

**Oils, fats and good frying practice**

**Oils and fats**

There are two main types of fats in food; saturated and unsaturated. They both contain the same amount of calories but eating a diet high in saturated fat can cause the level of cholesterol in the blood to raise over time and these increases the risk of coronary heart disease. Tran’s fats are present in foodstuffs manufactured with hydrogenated or partially hydrogenated vegetable oil, a process which turns liquid oil into a hardened fat. They are also produced when foods are fried in oil that is repeatedly used where it is allowed to cool and be reheated. Tran’s fats are particularly harmful to health as they lead to a rise in the “bad” type of cholesterol in the blood, as well as lowering the “good” type. Palm oil, dripping, lard, butter and ghee are examples of saturated fats.

Unsaturated fats include both polyunsaturated and monounsaturated fats. Polyunsaturated and monounsaturated fats have been shown to lower blood cholesterol levels and therefore can help in reducing the risk of heart disease and promoting heart health.

It is therefore better to eat foods rich in polyunsaturated and monounsaturated oils. Examples of polyunsaturated oils are sunflower oil, soya oil and corn oil. Monounsaturated oils would be olive and rapeseed oil.

The nutritional quality of the oil or fat is also dependent on its condition. Deep frying can cause oils to break down (degrade) and this can create trans fats and acrylamide. Acrylamide is recognised as a potential carcinogen and levels should therefore be kept to a minimum. Degradation of the oil is accelerated by air and water, therefore minimising the exposure of the oil to air and water will extend the life of the oil.

**Good frying practice**

**The main aims of good frying practice are to minimise oil uptake by good temperature control and trying to ensure that the oil absorbed is the healthiest it can be i.e. no trans fats and a low level of acrylamide.**

**Good frying practice will extend the life of your oil and reduce the amount of oil you use, which will also save you money.**

* Frying oil should be set at the correct temperature of between 175 - 190 degrees Celsius unless otherwise required by manufactures guidelines.
  + The frying temperature is very important. A temperature that is too high causes the oil to break down. A temperature that is too low allows the food to absorb more fat and will give a greasy product.
  + The thermostats on your frying equipment must be set to the correct temperature and should be turned down during quieter periods. The fryers should be regularly serviced and the thermostats accurately calibrated. Change the oil regularly.
  + (Oils should not be overused. Each time oil is heated up it forms more undesirable by-products which get absorbed into the foods being fried e.g. acrylamide and trans fats).
* The fryer should be skimmed throughout the cooking period and the oil must be filtered regularly. (Breading, batter and food pieces will cause problems in your fryer by speeding up the breakdown of the oil)
* There must be enough oil to just cover the thermostat throughout the frying session.
* (Usually 3.5 in/9cm is enough to prevent air breaking down the oil)
* Wet food should be dried before frying. Frozen chips must be cooked from frozen and should not be allowed to thaw before cooking. Fresh chips should be left for an hour after rinsing.
* (Reducing the available water will limit the moisture available to break down the oil)
* Fry in small batches. (The less that is put into the fryer, the less the temperature will drop and it will recover more quickly to the optimum cooking temperature).
* Shake as much oil as possible off the chips/food before service or placing in the hot box. (Shake, bang, hang – shake the basket vigorously twice and hang for at least 20 seconds)
* Avoid part frying foods and re-frying as this will increase the fat content.

**Safety during emptying of deep fat fryers and filtering of oil**

* Detailed guidance can be found on the HSE Catering Information Sheet No 17(revision 2) Safety during emptying and cleaning of fryers.
* A **risk assessment** should be carried out on emptying and cleaning of deep fat fryers. Oil filtering may be automated; semi-automated or carried out manually.
* Automated and semi-automated filtering processes (using enclosed portable filtering units) avoid the need for you to come into contact with the oil, significantly reducing the risks. You must however refer to the manufacturers guidelines for draining/filtering temperatures and safe operational requirements. These, together with your own risk assessment, will determine the need for suitable personal protective equipment.
* Manual oil filtering involves the operator draining the oil from the fryer through a filter, into a suitable drain bucket or container.
* **Burns from hot oil can be very serious.** Manual emptying and filtering should only be carried out when the oil has cooled to 40C. Allow at least six hours for cooling.
* Staff must be properly trained in safe procedures for emptying and cleaning in accordance with the risk assessment carried out.
* The power to the appliance should be switched off.
* Suitable personal protective equipment, as required by the risk assessment, e.g. eye protection, heat resistant gloves, aprons etc. must be worn.
* Follow any manufacturer’s instructions and use the correct equipment (e.g. drain valve or detachable spout for the type of fryer being emptied).
* Using a filter run the oil into a suitable heat resistant container. These containers will generally need carrying handles and a cover.
* Place the container in a safe place on a drip tray.
* Clean up any spillages immediately and make sure that the area around the fryer is clean and dry to avoid any slip risks.
* A legally authorised contractor must be engaged to remove waste oil from your premise. **Do not dispose of oil down the drain.**