Cases like this let us use an oil we may need occasionally for an old family recipe or in traditional East Asian cuisine, where oils like sesame add that distinctive flavor and the wonderful aroma that we so enjoy.

In the end variety is king! We need a repertoire of oils & fats in our kitchens to ensure we have the right tools for the job both in terms of technique and recipes and to ensure that we get the full nutritional value that a wide spectrum of good quality and clean oils & fats have to offer.





## THE EXTRACTION PROCESS WHAT DID WE LEARN?

1. The processing of oils & fats affects their nutritional content
2. It can also affect levels of potentially toxic chemicals
3. Unrefined is a better choice!

Sometimes we focus too much on the ingredient itself and we forget to look at how it is processed. We now know this is just as important!

2

## THE PROPER USE OF OILS & FATS





## AVOIDING TOXICITY

In order to avoid generating toxic substances while cooking with oils & fats, you need to pay attention to:

**1. The oxidation of the oil & fat.**

**2. The smoking point.**

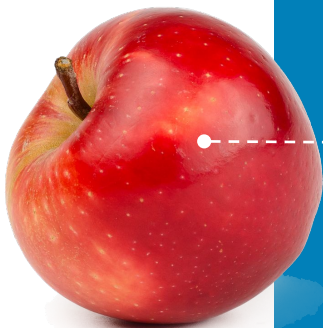
**3. The cooking method or technique**

The goal is to avoid passing the smoking point and to avoid rancidity.

**Learn how to make these sous-vide mini sardines cooked at 60°C in glass jars. Check out the recipe section**

## WHAT IS OXIDATION?

Oxidation refers to the reaction of the oil or fat with oxygen in the air. It is the chemical reaction by which a substance gains oxygen



## OXIDATION

Oxidation happens at a molecular level and you can actually see it happening around you all the time.

For example, **apple slices turn brown because of oxidation**. It's a natural process and it is important to remember that oxidation isn't always bad.

However, **when it comes to oils & fats we want to avoid oxidation as this reaction will adversely affect their taste, composition, and toxicity.**

Oxidation becomes a problem when it causes formation of large amounts of free radicals in our food which in turn can cause toxicity in our bodies. Free radicals are unstable, highly reactive, and can therefore damage important molecules in our cells such as DNA, proteins, carbohydrates, and lipids.

**WHEN OUR CELLS CAN'T REPAIR THIS DAMAGE  
IT COULD LEAD TO TOXICITY**

## SO, WHAT DOES OXIDATION HAVE TO DO WITH COOKING OILS & FATS?

The oxidation of lipids/fats in our food has long been recognized as problematic. Oxidative changes can cause rancidity (unpleasant taste or smell), changes in color, altered nutrient value, and can lead to formation of toxic compounds which can be detrimental to our health.

Different types of fats are more prone to oxidation than others. The more saturated the fat, the more stable the structure of the fat is at any temperature and therefore the less likely that it will oxidize.

You can see the stability of the fat when you look at it at room temperature. Fats that are solid or semi-solid at room temperature (think coconut oil, animal fats, butter, and ghee) are more saturated than those that are liquid (vegetable oils, nut oils, and olive oils).



NOW LET'S TALK ABOUT...

## THE SMOKING POINT

WHAT DOES IT HAVE TO DO WITH OXIDIZATION?

When heading to the stove you should first consider the smoking point of your oils or fats at hand. The smoking point or burning point, is the temperature at which an oil or fat begins to produce a continuous bluish smoke that becomes clearly visible.

**Each fat has its own threshold of temperature at which it can be used safely.**

This is important because once oils & fats reach their smoking point multiple detrimental things will happen:

It starts to break down

Changes to the chemical composition through oxidation

Nutritional value gets diminished

Produces toxic fumes we inhale

Releases harmful free radicals creating carcinogens we ingest

# WHAT DETERMINES THE SMOKING POINT?

While many factors can influence the smoking point of an oil or fat, there are two key drivers:

1

## **The level of refinement of the oil**

The more refined the higher the smoking point.  
The less refined the lower heat we can use with it.

2

## **The chemical composition**

Specifically, the amount of saturated fat it contains - the more saturated, the more stable, and so the higher the smoking point. See following page where we dive into more details.



## FAT COMPOSITION & SMOKING POINT

We just mentioned that the differences in the chemical composition of the oil or fat - saturated, monounsaturated, vs. polyunsaturated- affects their chemical stability and so affects their smoking point.

### So why is this important?

The chemical composition of each fat or oil tells us about its properties and gives us clues about its stability. This knowledge helps us better determine how to store and how to use them.

### What determines their fat type classification?

Each fat and oil contains three major and different types of fatty acids (components of fats) at different ratios to one another.

These three types are: saturated, monounsaturated, and polyunsaturated fatty acids. We are going to skip details on their chemical structure. The important point is that the amount of each of these 3 types of fatty acids in a fat determines which category it falls into.

We have a graphic on the next page to help us visualize how different fats are categorized.



COCONUT OIL



GHEE CLARIFIED BUTTER



TALLOW RENDERED BEEF FAT



BUTTER PASTURE RAISED COWS

## FAT COMPOSITION & SMOKING POINT

Let's take a look at the graphic below and use coconut oil as an example...

It has has approx. 86% saturated fatty acids, 6% monounsaturated fatty acids, and 2% polyunsaturated fatty acids, so it is considered a saturated fat since it saturated fatty acids are the most abundant. The opposite happens in the case of safflower oil.

Note the different proportions of each type of fatty acid in the different oils.

### FATTY ACID CONTENT

(grams per tablespoon)



## EXTRA VIRGIN OLIVE OIL SMOKING POINT, FAT COMPOSITION, AND THEIR EFFECT ON HOW WE USE IT!

Olive oils certainly have a lot going for them and their beneficial health effects are well known and backed by data. Yet, you might have heard people recommend we should not cook with them. So why not?

The problem is that not all olive oils are created equal. Their fat composition varies widely across brands and harvests depending on many different factors such as the cultivar, olive variety, maturity of the fruit, altitude, climate, extraction, processing...etc. Additionally, the amount of particulates in the oil also varies greatly.

### **All these factors can change the smoking point!**

The lack of standards across the industry adds to the unpredictability of the composition of the olive oil and its smoking point, so you easily run the risk of going over the smoking point, turning something that is beneficial into something toxic. There is also the impact of high cooking temperatures on nutrient composition, regardless of smoking point. We all know that olive oil is rich in nutrients such as antioxidants and delicate phytonutrients that benefit our health. However, heating olive oil runs the risk of destroying the very nutrients that gives this oil its healthy properties.

When it comes down to providing the safest food to my family, I take the guessing game out! I simply don't take the risk of heating olive oil. It's most flavorful, nutrient-dense, and safest when used cold, so that's why I avoid cooking with it.



photo: unsplash.com



## THE PROPER USE OF OILS & FATS

### WHAT DID WE LEARN?

1. How we use and store oils & fats is very important in preventing toxicity
2. Key things to think about
  - Chemical composition
  - Oxidation
  - Temperature & smoking point
3. We need to watch out for source and processing method

3

## SOURCING QUALITY

## SOURCING BETTER QUALITY

Good quality, clean dietary fats, in the right amounts are essential to give our bodies energy, support cell growth, and support many other critical cell functions. Irrespective of the source of your oil or fat (animal or a plant source) there are a few things that improve the quality of the product you are cooking with.

Here are the key things to look out for:

### ORGANIC

We like to avoid potential toxic chemicals in our food like pesticides and fertilizers. Buying organic also guarantees you are not consuming genetically modified ingredients. Science is still out on whether GMOs are good or bad for your health. Our personal choice is to avoid them until we know more. In addition, organic products help protect the environment and the farm workers from exposure to toxic chemicals.

We also recommend you go local whenever possible.

### AVOID CHEMICAL SOLVENTS

Most refined oils will now state on their label if their processing is **hexane free**. Hexane is a chemical solvent derived from petroleum products that is used to refine and clean oils. It's associated with side effects on the nervous system, headaches, and fatigue. How much makes it into the oils during the processing is unknown. What is used instead of hexane is not listed, another reason to choose to avoid refined oils.

### INGREDIENTS

There should only be one ingredient: the fat or oil itself! Labels matter. Things like preservatives are not required.

### AVOID

Artificial, "natural" flavors, aroma, preservatives, and "spices" (unless they specifically list the actual spice by name) are a no go. I sometimes enjoy infused oils, here, you need to look for ones infused with real ingredients like garlic, basil, vanilla.

### MILK BASED PRODUCTS

When buying ghee and butter, grass-fed is always best. Some ghee companies, like 4th & Heart, use butter that comes from New Zealand, which has very stringent dairy regulations and produces one of the highest quality grass-fed butter. Also avoid rBST - an artificial growth hormone used in some milk production that has been associated with multiple types of cancers.

## SOURCING BETTER QUALITY CONTINUED...

### ANIMAL WELFARE

Source brands with humane animal practices. The French taught us, duck fat is great for cooking, but you must check if it comes from a trusted farm that has treated the animals well, e.g. not fattening the ducks to the point of making them sick, a banned practice in the USA. Look for respected animal welfare certifications. Sometimes, commercial brands are ok but for some products this might not be the best option. In these cases your local farms and farmers market may be the answer - but be curious, and make sure you ask lots of questions!

### ANIMAL FEED

The animals we eat should be eating healthy diets too! We need to know what is the natural feed needed by the animal in question. Cows should be grass-fed; pigs should be able to roam free to pasture and may also need additional feed as part of their normal diets. Birds are perfect omnivores, they need to roam free on pasture to catch their bugs & worms. If the packaging of the birds product reads "all vegetarian diet" - this is ok to buy. This label tells you the birds are getting a supplemental feed without unwanted animal byproducts in it.

### PACKAGING

One of the easiest ways to damage your oils is to expose them to extended heat, air, and or light. Tintented glass is always optimal. Oils should be stored in a cool, dark place in your kitchen, and replaced if it has a bitter odor. Some of the more delicate oils (e.g. hemp, flaxseed, and walnut) will go rancid quicker and need to be refrigerated. When it comes to oils & fats it should be a plastic-free zone. This will keep them free of pesky hormone disruptors. The environment will also thank you as you stop ditching those plastic bottles and go for glass or a non-toxic environmentally friendly packaging.

### BRAND TRANSPARENCY

In a world of aggressive marketing and inconsistent, sometimes even nonexistent regulation on labelling, brand transparency is all we have as consumers. Look for the brand values and processing details across each and everyone of their products. Ask questions, call, or email them, and find out all you can. You may be surprised how much the best brands like to share with you about their good work.

### FOREST PRACTICES

Source vegetable oils such as palm and coconut oils from brands that support regenerative agriculture or disclose their stance in deforesting practices. Environmental organizations such as the International Union for Conservation of Nature say that, instead of stopping consumption of these oils, we need to prevent further deforestation for new oil plantations and focus on promoting sustainable production. Look for sustainable practices and fair trade certifications.



## THE GREAT OLIVE OIL SCAM

I am sure you've heard about the olive oil scam! Surprisingly, this scam dates back to the old Roman Empire and it still continues today!

A study by UC Davis in 2011 found that 73% of the 5 best selling imported "extra virgin" olive oil brands, did not meet the International Olive Council sensory standards for extra virgin olive oil with quality and composition varying greatly.

Turns out the oil from many of the popular brands may not be pure virgin olive oil after all and may be cut with heavily processed vegetable oils. So this is no longer pure virgin olive oil but an adulterated product that can also contain cheaper processed refined olive oil or even worse, cut with highly processed refined vegetable oils that may be detrimental to your health.

The brand of your olive oil and knowing the manufacturing practices of the producer are critical to ensure you get the best quality product and one free of potentially toxic chemicals.

To learn more about it, check out [this fascinating book.](#)



## **SOURCING QUALITY WHAT DID WE LEARN?**

- 1.** The source of your oils & fats is one of the most important drivers of their impact on your health, food quality, and taste
- 2.** Our choices impact us as individuals but also the environment
- 3.** Read the labels and do your research!  
As we learnt with olive oil... things are not always what they seem. Being an informed consumer pays off

4

BE STRATEGIC



## BE STRATEGIC

Now that you understand the potential to create toxicity when using oils & fats - I am sure you want to nail this temperature thing down and avoid going over the smoking point.

### **So how do I know if I am close to reaching the smoking point of a particular oil?**

It is often challenging to know what cooking temperature our food reaches unless it is specifically stated in say a baking recipe. More often than not you see things like “sautéed in medium heat” or “use low or high heat”. But how hot is that oil actually getting you wonder? Making things a little more complicated is the fact that there are no set industry standards for what is meant by high heat but rather temperature ranges that can also vary greatly depending on your kitchen stove, your pots & pans, and even altitude.

This sounds complicated but worry not... we are here to help and while thermometers are always handy specially from a food safety perspective for items such as meats, you don't always need that thermometer. You can learn your way through the different cooking techniques and the temperature ranges and to help you we have created a handy guide to navigate through selecting the right oil or fat for the job.

Make sure to use our handy reference guides to help you!



# THE IMPORTANCE OF CHOOSING RIGHT

**Eating oils & fats is not bad for your health**, in fact, they are an essential part of your nutritional balance and a central ingredient in any well stocked kitchen. However, to reap the benefits you have to make the right choices, buy the right brands, and use them properly!

Poor choices can expose you to toxic chemicals and impact your health & wellness. Hopefully after reading this edition of **DECODE**, you will feel empowered to make the right choices - we are also providing you with simple reference guides (see next section) to help simplify your busy lives.

Do remember, **we are all different due to our biology, our genes, and our environment**. So you always have to optimize your choices for you personally. Pay attention to the taste and the health effects that different oils & fats can have - make the connection! The impact on your health & wellness may not always be obvious and the individualization process can often be frustrating. You must be patient and may even consider a food diary to help you figure things out. Once you tune in, your body will let you know loud and clear when you introduced something that is not agreeing with you. Listen and be on the lookout for the signs.

Don't be afraid to experiment, have fun, and discover new flavors!

1

## REDUCE TOXICITY

The right choice of oils & fats and using them at the correct temperature, means less exposure to toxic chemicals from the manufacturing process and from going over the smoking point

2

## MAKE THE CONNECTION

The personal choices you make in oils & fats impacts your health. Individualize to you: what you enjoy, tastes you like, and the way your body responds

3

## IMPROVE QUALITY OF YOUR FOOD

The right choice of oils & fats will impact the quality of your food both from a culinary and from a health perspective, making your food not only yummy but beneficial





## THE ROLE OF OILS & FATS IN THE KITCHEN

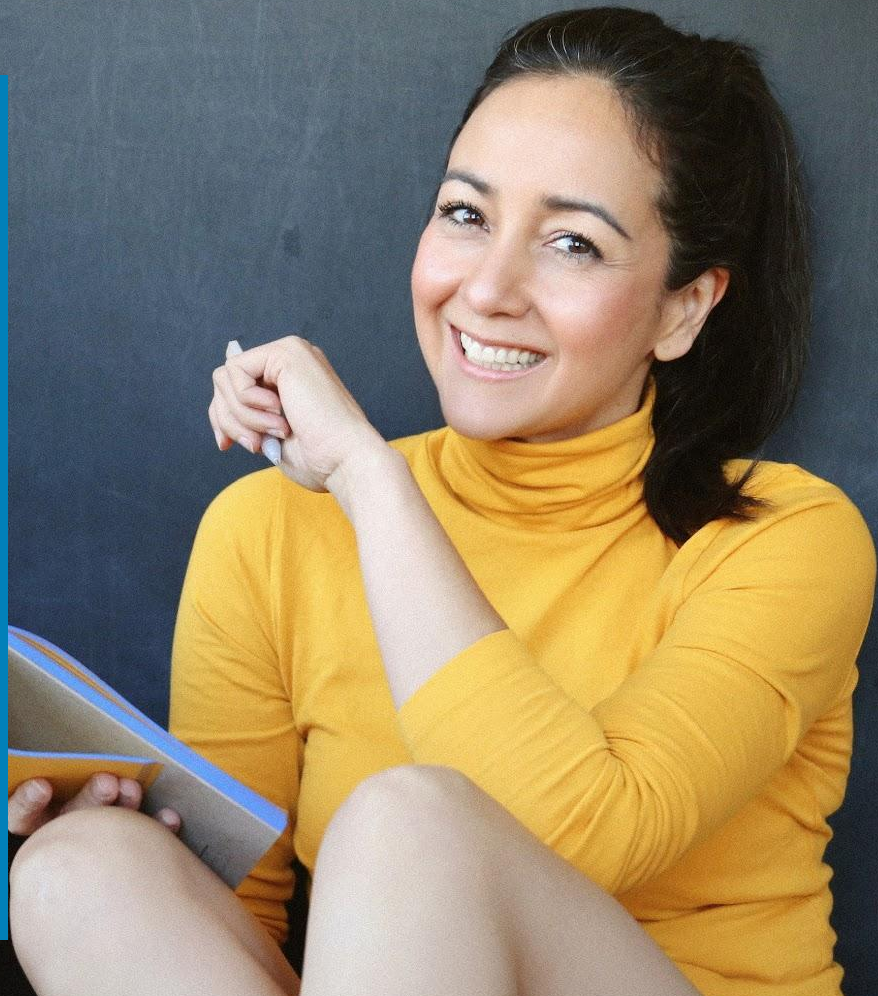
### BE STRATEGIC

Fat, water, protein, and carbohydrates make up the four key elements required for good cooking. However, much like salt, fat has received a bad rap and is often thought as unhealthy. But like salt, fat is also an essential nutrient required for our bodies to function properly and survive.

Dietary fats are essential for energy and to support cell growth. They also play a key role in insulating and protecting key organs in your body, absorbing nutrients, and hormone production.

In the kitchen the same fat can play different roles depending how you use it. Fats can be a cooking medium, like salt they can be used to season and add flavor, or it can be a key ingredient that brings a dish to life with its specific flavor. You have to be strategic about choosing and using your fats!

The strategy should include understanding what is the primary role of the fat in the dish you are making and also considering your own personal biology, health status, and genetics.



# 4 ROLES OF OILS & FATS IN THE KITCHEN

THE SAME TYPE OF FAT CAN PLAY DIFFERENT ROLES  
DEPENDING ON HOW IT IS USED

1



## AN ACTUAL INGREDIENT

Fat can be a main ingredient in a recipe to say help bind various components, achieve a specific flavor, or yield a desired texture

2



## COOKING MEDIUM

Fats can be used as a cooking medium and be heated across a wide range of temperatures to help develop different textures

3



## SEASONING

Use the fat to give flavor, deepen, and enrich the texture of a dish just before serving much like we use salt & pepper

4

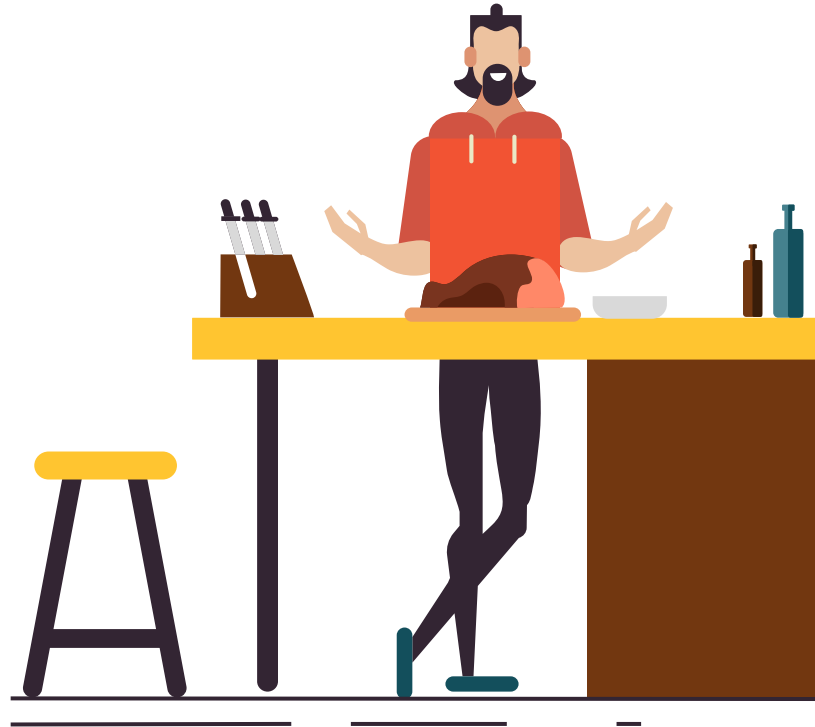


## NUTRIENT CONTRIBUTOR

We often forget that oils & fats can provide essential nutrients, antioxidants, and minerals to our diet

# NAIL YOUR RECIPE WITH THE RIGHT OIL

## A FUN MATCHING GAME!



# 1

### Use our shopping guides to help you buy a broad selection

How to choose the right oil is a process that starts with the choices you make at the supermarket. You should try to avoid old habits and strive to get out of your comfort zone. Resist the refined ones and get a wide selection of oils & fats based on all the new knowledge you just acquired.

# 2

### Choose the right fat or oil based on flavor and temperature

Look at your recipe and think about what you are cooking. What type of fat do you need for the cooking method (frying, grilling, sauteing, or baking). What temperature might the food reach while cooking. Ensure it does not go above the smoking point of the oil or fat you selected. Consider the flavor and how it contributes to your dish.

# 3

### Select the right pot or pan for the job

Think about what types of pots & pans you are using in your kitchen, how easily they conduct heat, and what cooking methods you are using. Have you read our **ON THE HOUSE** guide on pots & pans yet? If not, [download it here](#).

# 4

### Pay attention to avoid burning, this is no time to multitask!

Your cooking experience level is also important, learn to feel your way through your kitchen and watch the process. Paying attention is key to avoid overheating your oils & fats. Make sure there is no visible smoke or burning smells. If so, it is best to discard the food and start again.

## DIETARY REQUIREMENTS, ALLERGIES, AND SENSITIVITIES

### COCONUT OIL ALLERGY

Allergic reactions to coconuts are relatively rare as coconut is a seed not a nut and it is botanically distant from tree nuts. While still relatively rare, there are some cases of people allergic to nuts that can react to coconut. This happens due to a process called cross-reactivity where a protein found in both food types causes a reaction. So if you are allergic to nuts - just be a little extra cautious and do a quick test to check.

### NUT ALLERGY

If you have nut allergies you need to wisely select your oils and even refined vs. unrefined can make a difference in the allergen content. Highly refined peanut oil may be eaten by some allergic individuals without a reaction, but this may not be the case with the less processed versions such as cold-pressed peanut oil. Tallow (beef fat), lard (pork fat), schmaltz (chicken fat), duck fat, and avocado oil might be a great option for you!

### AVOCADO INTOLERANCE

Did you know that some people can't tolerate avocados or at least not in large quantities? But these individuals can easily digest avocado oil... Why? Both refined and unrefined avocado oils do not contain the usual culprit behind avocado intolerance, FODMAPs. See next page for more information about FODMAPs.

### LACTOSE INTOLERANCE

Technically, ghee is not really dairy-free because it's butterfat. However, it's lactose-free because all the milk solids are removed during production. If you're avoiding dairy because you're lactose intolerant, ghee might be a safe option for you.

## KNOWLEDGE PILL

### FODMAP

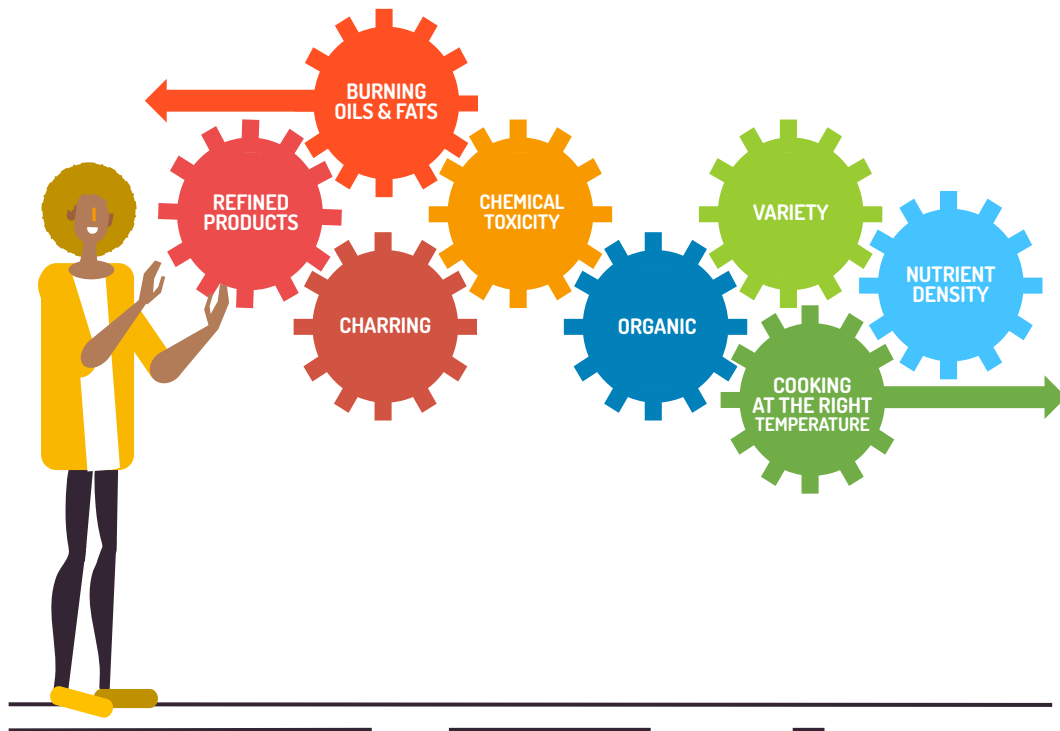
- **FODMAPs\*** are specific short-chain carbohydrates (sugars) that in sensitive individuals can cause digestive issues such as gas, bloating, cramps, diarrhea, and constipation. In general oils and fats do not contain carbohydrates and so we don't have to worry about FODMAP content.

#### **Tip - FODMAP friendly garlic / onion infused oil**

FODMAP sensitive, yet want the flavor of onions or garlic which sadly are very high in FODMAPs? No problem, you can still add this flavor to your cooking, infused oils are the answer! FODMAPs are not soluble in oil, so you can simply infuse your favorite oil by sautéing whole garlic pieces (do not smash or finely chop) in your oil for 1-2 mins. Discard the pieces of garlic afterwards and voila, you have the flavor without the discomfort!



# MAKE SIMPLE SWAPS & IMPACT YOUR WELLNESS



Small changes on our daily habits, like switching to healthier, higher in nutritional value oils & fats, can have a tangible, positive impact on your health.

Let's take butter, for example.

How the butter was produced, its origins, and how you cook with it, will determine the nutritional quality and whether or not it will contribute to your daily toxicity.

**Differences in the quality, source, and composition of the butter you consume on a regular basis can have a substantial impact on your health & wellness goals.**

## GO BUTTER!

- Organic
- Grass-fed or Pasture-raised
- Hormone-free
- Antibiotic-free
- Non-homogenized
- No additives
- Cultured or raw

## NO GO BUTTER!

- Cows fed genetically modified soy & corn
- Hormones like rBST
- Factory farming
- Antibiotics
- Homogenized
- Hydrogenated

Some of us can eat butter with no issues but for others that may not be the case - so you need to find out how it affects you personally.

**Remember, individualize your choices!**



## **BE STRATEGIC WHAT DID WE LEARN?**

Oils & fats can impact our health and the quality of our food.  
Our strategy should include:

- 1.** Selecting the right products
- 2.** Our own personal biology & dietary requirements
- 3.** Matching your selection with the recipe, texture, and flavors you enjoy

There are simple swaps that can make our choices easier  
and empower us to make the right choices



# BONUS

LET'S SHINE THE LIGHT ON  
OILS & FATS THAT  
DESERVE A LITTLE  
MORE ATTENTION!

## OLIVE OIL

**SMOKING POINT:**  
Do not heat

**WHAT MAKES THEM BETTER:**  
unrefined - cold pressed

**OUR FAVORITE USE:**  
dressings - finishing everything

When it comes to olive oil the phrase **“Let food be thy medicine, and let medicine be thy food”** certainly applies!

Olive oils has also been shown to fight Alzheimer's disease, type 2 diabetes, anticancer properties, rheumatoid arthritis, antibacterial properties due to containing powerful antioxidants and anti inflammatory phytochemicals.

One of the anti inflammatory compounds in olive oil is called oleocanthal and it is known to reduce inflammation via the same biological process as ibuprofen minus the side effects!

Studies have also shown it to have potent properties to help patients suffering from gastrointestinal diseases including ulcerative colitis - in fact it is so effective that scientist suggest it should be used as part of the treatment regime for these patients.

Olive oil is one of the primary sources of fat in the mediterranean diet and thought to be one of the secret weapons in protecting against chronic and inflammatory diseases in this population.

The scientifically recognized powerful disease preventing properties of olive oil means you should try and incorporated into your daily diet... sprinkle it on salads, soups, pasta & rice dishes, even add it to smoothies! It is simply too good for you to leave it out - make sure you get your daily dose of a really good quality olive oil.

Sounds too good to be true? In this case it turns out to be true!!!



## PUMPKIN SEED OIL

**SMOKING POINT:**  
250-320°F

**WHAT MAKES THEM BETTER:**  
unrefined - cold pressed

**OUR FAVORITE USE:**  
salad dressings - desserts

Many people are unfamiliar with pumpkin seed oil and it is somewhat of an under used gem, yet it has been around in parts of Europe for over 300 years. It is a versatile oil with broad culinary applications ranging from desserts to salads, and as a finishing oil with a wonderful nutty, sweet flavor. Try pouring some over ice cream for a surprisingly delicious combination!

Pumpkin seed oil has been linked to many health benefits including antioxidant and anti-inflammatory properties. This oil is also considered to provide a significant source of vitamin E, beneficial phytochemicals and antioxidants, and other nutrients including potassium, magnesium, calcium, iron, and zinc. Although further research is needed there are multiple clinical studies demonstrating the potential for pumpkin seed oil to positively impact blood lipid levels, depression, and overall cardiovascular health.

When buying pumpkin seed oil go for cold pressed unrefined. Just like with olive oil, this oil should not be heated irrespective of the smoking point as heat can destroy its health benefits and antioxidant properties. This is a delicate oil and goes rancid easily, so be careful.

Like coconut oil, we can also use pumpkin seed oil for hair and skin care. The high vitamin E and antioxidant levels likely drive its effects on skin appearance and texture. Be aware that this oil is very potent, so if you have sensitive skin do test a small amount first in case it causes irritation.



# BUTTER

SMOKING POINT:  
300-350°F

WHAT MAKES THEM BETTER:  
organic- grass fed- cultured

OUR FAVORITE USE:  
sauteing - roasting - to make ghee

Butter adds that distinctive wonderful taste to your food and it is amazing for baking... as the french well know, butter can be the secret to so many recipes!

Maybe like me you have avoided the Maillard reaction as we commonly think it burns the butter.... Whereas in fact the Maillard reaction (a complex chemical reaction between amino acids and sugars that gives a distinctive flavor) if done correctly should not burn the butter. When it comes specifically to butter if you carry out the technique properly it keeps it below its smoking point. The reaction itself occurs rapidly from around 280°F to 330°F. The key to success here is that the reaction happens very fast so you have to pay careful attention to avoid going past 330°F and burning your butter.

One of the things I miss from California is the butter from a local family owned dairy farm, Raw Farm (formerly Organic Pastures). Having a trusted local farm is simply the best! But if you can't access one, some will also ship to you. Now I order my butter online from Miller's Organic Farms. There are also some good alternatives in the supermarket with brands like Vital Farms and Organic Valley.

Similarly to ghee and coconut oil there is much debate about the health effects of butter... the answer is the same, use it wisely! Remember the 3 principles: variety is key, personalize to your own biology and genetics, be an informed consumer.



## UNREFINED COCONUT OIL

SMOKING POINT:  
350°F

WHAT MAKES THEM BETTER:  
virgin - unrefined - hexane free

OUR FAVORITE USE:  
sauteing - roasting - bake

I am sure with all the recent attention coconut oil has received that you may already have used it in your kitchen or at least heard of it. If you have not tried it yet, we recommend that you explore this delicious oil! We prefer the unrefined version that has not been deodorized, or bleached. Having a smoking point of 350°F makes it safe for a wide range of cooking techniques - just take care not to let it go into the high heat zone.

Coconut oil has a creamy flavor and consistency that brings notes of the tropics to your food... this oil will nicely enhance Caribbean or Southeast Asia dishes like thai, vietnamese, or a yummy curried chicken. When cooking vegetarian dishes, we use coconut oil instead of butter to sauté. This is also a great alternative if you're on a dairy-free diet. Coconut oil spread on toast or crackers makes for a delicious treat.

The health effect of coconut oil have been the subject of much debate with many touting its health benefits while others demonized it. We need more research to better understand the properties of this oil. As we talked about with other oils & fats... when cooking with coconut oil, remember the key principles and use wisely as part of a wider array of oils & fats in your kitchen.

What we do know is that coconut oil is a valuable ingredient when it comes to cosmetics with data showing its beneficial effects on skin and hair. We confidently apply it everywhere on our bodies!



## SCHMALTZ

SMOKING POINT:  
375°F

WHAT MAKES THEM BETTER:  
organic - free range - unrefined

OUR FAVORITE USE:  
sauteing - roasting - baking

Schmaltz is a common ingredient in Jewish and Central European cuisines but its use is much more widespread than many people think. Its popularity is based on the fact that it is easily accessible and economical, can be used at medium to high heat, and unlike other rendered fats it has a very mild, buttery, and neutral flavor.

Schmaltz is made by heating and rendering poultry fat (usually chicken and sometime people use goose) and letting them melt to collect the drippings. Organic, free-range commercially made schmaltz is not an easy find. Look for a local farmer or you can easily make it yourself at home by melting small pieces of chicken fat in a pan over low to medium heat. Then straining the liquid through a cheesecloth. You can also get some schmaltz by chilling homemade chicken bone broth. Refrigerate it overnight and the fat will solidify at the top of the broth, where you can easily skim and collect. Go ahead and explore!

Sometimes we overlook the potential nutrition that can come from a fat, but for example, one cup of chicken fat can provide 205g of total fat, 251mg of choline, 5.5mg of vitamin E, 0.4µg of selenium, 0.4g of water. Quite impressive for those like me, who once thought that fats were simply empty calories. Well, that is not so!



# MACADAMIA OIL

SMOKING POINT:  
390°F

WHAT MAKES THEM BETTER:  
virgin - unrefined - organic

OUR FAVORITE USE:  
frying - sauteing - dressings

Have you considered baking with macadamia oil?  
How about sauteing your veggies with it?

Now that you are becoming an expert matching smoking points to cooking techniques, you can start to play with different flavors that oils such as macadamia nut oil can bring to your cooking. It has a wonderful toasty, nutty, and buttery flavor that can enhance the taste of baked goods, sauces, and salad dressings. This oil is highly valued in the high-end culinary industry for its wonderful flavor.

Surprisingly, the extra virgin macadamia nut oil smoking point is pretty high. This makes it perfect for sautéing or using as a butter substitute when cooking.

Finding an organic version of this oil is not easy but we managed to find two good sources that we love... Ostro Organics and Mountain Rose. If you find others please share them with us. The brand Olivado, has a natural, clean product, that while not organic, provides an alternative that could work.

Virgin organic macadamia nut oil is also an excellent ingredient in cosmetic and personal-care products due to its natural emollient properties. It is easily absorbed into the skin, making it a common carrier oil used in topical skincare products such as serums and moisturizers.



## UNREFINED AVOCADO OIL

SMOKING POINT:  
375-480°F

WHAT MAKES THEM BETTER:  
organic - unrefined - glass jar

OUR FAVORITE USE:  
frying - sauteing - dips

This oil has recently become more popular with chefs and home cooks alike as people discover how useful it can be. It often comes from Mexico but a brand we use, Olivado, is produced in Kenya. We love this brand as they not only make exceptional products but also help local communities and farmers. They have trained small farmers in Kenya to grow organic crops using sustainable techniques and helped the farmers find a market for their avocado crops. This inspiring program has helped over 10,000 people improve their standard of living.

Avocado oil has a mild and delicate taste with hints of grass and avocado flavor. Our favorite part is that it has a very high smoking point. Even the unrefined first pressed, can be used for deep frying and high temperature sauteing, but bare in mind that when cooking at high temperatures you could compromise some of the nutrients and tame the flavor. This is a great option for when you need a deep-fried treat like my favorite deep fried yuca root sticks.

I love avocado mayo! Have you tried it? You can experiment with avocado oil by making your own mayo at home using the mayonnaise recipes in this **DECODE** edition. Making mayo is easier than you think and the taste of fresh homemade mayo is simply out of this world - go ahead give it a try!



# GHEE

SMOKING POINT:  
450-485°F

WHAT MAKES THEM BETTER:  
organic - unrefined - grass fed

OUR FAVORITE USE:  
Everything!

Ghee, one of my personal favorites! Once you taste it there is no going back. It has traditionally been associated with Indian, Middle Eastern, and Southeast Asian cuisines. This fat has a very high smoking point making it a versatile substitute for butter.

So what is ghee? It is a type of highly-clarified butter but unlike other clarified butters that are made using high heat, ghee is typically made by gently melting butter and cooking it at low heat for long periods of time to remove the moisture and milk solids. The resulting product has less milk proteins (e.g. lactose and casein) than regular butter. The longer heating method generates the richer, nuttier flavor, and dark hue associated with ghee.

In Ayurveda, a 6,000ish year-old style of medicine that is widely practiced in India, ghee is widely used for therapeutic purposes. Ghee has been associated with many health benefits due to its bioactive components that are associated with anticarcinogenic effects. However, the health benefits are controversial due to the high level of saturated fats in ghee. The impact of saturated fats on health is beyond the scope of this edition of **DECODE**, however, remember 3 simple principles that we like to follow: variety is key, personalize to your own biology and genetics, be an informed consumer.

Pay careful attention when buying ghee as even some of the brands we recommend here can come in plastic jars which we want to avoid, so always check it is in a glass jar.



# I WANT TO PERSONALLY THANK YOU FOR JOINING US ON THIS EDITION OF **DECODE**

As a consumer product safety advocate, researcher, and curator my ultimate goal is to decode the myriad of confusing and often conflicting information out there. Supporting you with the tools to help shape your criteria for choosing products is key. I want to inspire and enable you so that you can evolve to make choices beyond need, price, and looks to also include a focus on your own personalized health, safety, and the impact on the environment.

I get really excited to share our research. I want to invite you to hang out with me online and social media as we continue to decode the complex choices you have as a consumer. Please do reach out with questions, ideas, or thoughts... I enjoy getting to know you a bit better and your feedback helps me create better tools. Simply email me or we can connect on Instagram or Twitter, I'll always respond. We look forward to hearing your stories about the changes you are making, your new cooking adventures, and how you are using oils & fats differently in your kitchen!

All the products we showcase have been highly scrutinized by my team and I. We only share products that we personally use and love! We have some affiliate links to help support our continued research - but be assured that all our recommendations are always a result of extensive scrutiny and come from our heart, and are Yrmis approved!

Food for thought... half the things we read out there aren't based on solid science but rather speculation, opinions, marketing, or pseudoscience that lack supporting data.

Decode wisely!  
Yrmis & the All Black Sheep team.





We hope you've enjoyed this edition of

# DECODE

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CREDITS: we have used and modified some design elements from Slidesgo, including icons by Faticon, and infographics.  
We have also used some images by Freepik and unsplash.com



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