9 COOKING METHODS

Cooking gives improved digestibility and converts nutrients into forms which are more readily absorbed. There are a variety of cooking methods some of which are better nutritionally and from a sensory perspective, than others.

Boiling – immersing vegetables in boiling water (100˚C) until cooked to preference. The loss of water-soluble nutrients (Vitamin C and B Vitamins) associated with this method can be recovered by using the water as a stock for soups or by drinking the water.

EXCEPTional **Spinach** – boil in lots of water for 1 minute with the lid off the pot to reduce oxalic acid content (up to 50%) and bring out sweeter taste – oxalic acid binds with iron, calcium and magnesium inhibiting their absorption

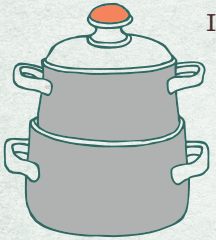
Braising – used to cook meat, fish, vegetables or seafood usually in large chunks and involves initial sautéing followed by simmering in liquid (barely half-covered), to finish.

Deep Frying – uses large amounts of fat heated to about 177˚C in a pot or special deep frying equipment. The food is fully submerged in oil.

Frying – cooking foods in fat eg oil or butter.

Grilling – involves dry heat either from above eg. conventional grill or below eg. barbeque grill. Grilling adds flavours however charred food contains carcinogens (cancer causing compounds).

IN MY KITCHEN



It is therefore best to avoid cooking meats beyond their goal cooking temperature eg. 82˚C for poultry, 71˚C for ground meats, and 63-77˚C for red meat steaks (depending on preference). Smaller pieces may speed up the cooking process reducing the level of charring. Carcinogens may further be reduced by marinating the meat using mixtures of oil, lemon, herbs and spices.

Pan Frying – used to fry large pieces of food in a little fat at a medium to medium-high heat (225 - 350˚F), with only occasional flipping.

Roasting/Baking – slow cooking of uncovered poultry, vegetables, meat or fish using dry, indirect heat in an oven.

Sautéing – finely chopped or sliced ingredients are cooked in a little hot oil for a short time. Food is tossed around to avoid burning, by shaking the pan.

Shallow Frying – food is partially submerged in oil (about halfway up the food) and flipped once.

Steaming – suspension of food over boiling or simmering water, cooking it in the resulting steam, and preserving vitamins and minerals which may otherwise be lost in boiling. RETAINS GOOD COLOUR AND FLAVOUR.

Stewing – slow simmering of vegetables, meat or seafood in a flavourful broth seasoned with spices and/or herbs.

Stir Frying – quick way of cooking foods using a very small amount of oil (or water) over a high heat for a short time, preserving flavour, freshness and nutrients.

DID YOU KNOW?

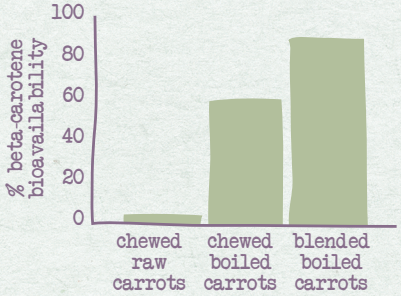
Time, heat/temperature and water all affect the level of nutrient loss.

Minimising heat and water exposure can reduce nutrient losses to 5-15% compared to the typical loss of 50-80% associated with highly processed foods, such as convenience meals.

A NOTE ON RAW VERSUS COOKED

Raw foods eg. salad leaves, vegetables, and fruit, provide **enzymes** which can support digestion. Cooking unfortunately deactivates these enzymes and may result in vitamin losses. However, cooking can be very beneficial in making phyto (plant) chemicals more available for absorption and use by the body.

For example, research on *carrots* by the Institute of Food Research (2009) has shown that beta-carotene, an important antioxidant which can be converted into Vitamin A, is absorbed more easily by the body when the carrots are cooked!



In addition, antioxidant (phenols) power is greater in cooked carrots compared to raw, averaging 34% higher.

Similarly, the antioxidant lycopene found in *tomatoes*, has greater bioavailability when cooked.

Top Tip

A mixed diet of raw and cooked foods is recommended for optimum health.

FAT

THE 'LOW-DOWN' ON COOKING WITH OIL

All fats/oils contain fragile unsaturated fats which can become damaged when exposed to heat, light and oxygen. Signs of damage include off-flavour, undesirable odours, and discolouration. Other undesirable changes in fat/oil includes reduced nutritional content and generation of harmful compounds including oxygen radicals and production of unhealthy trans fats.

In determining the suitability of oil/fat for cooking the *smoke point* must be considered.

This is the temperature at which the oil/fat will start to smoke and decompose and represents the upper limit for heating without excessive damage. Smoke point for fats/oils reflects their chemical composition.

Refining oil tends to increase the smoke point making the oil more suitable for high temperature cooking but will have an effect on sensory and nutritional qualities.

DID YOU KNOW?

Trans fats are foreign to the body and can cause a lot of damage. Processed foods tend to be high in trans fats due to the type of fat used and its exposure to high processing temperatures.

Top Tips

Olive oil, especially the unrefined varieties eg. extra-virgin, has a low smoke point and should not be used for cooking! Cook with water or stock and **add olive oil after cooking to enjoy its nutritive health benefits!**

For frying or roasting, use oils which are more stable at high temperature such as avocado oil, sunflower, or safflower oils.

Unrefined Oil – lower smoke point but fuller flavour, richer colour, nutrient dense.

Refined Oil – higher smoke point but bland flavour, pale coloured, reduced nutrition.