

## SECTION 1

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# Health is Wealth

*"It is health that is real wealth and  
not pieces of gold and silver"*

*Mohandas Karamchand Gandhi*





Chapter 1

# Making Right Food Choices

The road to health goes through this simple equation:

**Nutrition + Health = Right Food x Better Digestive Capacity**

And all this takes is making correct food choices.

**O**ur eating habits can make or break our health. There is no doubt at all that - we are what we eat. And unfortunately, we eat what we get. Even more unfortunate the entire environment we subsist in is fashioned towards eating unhealthy food, as that is what is being made available and sold to us through high decibel and very effective marketing. This is in fact the key field in the food and nutrition space that FSSAI is working to address. Eat Right India movement is working to transform the country's food system to not just ensure availability of safe food, healthy and sustainable diets, but the programme is also bringing about a right information revolution by ensuring that correct information is reaching people across the country through its stellar initiatives. The key challenges FSSAI is seeking to address via the Eat Right India movement are:

Food is a fundamental need and a right. The fact that food is critical in shaping and determining the health and nutrition outcomes of the country is a no brainer. It is also a commodity, a product, a meal and source of nutrition which is deeply ingrained in our culture, heritage and identity. At every stage along the food value chain - primary producers, processors, buyers, packagers, distributors, regulators and consumers play a role in shaping its safety and quality, its environmental footprint and its ability to feed citizens healthily and sustainably. And this chain needs to function properly for right food to reach the end users.

Food safety is a critical link for good health and nutrition but is often neglected. In India, food-borne illnesses remain a threat to the entire population and their burden in fact is comparable to malaria, HIV/AIDS and tuberculosis.

That there is a strong interconnection between unsafe food and adverse health and nutrition outcomes is again well established as that results in poor absorption of nutrients from food, particularly of vitamins and minerals that impact nutritional status of a person.

India has persistently high prevalence of undernutrition with rising incidence of over-nutrition and non-communicable diseases. These are pervasive across age groups and there is need for urgent action across age groups. There is also an epidemiological shift happening from communicable to non-communicable diseases like diabetes, hypertension, and obesity.

Finally, the country is also facing myriad of other challenges, including water crisis, high food loss and waste, and rising ill effects due to climate change. All these need to be addressed too.

## The Good Work

To address all these concerns FSSAI has expanded its focus from merely preventing food adulteration towards a more holistic approach to ensure safe and wholesome food for all citizens and has made a transition from being merely an 'enforcer' to also an 'enabler' by launching the 'Eat Right India' movement. The movement targets people across ages, gender, regions, and socio-economic groups. It brings together food-related mandates of the agriculture, health, industry and environment ministries with a 'whole of government' approach. It has forged partnerships with not only flagship programs of the country but also with professionals and other stakeholders.

The movement has three key pillars -

**1** Food Safety

**2** Healthy Diets

**3** Sustainable Food System

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# Food Safety

The focus is on ensuring personal and surrounding hygiene, maintaining hygienic and sanitary practices through the food supply chain, combating adulteration, reducing toxins and contaminants in food and controlling food hazards in processing and manufacturing processes.

# Healthy Diets

The focus is on promoting diet diversity and balanced diets, eliminating toxic industrial trans fats from food, reducing consumption of salt, sugar and saturated fats and promoting large-scale fortification of staples to address micronutrient deficiencies.

# Sustainable food systems

Actions under this pillar promote local and seasonal foods, prevent food loss and food waste, conserve water in food value chains, reduce use of chemicals in food production and encourage use of safe and sustainable packaging.



On occasion of 150th birth anniversary of Gandhiji, FSSAI also launched a unique initiative the 'Swasth Bharat Yatra' to spread the messages of 'Eat Right India' movement amongst masses. 'Swasth Bharat Yatra', the world's biggest cyclothon was flagged off on 16th October 2018, on the occasion of World Food Day. This yatra was one-of-a-kind Pan-India public health revolution, encouraging people to 'Eat Right' and delivering the message of 'Eat Right India' through direct outreach among citizens. It was instrumental in galvanizing the food safety network in all the states and create a sustainable culture and habit of safe and healthy diets by promoting individual awareness and collective action and strengthening institutional systems.

In addition, an amazing initiative the 'Eat Right Mela' has also been conceived to engage, excite and enable citizens to eat right through an info-tainment model. The first National Eat Right Mela was held during 14th-16th December 2018 in New Delhi in collaboration with NASVI's Street Food Festival to an overwhelming response. Since then, Eat Right Melas have been held all over India in various cities like Mumbai, Chennai and Indore and even at district level at Barpeta, Assam.

The second National Eat Right Mela was organised from 25th -29th December 2019 which was a complete food experience for the entire family. In addition to showcasing street foods from all over the country, it consisted of entertaining yet informative activities such as food quizzes, talks by dieticians and nutritionists, live cooking demonstrations by chefs, discussions by leading food experts and exhibits on healthy eating along with a host of cultural performances such as street theatre, dances. It was a huge success.



# 6

## Simple Steps to Eat Mindfully

- 01** **Keep Gaps:** Try to eat all your meals within a consistent 10-hour window, and fast for the remaining hours of the 24 hours day. This helps protect from NCD's like Type 2 diabetes, cardiovascular diseases and inflammatory disorders.

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- 02** **Hydrate well:** Very often what you perceive as hunger is only dehydration. So, before you pick up that cookie, have some water first. Enough water will keep all body systems chugging along.

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- 03** **Chew More:** Chew your food properly. It takes about 20 minutes for your brain to respond to increased glucose levels (due to the food) and get the "I'm full" message. So if you eat at supersonic speed, you'll end up eating much more than you should. So, to time it right, follow the 20:20 rule. Try chewing each mouthful 20 times until it becomes almost liquid. This also leads to better digestion of food.

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- 04** **Just eat:** When you are eating, avoid all distractions, and just focus on your food... look at it, taste it, feel it... let your stomach extract the maximum possible nutrients. Otherwise the food you are eating at that time is as good as 'wasted' if your body's energies are concentrated elsewhere as the nutrient absorption gets short-changed extensively.

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- 05** **Know your portions:** Practice portion control consciously. Your portion could decide just how many extra calories you are wolfing down on a daily basis. When portion size of a dish is too large, share your dish.

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- 06** **Eat a happy diet:** What you eat has the power to make you feel good or really bad as food affects our emotions directly. Science is clear that when you eat food that you don't enjoy, the nutrient absorption is very low. So, try to eat healthy foods in a way they make you happy.





Chapter 2

# Pledge to Cut Off Too Much Salt

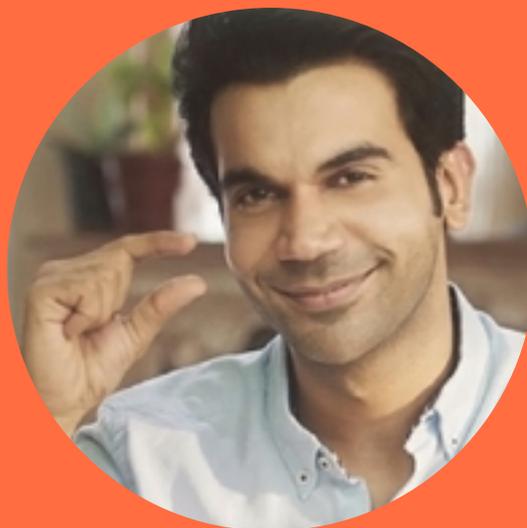
When **Rajkumar Rao** says it, you just listen. When experts talk about its importance, you just think about it.

But it's only when your heart begins to get affected by it, then you actually take action.

Why wait for the damage to happen before understanding its importance.

We are talking about

## Aaj se 'Namak' Thoda Kam



### The Truth

In spite the flak it has been receiving, a little salt is indispensable for a healthy, balanced diet. Salt (sodium chloride, NaCl) helps regulate body's water balance, keep muscles functioning and helps conduct nerve impulses. In short, salt is essential for life.

### How much do we need?

Different people spout different figures for our daily requirement of salt but experts worldwide thankfully are unanimous about it. WHO recommends a safe intake of 2000 mg of sodium = 5 g (1 tsp) a day.

Eating excess of salt will only add to the health troubles and unfortunately, that is exactly what we are doing, often unwittingly, every day. It's time to look at just how much salt we are eating every day.



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~~SALT~~ +  
DELETE**



## Are we eating **too much**?

Ask people what they know about salt and sodium, most don't know and often underestimate how much sodium they are getting. In fact, on an average, Indians are consuming two times the recommended daily intake i.e. more than 2 tsp of salt, (approximately 10g per day) the recommended daily intake i.e. 1tsp of salt approximately 5g per day.. It is not just the salt we add to our food while cooking, the sodium can come from salt and other chemical additives which are added to processed and restaurant foods. Foods naturally also contain some sodium. This make it hard to stay within the recommended limits. The truth is unshakeable: Most of us get way too much sodium through food.

## Why **you need to pay attention**?

Remember, that uncomfortable bloating feeling when your rings get stuck and your waist swells a few inches suddenly could also be due to the skewed sodium-potassium balance in the body; too much sodium makes the body retain water and bloat up. Salt has a direct connect with high blood pressure (hypertension). Too much sodium causes your body to retain water, putting an extra burden on your heart and blood vessels, which may lead to high blood pressure (BP).

High BP is an important risk factor for stroke, so keeping salt low is important to keep debilitating and often fatal strokes away too. Globally more than a million people die every year from heart attacks and stroke

Finally, excess sodium can even weaken your bones as it leads to leaching of calcium from the skeleton, priming you for early osteoporosis



# Less Salt



## Trim it!

### Smart strategies

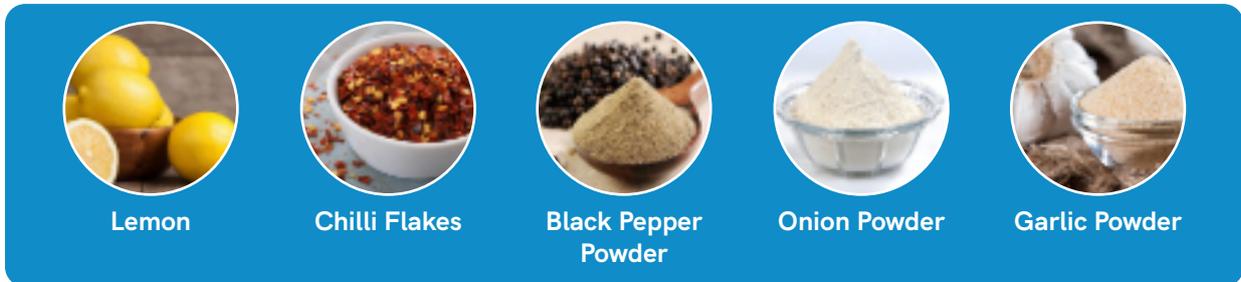
- ▶ Make gradual reduction in salt intake to let the taste buds adapt better.
- ▶ Have more water. Excess sodium will get excreted out with water.
- ▶ Eat more potassium rich foods like fruits, vegetables and coconut water (to balance out sodium).
- ▶ Don't keep the salt shaker on the table.

### Read labels carefully

- ★ Packaged foods are big culprits in adding sodium to our diet. Sodium is there in everything from canned foods to papads, to even ketchups and bread, biscuits and cookies. As per FSSAI's advertising claims
  - **Low Sodium:** Product contains not more than 0.12 g of sodium per 100 g for solids or 100 ml for liquids. Very low Sodium: Product contains not more than 0.04 g of sodium per 100 g for solids or 100 ml for liquids.
  - **Sodium free:** Product contains not more than 0.005g of sodium per 100 g for solids or 100 ml for liquids.
- ★ Limit your intake of pickles, chutneys, sauces, papads and namkeens.
- ★ Eat unsalted nuts.
- ★ Look out for regular high sodium suspects like cured meats - salami, bacon, ham and sausages and steer clear of Mono-sodium Glutamate (MSG or ajinomoto). Skip or avoid them.
- ★ Limit intake of foods described as brined, pickled, barbecued, cured or smoked as they tend to be higher in salt.
- ★ Say no to HFSS or unhealthy food; a few slices of pizza or canned soups can send your sodium skyrocketing.
- ★ Cook from scratch or use minimally processed foods which are additive free... De-emphasize the use of processed foods. Avoid readymade soup premixes and batters, masala mixes, and instant meals. They tend to be high in sodium.

## Add flavor not salt

- ★ Switch to alternative flavorings: wedges of cut lemon/lemon juice, chilli flakes and black pepper powder, onion powder and garlic powder are good options.



Herbs like coriander, parsley, mint, oregano, thyme, and basil work well too. Try this: mix 5 parts roasted and powdered sesame seeds with 1 part salt, and use as a flavoring. Adds an interesting flavour to food.

- ★ Avoid highly salted flavorings like stock cubes and gravy granules and foods like crisps, salted nuts, popcorns, savory snacks and soups – they are all high in salt.

## Cook Smart

- ★ Monitor added salt during cooking. In India, more than 80% of salt comes from salt added during cooking. Track and monitor the consumption of salt at home - buy and use only a fixed quantity every month and try further reducing the quantity.
- ★ Do not add salt to rice or atta when making chapatis.
- ★ Eat fruits and salads without adding salt. Avoid sprinkling salt on curd too.
- ★ Use more fresh produce as they are rich in other nutrients which balances the sodium.
- ★ Add salt after the food is cooked, it gives more salty taste with less salt.
- ★ Look for ways to pair salted foods with unsalted or less salted foods, for example, have dal that has salt with rice without salt, etc.
- ★ Focus on high umami foods. These foods are high in a compound called L-Glutamate (a flavour enhancer) that triggers our umami or savory taste receptors. Chicken and meat broths together with fermented foods, fish, soya bean, mushrooms, tomatoes, seaweeds and carrots are examples of umami foods/ingredients.

# The Good Work

Aj Se Thoda Kam Campaign of FSSAI aimed at nudging people to reduce their salt, sugar and fat intake is delivering the message very effectively, and educating people through communication material and a TVCs featuring actor Rajkummar Rao.

A meaningful all round strategy to reduce salt consumption across populations containing all elements of the WHO's SHAKE salt reduction package is being followed aggressively.

FSSAI launched an innovative challenge-The Salt Challenge: Every Pinch Counts in November 2019, where they invited suggestions from nutrition professionals and students all over India for cutting down salt intake at home and restaurant cooked food. The competition received an overwhelming response from every corner of the country in a span of just 10 days

## **Success Story shared by 'ICMR-NIRT Staff Canteen' at Chennai: They have successfully implemented following strategies to reduce salt intake:**

- ▶ No salt is added in idli and dosa batter before cooking for breakfast.
- ▶ No salt is added in boiled white rice during preparation for lunch.
- ▶ No salt is added in buttermilk, served along with afternoon meals.
- ▶ Instead of pappad/ appalam (which contains salt) along with meals, customers are offered option of having green salad with lemon. (Which instead has resulted in reduction in papad consumption in 1/3rd of staffs.
- ▶ Request to avoid pickle or to take less pickle, which is salty and nor-mally served along with afternoon meals. (This advisory has resulted in 3/4th reduction in pickle consumption overall).
- ▶ Request to avoid or add less salt to curd rice in lunch

## Suggestions received during the challenge:

- ▶ Use of unsalted butter, use of groundnut powder, tamarind pulp, amla, garlic powder, onion powder, carrom seeds, coconut milk, coconut powder, mushroom powder. Undaria and dulse species of Brown seaweed delivers umami flavour to the food
- ▶ Many herb /spice mix which were suggested from different regions as an alternate to salt e.g. Podi using toor dal, garlic, chillies, tamarind, rosemary and curry leaves and using dried coriander, jeera, bengal gram, chilly, pepper, cloves, lemon zest, vinegar, oregano, dried lemon powder, kokum, dried beetroot powder, and cinnamon can be added to reduce the salt in the dish.
- ▶ Oils infused with garlic, chilli, lemon can be a wonderful replacement for butter, salted butter, and soy sauce.
- ▶ Salt substitutes, which consist of other mineral salts, can impart a salty flavour to food. Potassium chloride (KCl) is the most popular choice as a feasible salt replacer.
- ▶ Prepare poriyal with adding roasted groundnut powder instead of salt.
- ▶ Replace traditional pickles and sauces with pickled vegetables (cucumber and carrot soaked in vinegar).



## More is being done

### ◆ There are some more effective proposals in the pipeline:

The Eat Right campaign (somewhere it's written as a movement and somewhere a campaign - let's maintain consistency) is working towards reducing the salt content of packaged foods as that helps change the food environment without requiring consumer action, making the healthy choice the default. It seems possible looking at the example of Kuwait, the largest manufacturer of bread, which has successfully reduced the salt content of bread by 20%.

Focused advocacy is on to garner with support by civil society, researchers, and scientific associations to encourage industry to participate, ensure support across government, consumers and industry.

### ◆ Low Sodium Salts

Low-sodium salt is a specially formulated salt that provides lower sodium than ordinary salt by partial replacement of sodium chloride with potassium, magnesium and calcium compounds. It is generally consumed by people with hypertension and high blood pressure. FSSAI is under the process of setting up standards for low sodium salts in India. Presently, there are few brands of low sodium salts available in India market. Advocation of low-

sodium salts in which the sodium chloride (the harmful ingredient in salt) has been replaced with potassium chloride will help. However, it is advisable to consume it under medical supervision, and should be avoided by people with medical conditions like kidney problems, hyperkalemia etc.

People don't know or have no control over the amount of salt that they eat at restaurants; these foods are often saltier than foods cooked at home. Here displaying warning labels on foods to enable consumers to make informed choices can help. For example, New York City has introduced regulations so that large restaurant chains with 15 or more locations must display high-salt warning labels on menu items or combination meals that contain more than the recommended daily limit of sodium.

Behaviour change communication strategies must be used to educate, motivate and empower the public to achieve the objective of reducing salt consumption.

## Bottom line

One must eat just adequate quantity of salt. Avoid adding extra salt at the table

Know approximately how much sodium is in a given amount of table salt  
(made approximately of 40% sodium and 60% chloride):

1/4 teaspoon salt = 575 mg sodium

3/4 teaspoon salt = 1,725 mg sodium

1/2 teaspoon salt = 1,150 mg sodium

1 teaspoon salt = 2,000 mg sodium

# SHAKE the SALT Habit

WHO recommended

**SHAKE Technical package Surveillance:** measure and monitor salt use

**Harness Industry:** promote reformulation of foods and meals to contain less salt.

**Adopt:** standards for labelling and marketing

**Knowledge:** educate and communicate to empower healthy eating

**Environment:** support settings to promote healthy eating



**Eat Less  
Salt.**





Chapter 3

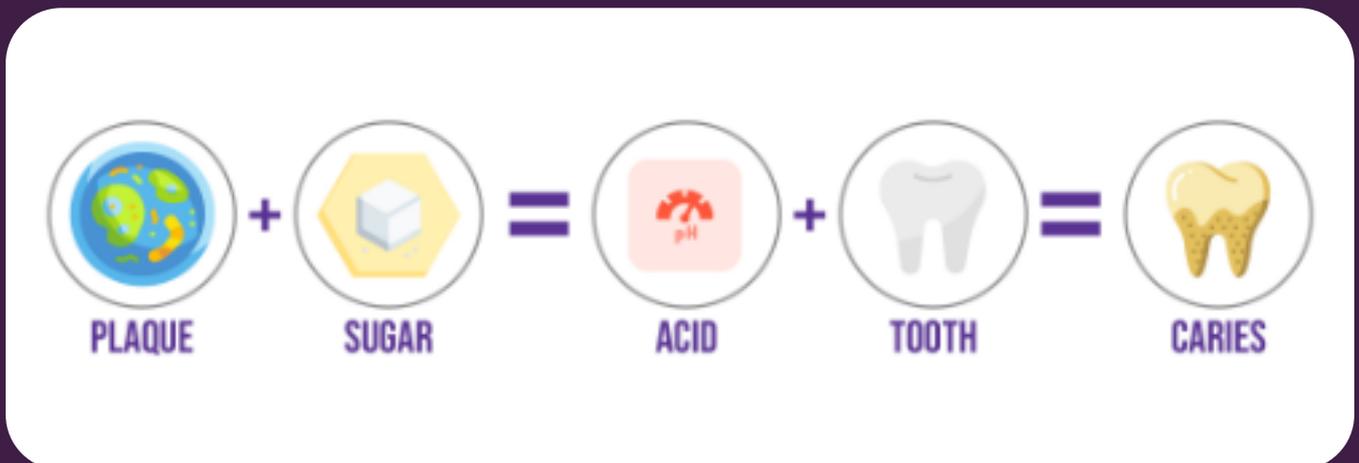
# Stop the Sugar Attack

If you think that sugar's only adverse effect is on our teeth then it's time to swallow the bitter pill – it is not really as sweet and simple as that! In fact, sugar is a far bigger devil (threat)? As its excess leads to weight gain, elevates blood lipid levels and increases inflammation in our body.

## Why is it important to be careful?

Mindless consumption of sugar in our diet does not just lead to diabetes; it can speed up heart disease, grow gallstones, hasten hypertension, cause arthritis, and even aggravate adult acne and wrinkles.

- ★ Every 5 gm (1tsp) of sugar adds an extra 20 calories, and slowly these calories add up and lead to weight gain. So, if you are skipping meals to get thin but not putting a lid on how much sugar you are eating, then you are going on the wrong path. Those inches won't melt.
- ★ The connection between sugar and dental caries is known to everyone, and it can come in between you and your 100watt smile. Bacteria thrive on sugar. More sugar consumption leads to more food for the bacteria which increased thrive and multiply and produce acid. And when bacteria are more, more acid is produced. This acid eats away at the tooth enamel leading to holes or caries. And yes, adults are equally susceptible too



- ★ Too many ladoos or chocolates might show up as pimples on your face (and early wrinkles with time), as sugar leads to inflammation in the body, one side effect of which could be bad skin too. This is because too much sugar in the bloodstream attaches to proteins to form advanced glycation end products (AGEs), which damage the collagen and elastin, the protein fibers that keep skin firm and elastic. Keeping diet low in sugar (and fat) keeps the wrinkles and acne at bay.

## So how much to have?

When it comes to sugar, lesser the better. Ideally 4-5 tsp in a day according to Indian Dietary Guidelines. This includes the sugar you add to beverages and foods as well as sugar present as an ingredient in any foodone , one must limit the intake of sugar specially in hidden sources. WHO recommends 5% of the total energy from sugar. But sugar is not just the table sugar that you consume; added sugars can be found in everything from cereal bars to salad dressings, and even in seemingly healthy foods like granola, flavoured yoghurts, instant cereal mixes, protein bars, canned fruits, and even in juices, sports drinks and iced teas. So ,**read labels carefully.**

## Look out for

While there is certainly nothing wrong with having moderate amounts of sugar in your diet, what is damaging is how fast it adds up. There is just too much sugar in almost everyone's diets these days and we end up unwittingly consuming it at an astoundingly high and unhealthy level - even if we don't have a sweet tooth. So to keep a lid on consumption look out for:

- ★ The umpteen teaspoon of sugar that you add to your tea, coffee, milk, iced tea, lemonade, lassi, cocktails.
- ★ The packaged juices, flavoured yoghurts, canned fruits, cereal bars, chocolates, cookies, aerated drinks ( , processed foods, granola, sports drinks, even ketchup and salad dressings.
- ★ Read the labels carefully. Added sugars include all kinds of sugars and syrups that are added in a product during processing to make it taste better. Check the box to know about the different kinds (names) of sugars.



# Aaj se thoda kam – cheeni kam

The **Aaj se thoda kam Campaign** is nudging people to:

- ★ Gradually reduce the use of sugar in their daily diet
- ★ Track and monitor the consumption of sugar at home – buy and use only a fixed quantity every month
- ★ Use naturally sweet ingredients rather than refined sugars. For example, in fruit-based desserts add more fruits for natural sweetness.
- ★ Limit the intake of cakes, pastries, confectionary and sweets prepared with refined cereals containing high amounts of sugar.
- ★ Limit the consumption of sugar or carbonated sweetened beverages and sugary snacks
- ★ Instead of drinking fruit juice, eat fresh whole fruits. It provides fibre, which gives a feeling of fullness and fewer calories.
- ★ Moderate the intake of sugar-preserved foods like jams, jellies, marmalades and sugarysnacks.
- ★ Prevent children from overindulging chocolates and candies that may put them at risk of obesity, and other non-communicable diseases later in life
- ★ Limit the amount of desserts and use less sugar in preparing them.
- ★ Use of condiments such as nutmeg, cinnamon could be added to reduce the need of sugar in the dish.



## One Final Tip

To keep sugar cravings away it is very important to keep the blood sugar stable by starting the day with a nutritious breakfast and having smaller meals throughout the day.

## Read food labels carefully

Knowing about different kinds of sugars goes a long way in controlling blood sugar.

### Brown sugar:

These are sugar crystals coated with molasses.

### Maltose:

Maltose is the breakdown product of the starches. It is formed when two molecules of glucose combine.

### Fructose:

It is the naturally occurring sugar in the fruits and honey. One and a half times as sweet as sucrose but with the same caloric content,

### Molasses:

Also referred to as the golden syrup and is often listed in the list of ingredients for making cakes.

### Glucose:

This naturally occurring sugar is found in fruits, some vegetables and honey. It results in a quick and significant rise in blood sugar.

### Sorbitol:

A sugar alcohol, which is present naturally in fruits. It is more slowly absorbed than glucose.

### Honey:

Other form of sugar like honey contains about 35 per cent glucose, 40 per cent sucrose and 25 per cent water.

### Sucrose:

Known as table sugar, it is refined sugar that is made from sugarcane.

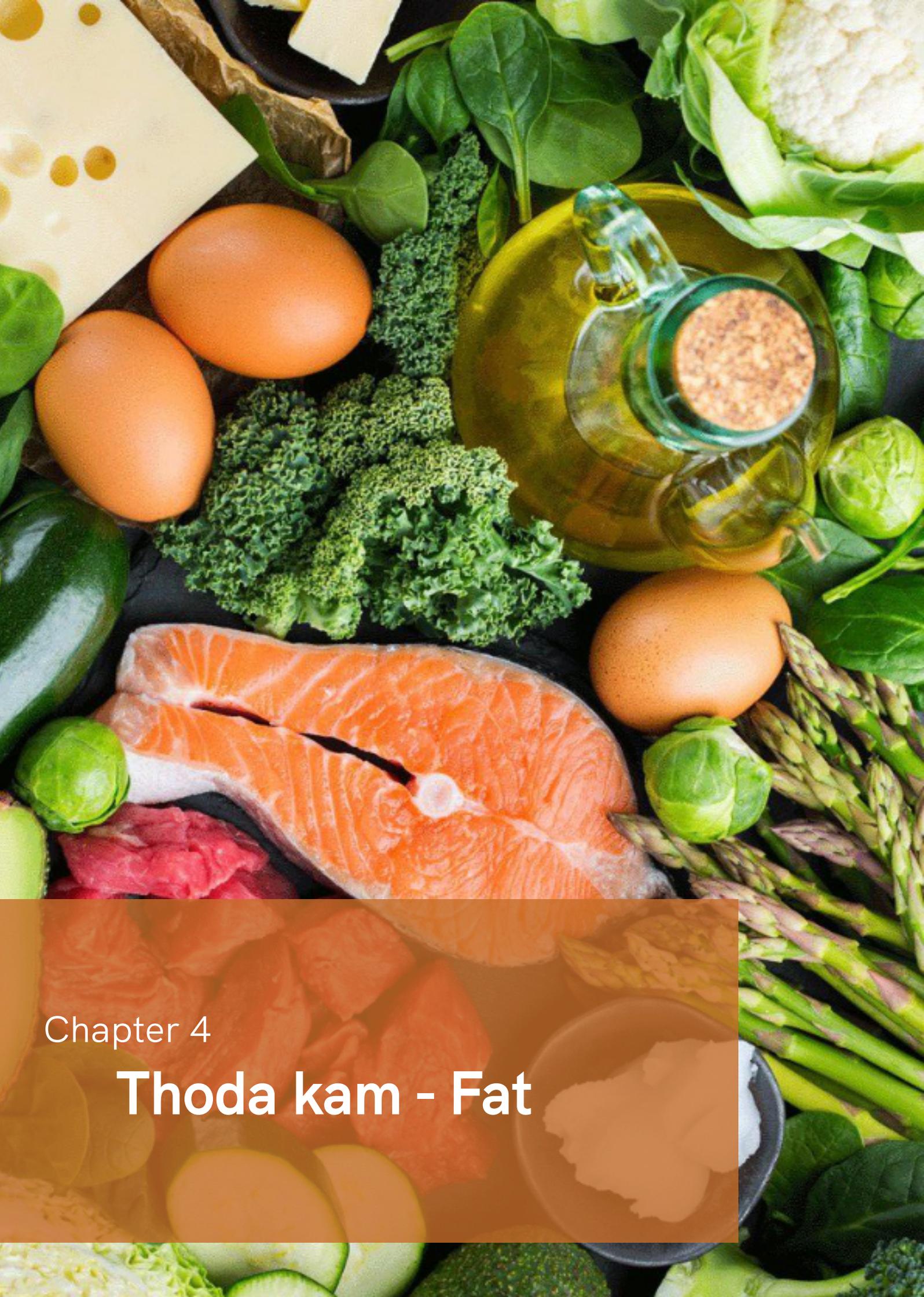
### Lactose:

Form of sugar naturally present in milk.





The need for sugar free products has given rise to 'sugar substitutes or artificial sweeteners'. Sugar substitutes or artificial sweeteners also called as non-nutritive sweeteners, contain few or no calories or nutrients. They used instead of sugars (i.e., sucrose, corn syrup, honey) to sweeten foods, beverages and other products, such as oral care products and certain medications. In India the FSSAI has approved five artificial sweeteners, namely, **Saccharin sodium**, **Aspartame** (methyl ester), **Acesulfame potassium**, **Sucralose**, and **Neotame**. These are available under different brand names. However, it is advisable to be cautious in their consumption. It is best to stick to naturally sweet foods.



Chapter 4

# Thoda kam - Fat

**F**or more than half a century now we have been asked to eat a low fat diet to save our health, but have progressively only become more unhealthy, fat and diseased. Confused?

Well, that's exactly how news about fat has always been over the decades: complicated, confusing, and contradictory.

That said: one fact that stands validated and strong still, is that excess of fat intake is a clear risk factor for obesity and non-communicable diseases (NCDs) like diabetes and heart diseases.

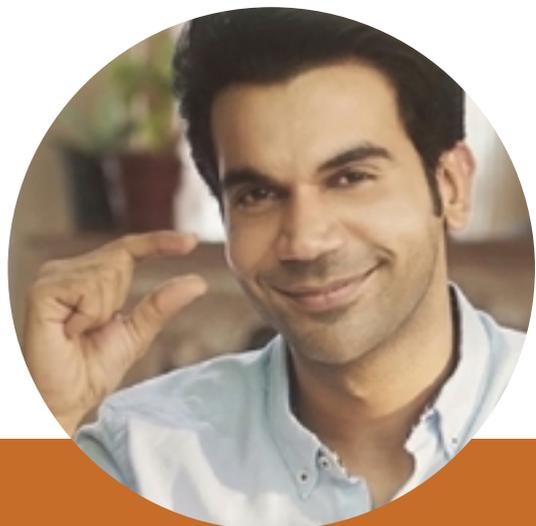
Now the right message is not to 'give up' fat, but to reduce the consumption as we all do need some fat to stay healthy.

## How much?

Now that it is decided that giving up fats is a bad idea, how do we decide how much fat to eat? Well, keep calories coming from fats to maximum 25% of your total calorie intake for the day. Basically, if you are eating a 2000 calorie diet then not more than 500 calories should be from fats, both visible (what you cook in) as well as invisible (nuts, oilseeds, milk, eggs, fish, etc). Easier way would be to stick to about 20-25g gm or ml (4 tsp) of visible fat (cooking oil) per person per day, and avoiding processed foods that are high in fat. Nuts and seeds also form an integral component of the 'fat' category. They provide us with the good fats. Include peanuts, almonds, pistachio, sesame seeds. etc., in your daily diet.

# The Good Work

Food Safety and Standards Authority of India launched 'Aaj Se Thoda Kam' campaign as a preventive healthcare measure to address various lifestyle related non-communicable diseases. The campaign aims to promote reduction of fat through communication material and a TVCs featuring actor Rajkummar Rao for wider and more effective dissemination in mass media and social media and is proving very effective at this.



# Karo Thoda Kam

- ★ Gradually reduce the use of oil in your daily diet.
- ★ Track and monitor the consumption of oil at home - buy and use only a fixed quantity every month and try reducing its quantity further.
- ★ Measure cooking oil with a small spoon rather than pouring freely from the bottle.
- ★ Change the type of oil every month.
- ★ Do not repeatedly reheat oil or re-use the same oil for frying or cooking. This is elaborated further in the box.
- ★ Avoid frying as much as possible. Instead boil, steam, roast or grill food.
- ★ Moderate the use of butter and ghee.
- ★ Avoid vanaspati, bakery shortenings and margarine as they contain trans fats (bad fat).
- ★ Moderate the consumption of bakery products or processed foods high in fat.
- ★ Choose lean meat sources like chicken or fish over red meat or organ meat, if you are non-vegetarian

## Why do we need **Fat**?

Yes, you read it right, fat in fact is quite vital to help us lead healthy, productive lives. Dietary fats supply us with energy. So, if you want to feel good all day long, you need to make sure you are getting enough fats, and the right types. Eating less fat means one ends up eating more carbohydrates, (and the wrong type!). When we replace the fat with quick burning carbs we tend to feel fatigued, and also risk wreaking havoc on the metabolism and hormones.

Fat also provides fat soluble Vitamins A, D, E and K. This means their absorption and proper use in the body depends on the presence of fat in our diet. These vitamins are essential for blood clotting, cell repair, growth and immunity.

Certain essential fatty acids omega 3 and omega 6 fatty acids are linked to the production of many chemicals in the brain, and their deficiency can play havoc with our mood. Our hormones get affected too, as most hormones running in our body depend on fats to stay the course. Very often hormonal imbalances can be traced to low fat diets.



**Choose Wisely**

Elimination of fat from the diet usually means eating more carbs and proteins, which is not a good idea. Too much protein has been linked to nephrological problem or kidney damage, and carbs in excess are any ways clearly bad for us.

Finally cutting down fat does not help in weight loss. Fat delivers a feeling of satiety as they keep our blood sugar levels stable longer and prevent excess hunger and cravings. Whereas with fat free meals we usually end up eating and eating, and consume excess calories without realizing.



## Quit repeated use of cooking oil

You must have seen the same oil being reheated again and again to cook the snacks when you go to a restaurant, hotel or at the local shop. We are guilty of doing this at our homes too. But is this practice safe? Have you ever wondered what this practice does to our health?

### The Dangers

Eating food cooked in the oil that has been reheated again and again is the worst thing we can do to our heart and general health. This process - reheating oil - leads to formation of toxic compounds in the oil which when ingested lead to multiple health problems. Cooking food in dark coloured oil giving blue-grey colour smoke which is being used and reheated throughout the day can make the food rancid, release harmful toxins, form trans fats, which can further lead to:

1

**Increase in free radicals in the body, which can cause inflammation - the root cause of most diseases including obesity, heart disease and diabetes.**

2

**Increase in level of LDL or bad cholesterol in the body which can lead to heart disease and stroke.**

3

**Burning sensation in stomach and throat and acidity.**

4

**Higher risk of cancer. Reheating the oil changes its composition which leads to release of So be wary! Very wary!**

## The Good Work

While using the same cooking oil for repeated frying has adverse health effects, this Used Cooking Oil is also a potential feedstock for manufacturing biodiesel. Therefore, on the occasion of World Biofuel Day i.e. 10th August 2018, FSSAI has launched 'Repurpose Used Cooking Oil' (RUCO) - an ecosystem to enable the collection and conversion of used cooking oil to biodiesel. FSSAI has created a nationwide eco-system to collect used cooking oil to be converted into bio-diesel. In a typical year, Indian masses consume about 23 million tons of

cooking oil. Hence There is a potential to recover about 3 million tons of used edible oil for producing bio-diesel,

The government has introduced a new set of regulations governing the use of cooking oil which has set the maximum permissible limit of Total Polar Compound (TPC) in cooking oil at 25 percent. As part of RUCO, standards relating to total polar compounds in cooking oil have been notified, guidelines and directions have been issued to streamline the collection process. A "RUCO Compliant" sticker has also been released for food businesses complying with the regulations.

## **Use Oil Responsibly at Home**

For cooking at home using a fresh batch every time is a good practice but may not really be economical and practical. But you can reduce the risk of negative effects that of reused oil by following these pointers:

- ★ Make sure the leftover oil from cooking or frying is cooled down, strained (as food particles in used edible oil further spoils it) and then transferred into an airtight container, which can be used for making parathas and vegetables.
- ★ Always check the oil each time before reuse; if it's dark in colour and is sticky then don't use it.
- ★ If the oil begins to smoke too quickly while heating it, please discard it. Nothing is more important than your health.





Chapter 5

**Trans Fats are not  
Just Bad but  
Downright Ugly**

**F**ats get the bad rap all the time, but not all fats are bad. Some like ghee and coconut oil are actually good for us when consumed in right amount. But that said it's important to keep an eye out for the meanest of all the fats - trans fats.

That is because according to WHO estimates, every year, trans fat leads to more than 500,000 deaths worldwide from cardiovascular diseases. So, eliminating trans fats is key to protecting health and saving lives.

### But why are they so dangerous?

Trans fats have a specific chemical structure, that our body finds hard to metabolize and also trans fats have no physiological role to play in our body. So certainly don't consume it !

In addition they clog arteries, increases 'bad' LDL cholesterol and triglycerides, and reduces 'good' HDL cholesterol, a multifold whammy that increases the risk of coronary heart diseases. They can also trigger diabetes. Immune dysfunction, obesity, reproductive problems and cancer.

Plus those who eat more trans fats have higher levels of C-reactive protein (a biomarker for inflammation in the body). Trans fat consumption is linked with poor memory and higher risk for dementia too.

All this is definitely scary!

### Where are they lurking?

Even scarier news is that these artery clogging fats are there almost everywhere. Some trace amounts are found in dairy and red meats which according to some reports may not be that harmful for health as other forms i.e. artificial trans fats.

It is the artificial trans fats that is formed when hydrogen is added to vegetable oil to make it solid at room temperature called industrially produced trans fatty acids (IP-TFA), which is the dangerous kind.

TFA were first introduced into the food supply in the late 19th and early 20th centuries when partially hydrogenated oils became popular and replaced butter and ghee in industrial food products to cut cost and to increase the shelf life.

# Look out

Trans fats are also found liberally in:



**Fats/oils:** Vanaspati, margarine, bakery shortenings.



**Bakery Products:** Cookies, biscuits, doughnuts, fan, rusk, cake, crackers.



**Packaged foods:** Bhujia, namkeen mixtures, cake icing, hot chocolate mixes, potato chips, corn and tortilla chips, microwave popcorn.



**Fried foods:** Most street / restaurant foods - bhatura, aloo chaat, patties, samosa, kachori, pakora's, french fries, fried chicken, even sweets like imarati, jalebi... as these are mostly made with or fried in partially hydrogenated oils.



**Reheated oil:** Some trans fats are formed when the same oil is reheated and used for cooking again and again.

## Be careful

WHO recommends that total TFA intake to be limited to less than 1% of total energy intake, which translates to less than 2.2 g/day in a 2,000-calorie diet. No need to get into calculations, just follow these thumb rules:

- ★ Go easy on fried foods and bakery items
- ★ Carefully choose the cooking oil at home (avoid vanaspati)
- ★ Don't reheat oil too much
- ★ Cut down consumption of processed and packaged foods
- ★ Avoid fried street food.
- ★ Read the labels carefully as other names for trans fats are partially hydrogenated oils, hydrogenated vegetable fats and shortening.

## The News is Good

Elimination of industrially-produced TFA is feasible and achievable, and it is being done successfully worldwide. Several countries have in fact eliminated industrially-produced TFA from the food supply through implementation of systematic policy actions and monitoring programs.

Taking guidance from the REPLACE action package recommended by WHO that provides six strategic actions to eliminate trans fats from the food supply: Review, Promote, Legislate, Assess, Create and Enforce - India too is committed to elimination of industrial trans fats in fats and oils in a phased manner from the food supply and make India Trans Fat free by 2022.

The trans-fat content in fats and oils has already been limited to 5% and the process to further reduce it to 3% by 2021 and to 2% by 2022 is already on target. The regulation is being extended to food products having fats and oils too.

In addition, Food Safety and Standards (advertising and claims) regulation 2018 allow the trans-fat free claim on foods that contain 0.2 gram trans fats per 100 gm / 100 ml. Similarly, food establishments (bakeries, sweet shops and other food outlets) can now display the trans-fat free logo in their outlets and on their food products if they use trans-fat free oils/fats.

FSSAI is also educating chefs and working with them to encourage use of healthier fats/oils, use fats/oils with less than 2% trans fats in all their recipes, promote trans fats free food, reformulate and create a pool of healthy region specific trans-fat free recipes, work with food technologists to promote substitutes for trans fats and create awareness among consumers on ways to avoid trans-fat in their diet.

# TRANS-FAT: A SILENT KILLER

## Eliminate Trans-fat



AVOID  
VANASPATI OR  
MARGARINE



LIMIT FRIED  
FOODS



AVOID REPEATED  
USE OF COOKING  
OIL



100 Calories from Fat	
	% Daily Val.
Total Fat 11g	17%
Saturated Fat 2.5g	12%
<b>Trans Fat 2.5g</b>	
Cholesterol 0mg	0%
Sodium 105mg	4%
Total Carbohydrate 0g	0%
Dietary Fiber 0g	

CHECK  
NUTRITION LABEL  
FOR "TRANS-FAT"



**Trans Fats** are the worst type of fat, they increase the bad cholesterol (**LDL**) and decrease the good cholesterol (**HDL**) in our body

## Bottom line

The fact is that while we love foods which contains trans fats, our heart and blood vessels don't. Remember they increase the shelf life of foods, but might end up reducing ours. Besides why should our children have such an unsafe ingredient in their food. We owe it to them to eliminate it completely, and replace with healthier oils that preferentially contain monounsaturated and polyunsaturated fats.

### The REPLACE Road-Map

Review dietary sources of industrially produced trans-fat and the landscape for required policy change.

Promote the replacement of industrially produced trans fat with healthier fats and oils.

Legislate or enact regulatory actions to eliminate industrially produced trans fat

Assess and monitor trans fat content in the food supply and changes in trans fat consumption

Create awareness of the negative health impact of trans fat among policy makers, producers, suppliers, and the public. Enforce compliance with policies and regulations

**TRANS FAT**  
**FREE**



Chapter 6

# **Don't be afraid of fats - Just Get Oil Smart**

**A**re you constantly on a hunt for foods that are fat free? And when you hear the word "fat," do you automatically think bad? If yes, you couldn't be more wrong. Not our fault actually! Dietary policies worldwide for decades continuously branded fat as a villain, a vile food ingredient responsible for all the bad that happens to our body.

In 1990s in fact the market was flooded with low-fat products: non-fat salad dressing, baked potato chips, low-fat milk and yogurt and more such. And due to this conscious cutting down of fat from the diet, our consumption of carbohydrates increased substantially and our plate became completely unbalanced. This is one of the cause which has led to an increase in the lifestyle diseases worldwide.

Thankfully now the tide is turning and it is becoming increasingly clear that fat is not devil, in fact its intake is imperative for health, as long as we choose the right kind and quantity. Sure, some fats are still bad, and too much of any kind is harmful to our waist and health (when it comes to calories, all fats deliver 9 calories per gram), so the trick is to consume the right kind of fat in an appropriate amount and choose the good fats over the bad.

## Know Good fat vs. Bad fat

Replace bad fats with good fats. And beware just adding a little good fat to an already bad diet does not work as good fat works best when it replaces bad fat. For that it is important to understand the difference between healthy and unhealthy.

### Poly Unsaturated Fatty Acids

PUFA are primarily of two types: omega 6, and omega 3. They are called essential fatty acids (EFA's) because we cannot live without them, and the body cannot make them indigenously, like vitamins, minerals and other essential nutrients, we must get them from the foods we eat. While we need both omega-3s and omega-6s, an imbalance between them can lead to inflammation in the body (bad for our health). The ideal ratio of essential fatty acid, linoleic acid (omega- 6): linolenic acid (omega - 3) should be 5- 10:1 but today the ratio stands around 15:1, that is we are consuming way too much of omega 6 which is extremely unhealthy. Excess usage of visible fats and processed foods (like chips, pakoras, French fries etc.) that we consume are to be blamed for this.

**Balance it:** with enough consumption of omega 3, found in fatty fish (salmon, mackerel, tuna, surmayi, singhara, hilsa, rohu), walnuts, flaxseeds (alsi seeds), and greens like methi and mustard leaves.

## Monounsaturated Fatty Acids

Along with PUFA, MUFAs too health benefits. These important fats help lower bad LDL cholesterol and raise good HDL cholesterol.

**Zero in:** on high MUFA oils - olive, flaxseed, almond, sesame, peanut and cashew. Olives, dark chocolate, peanut butter, almonds, cashews, pistachios, peanuts and seeds like sesame, pumpkin, poppy, chia and flax are other good sources of MUFA.

## Saturated Fatty Acids (SFA)

Stop banning unsalted butter and ghee from your diet. These are not devil. The mantra is to take them in moderate amounts.

**Look out:** SFA are found in found in red meat, poultry, butter, cheese, full-fat dairy products, coconut oil, palm oil and ghee.

# Bad Fat, the Trans Fats

As discussed in previous chapter it is important to keep an eye out for this meanest of all fats. They are dangerous as they increase 'bad' LDL cholesterol and triglycerides, and reduce 'good' HDL cholesterol (terrible for our heart), and also trigger diabetes, immune dysfunction, obesity reproductive problems and cancer and have been linked to poor memory too.

**Be careful:** they are there almost everywhere - cookies, crackers, cake icing, potato, corn and tortilla chips, many types of packaged or microwave popcorn, doughnuts, baked goods, margarines, and other processed foods, and of course all fried food - samosas, pakoras, kachoris, French fries, doughnuts and fried chicken, even fried sweets like gulab jamuns. jalebis... as they are often cooked in partially hydrogenated oils. So be careful. By the way another name for trans fats is "partially hydrogenated oils", so steer clear of the vanaspati's too. (Read the chapter 5 on trans fats for more details).

**Use combination of fats  
and oils but with  
moderation.**



## Choose oils carefully

There is an ever-expanding choice of oils at your local grocery store over the past few years. Each of these oils has its place in the kitchen and serves a specific function. Keep these factors in mind when choosing them:

No oil is completely made of one fatty acid; they all are a combination of the three kinds of fats (MUFA, PUFA and SFA) in different percentages, based on the nut, seed or fruit from which the oil is derived, so it makes sense to keep rotating them.

Consider the smoke point (the temperature at which volatile compounds emerge and a bluish smoke becomes clearly visible from the oil) of the oil. Heating oil past its smoke point leads to a loss of flavor, its nutritional value and also toxic compounds which are bad for health. Oils that can take high temperatures make good all purpose cooking oils e.g. mustard, safflower, sunflower, and peanut oil. Medium-high heat oils are good for baking, sautéing and stir-frying e.g. butter, coconut oil,. For sauces, lower-heat baking and pressure cooking, medium-high heat oils are best.

There are some oils that should never be heated; these can be used in dips and dressings, or added to a dish after it has been removed from heat. These oils are a good way to incorporate essential fatty acids into our diet.

A teaspoon or two of cold-pressed oils can also go a long way to complete your good fat requirement. These are obtained by pressing the fruit or seed naturally and as the temperature does not rise too high, they are far healthier compared to refined options ones (where the extraction process breaks down the natural composition of oils due to processing at high temperature).



# Oils and Fats - Myths and Facts

## Myth: Margarine contains less fat than butter.

**Fact:** Butter and margarine contain different types of fat, but in similar amounts and hence also have an equal number of calories. In fact, unsalted butter is usually the healthier option - of course in limited quantities - as most margarines (particularly the hard varieties) although free of saturated fats have trans fats. Secondly, butter contains the usual vitamins found in milk - which are fat soluble, the fat in the butter helps your body absorb them well and margarine is generally devoid of vitamins unless they are specially added during production.

## Myth: Salad dressing should be totally fat-free

**Fact:** Salad veggies are filled with terrific nutrients such as lycopene and beta carotene. But these antioxidants are better absorbed with a little help from fat.

This doesn't mean you should drown your greens in a rich ranch or blue-cheese dressing: A small amount of olive oil or any cold pressed oil will be sufficient. Or you can add low-fat cheese, nuts, seeds or avocado.

## Myth: Fat-free is low-calorie

**Fact:** Don't indulge in extra-large servings of fat-free foods, especially baked goodies such as cookies, cakes and crackers - these foods may contain the same amount or even more calories than regular versions! That's because manufacturers usually add other things to compensate for the taste and texture that fats give to the dish, and that something is often a sugary or floury substance - empty calories! So, in fact certain foods labelled, as low fat may actually be high in calorie because of high sugar or carbohydrate content. Always get the details by checking labels for the serving size and number of calories per serving.

## Myth: The 'cholesterol free' label means a healthy food

**Fact:** 'Cholesterol free' doesn't necessarily mean fat free. The food might well be cholesterol free but at the same time be rich in saturated fatty acids or trans fatty acids, both of which raises blood cholesterol. 'Cholesterol free' is just a marketing strategy.



# Look For



**FORTIFIED**  
SARPOORNA POSHAN  
SWASTH JEEVAN

# Logo



## Chapter 7

# Fortifying our Health



**T**here is just too much focus on what we eat, but somehow, we are still losing the plot. Our energies are concentrated on whether we are getting enough of the macronutrients like carbohydrate, fat and protein etc. But we often miss out on the essential micronutrients - vitamins and minerals - and thus get saddled with deficiencies that can affect our health negatively. The effects of these micronutrient deficiencies, also known as 'hidden hunger' can be devastating. This "hidden hunger" in India affects all sections of India's population - urban and rural, rich and poor, old and young - with women and children most at risk.

### So, what actually are the micro-nutrients?

The term micronutrients actually refer to a broad list of vitamins and minerals that are important even though they are needed only in minuscule amounts, in milligrams or micrograms (that's why they are called micronutrients). They enable the body to produce enzymes, hormones and other substances that are essential for sustained growth and development, fighting infections, building immunity and that's why the consequences of their deficiency can be severe.

### Why are they important?

Micronutrients act as 'spark plugs' for several body functions, which is why they are often referred to as the "magic wands" of health. Each nutrient has a specific role to play. Iron, calcium, Zinc, Vitamin A, vitamin D, and vitamin B, particularly folate and Vitamin B12 or cobalamin deficiencies are of big concern today as they are mostly lacking in modern day diets. All these are needed for multiple processes and proper absorption and utilization in the body is also important.

Each nutrient has a specific role to play. For example, manganese promotes bone formation and energy production, iron helps the body produce enough red blood cells which are needed for oxygen transportation, magnesium helps your heart maintain its normal rhythm, vitamin B complex plays an important role in cell metabolism, and vitamin E protects cells in the body from damage caused by free radicals, which are the main cause of cardiac disease and cancers.

Iron deficiency is extremely common and can lead to anaemia. Iodine deficiency is the primary cause of preventable mental growth and development in children and thyroid disorders in adults. Zinc deficiency impairs immune function and also increases risk of gastrointestinal infections. Deficiency of Vitamin D level affects besides bone health, lifestyle-related chronic disorders like diabetes, cardiovascular diseases, auto-immune disorders, depression, and some cancers too.

## How to get them?

Our bodies cannot make these micro-nutrients, so they must be supplied through the diet via a wide variety of fruits, vegetables, whole grains and dairy products. Also, as different foods contain different levels of vitamins and minerals, it's important to eat a wide variety of foods from the different food groups to ensure that we get enough of all. Sometimes though, even a good diet on its own is unable to address all the requirements of a person. In such cases micronutrient malnutrition can be addressed successfully in a holistic manner through food fortification.

## What is Fortification?

Fortification involves adding small quantities of the vital, vitamins and minerals to staple foods like rice, wheat flour, salt, edible oil and milk - to improve their nutritional value. It works as a good preventive tool too and is an extremely effective way of meeting our nutrient needs. Such foods are known as fortified foods.



Recognizing the importance of this, the Food Safety and Standards Authority of India (FSSAI) has launched a large-scale drive to encourage certain foods to be fortified. This include milk and oil (fortified with Vitamin A and D), wheat flour and rice (fortified with Iron, Vitamin B12, and Folic Acid) and double fortified salt (fortified with Iodine and Iron). Now a lot many fortified products can be seen in the market which have the +F logo, also notified by FSSAI for easy recognition of the fortified staples.

### Fortification

Works as a good preventive tool too and is an extremely effective way of meeting nutrient needs of people. Fills the gap in nutrition in an easy manner without any change in taste, texture or flavor of food. Does not require a behavior change so is easily accepted. Is one of the most effective, scalable, affordable and sustainable ways to address micronutrient deficiencies.

# The Good Work!

FSSAI is working with various organizations and line ministries like the Ministry of Women and Child Development (WCD), Ministry of Human Resource Development (HRD), Department of School Education and Literacy and Ministry of Consumer Affairs, Food and Public Distribution (CAFPD) Department of Food and Public Distribution for the cause of fortification to help change the nutrition landscape and bring the food ecosystem to globally set benchmarks. Some of the effective steps already taken are:

- ▶ The Food Safety and Standards (Fortification of Foods) Regulation, 2018 on fortification of food in key staples like oil and milk (with vitamin A and D), wheat flour, Maida and rice (with iron, folic acid and vitamin B 12), and double fortified salt (with iodine and iron).
- ▶ The LOGO (+F) for fortified foods that creates a rallying point for the industry to adopt fortification has already placed fortification firmly on the national agenda.
- ▶ Multiple advisories for endorsement of '+F' logo, and scientific health claims for label declaration of fortified foods (all approved by the scientific panel on nutrition and fortification) have been released.
- ▶ The Ministry of WCD and Department of School Education and Literacy have issued advisories for mandatory inclusion of fortified staples namely Wheat Flour, Rice, Edible Oil and Double Fortified Salt.
- ▶ Department of Food and Public Distribution has directed states, which are distributing wheat flour to use Fortified Atta for distribution and encourage publicity of fortified oil in the States/UTs. Further, they have started a centre sector scheme where initially 15 States (1 district each) will be provided with fortified rice through Targeted Public Distribution System (TPDS).
- ▶ FSSAI has also set up the Food Fortification Resource Centre (FFRC), which acts as a resource hub and a single point contact for accessing end-to-end technical support to scale up fortification across the country.

## The Hits:

114 top companies and Medium, Small and Micro-enterprises (MSMEs) with ~157 fortified products across commodities have already been placed under the purview of the Food Fortification agenda. There has been tremendous traction in the oil and milk industry, with 47% of top ten players of packaged refined edible oil industry and 36.6% of the organized milk industry fortifying as per FSSAI standards.

22 States, namely, Odisha, Karnataka, Haryana, Gujarat, Goa, Uttar Pradesh, Himachal Pradesh, Madhya Pradesh, Maharashtra, Jharkhand, Assam, Rajasthan, Tamil Nadu, Telangana. Tripura, West Bengal, Kerala, Bihar, Chhattisgarh, Andhra Pradesh and Delhi and 5 Union Territories (UTs) (Dadra and Nagar Haveli, Daman and Dui, Andaman and Nicobar Islands, Chandigarh, Delhi) have adopted fortification of several commodities in the government Safety Net Programmed (SNP) namely Integrated Child Development Services (ICDS), Mid-day Meal Scheme (MDM) and Public Distribution System (PDS). As on April 2020.

Retailers and e-commerce platforms, Kendriya Bhandars, CRPF/CSD (write full form) and other armed forces canteens and messes are communicating the benefits and providing fortified staples to the masses.

The good work is on and it will help change the nutrition landscape of the country in a big way.



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Chapter 8

# Catching Them Young!

**A**re you concerned about what your child is eating and drinking every day? Join the Eat Right School Program! Everyone is worried about the kind of food our children are eating these days but we don't know what to do about it. Here, the catchphrase, 'catch them young' can provide the answer.

Eating habits formed in the formative years stick and stay on till adulthood making it imperative

to teach young children good food habits early on. Ideally, the process must begin as early as possible to ensure that they will make and keep right eating habits for a lifetime. That said, catching the attention of a captive audience (in schools) to educate and teach them the rules of right eating at any age is a wonderful start. And this is where the '**Eat Right School**' initiative

# The Good Work!

Realizing how susceptible students are to wrong eating influences due to their lack of awareness, and also taking into account the fact that at a young age they are open to experimenting with food, FSSAI, under the Eat Right School vision has been working extensively to create awareness about 'Eating Healthy', 'Eating Safe', and 'Eating Sustainable' among school children, and through them, among the community at large.

## The Eat Right School Program

The Eat Right School program, launched by FSSAI in September 2016, promotes a culture of food safety and nutrition. It is based on the Eat Right Matrix and is run through the school's health and wellness ambassadors and teams. Close to 35,527 schools across the country have already been registered under the Eat Right School program till 5<sup>th</sup> October 2020.

The **tools** used for the program are:



**The Yellow Book** - an attractive manual with age-appropriate content with simple messages and activities to be carried out within school and at home to reinforce the importance of food safety and nutrition.

It has been translated into English, Hindi, Assamese, Bengali, Punjabi, Gujarati, Marathi, Kannada, Tamil, Malayalam and Telugu already.



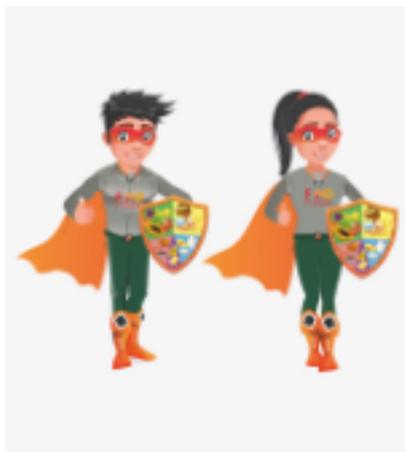
**Activity Book** - A fun-filled activity book has been designed to teach and reinforce the message of safe and nutritious food.



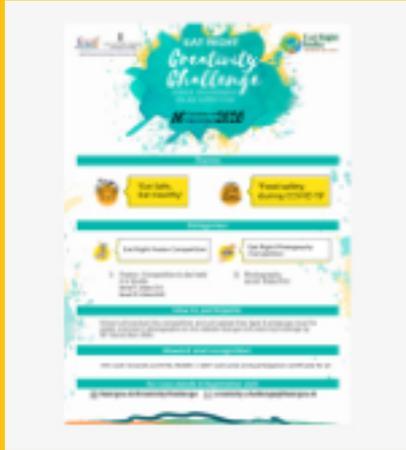
**Magic Box** - The Food Safety Magic Box comprises 102 simple tests to check food adulteration along with Magic Box Companion Guidebook designed to provide right information for schools and homes.



**Food Safety Guidebook for Teachers**- To further facilitate the usage of Food Safety Magic Box, grade-wise lesson plan booklets have been developed for the teachers. The lesson plan booklets are available from grades 3-10. Each grade booklet contains 12-15 tests, which are mapped across the curriculum of the particular grade.



**Mascots:** 'Miss Sehat' and 'Master Sehat', which children can relate to have been used extensively in the training content and a mascot activation program in malls, schools and other public places is on the anvil. Master and Miss Sehat engage and educate children to promote social and behavioural change around food safety, hygiene and healthy diets in a fun, educative manner and are a huge hit.



**Eat Right Creativity Challenge:** Pan India competitions 'On the spot Poster', 'Paint a Wall', and 'Digital Creative' on the 'Eat Right' theme is organised to engage schools and young people.

## The Regulatory Framework

FSSAI has passed a Regulation, Food Safety and Standards (Safe Food and balanced diets for children in School) Regulations, 2020. The regulation prohibits,

- 1 The sale of food products high in saturated fat or trans-fat or added sugar or sodium in school premises or campus.
- 2 The Food Business Operators (FBOs) to advertise, market or sell or offer for sale including free sale food products high in saturated fat or trans-fat or added sugar or sodium in school campus or to school children in an area within fifty meters from the school gate in any direction.
- 3 Any advertisement banner or wallpaper of food, which is high in saturated fat or trans-fat or added sugar or sodium on school computers.

Additionally, the regulation makes it mandatory to FBOs supplying prepared meals in the premises to follow general guidance provided in the regulation and direction issued by the Food Authority or the State Food Commissioners.



In addition, FSSAI has developed a regulatory framework to enable the schools to promote safe and wholesome food in schools via:

- ★Mandatory registration of school canteen/hostel mess
- ★Training modules for school canteen and mess staff
- ★Guidance for sale and nutritious food in Mid-Day meal

FSSAI also works with the school to create awareness for parents and community through seminars, workshops and training programs for parents on Eat Right and conducts activities for creating mass awareness on food safety, hygiene, nutrition and to curb waste.

Well, teaching children to eat well can be tricky. The idea is not to overwhelm them with too many facts that they can't grasp or turn every information section into a lecture. But it is important not to wait too long as then they could pick up unhealthy habits that become difficult to shake off later. They need to know that every food they put into their bodies affects them. And schools can get that message across by talking with them about the food they put in their bodies, why it matters, and how they can learn to make the healthiest choices. FSSAI has stepped in here in a very effective way to help guide the schools to do this process effectively.



# What the schools can do...

Schools can encourage healthy eating habits by:

Incorporating healthy eating and physical activity across the curriculum in fun and creative ways.

Offering healthy foods in school canteens

Creating partnerships with the broader community, for example, local food growers, sporting clubs, library etc.

Providing parents with information on healthy food choices and active living.

Providing professional development opportunities for teachers and other support staff to teach and promote healthy eating and being active.

Creating and developing a school vegetable garden.

Involving pupils and parents in making school food policy.

Promoting snack breaks for students to eat fruit and vegetables.



# Nutrition Facts

Per 3/4 cup (29 g)

Cereal Plus 125 mL  
Only 2% P.S. Milk

Amount

110

170

**Calories**

% Daily Value

6%

9%

**Fat** 1 g\*

Saturated 0.3 g  
+ Trans 0 g

**Cholesterol** 0 mg

**Sodium** 180 mg

**Carbohydrate** 23 g

Fibre 2 g

Sugars 10 g

**Protein** 2 g

Vitamin A

Vitamin C

Calcium

Iron

Vitamin D

0%

0%

10%

30%

0%

2%

0%

Chapter 9

## Learn to Read Labels

**H**ow many of us actually pay attention to labels when shopping for groceries and other food items? Typically, we scan the brand, price and if we have an extra second, we glance at the expiry date. The nutrition sticker, however, usually goes unnoticed. And even if people try, the jargon sounds confusing and most people find it difficult to spot the red flags amongst the maze of details mentioned there.

## Why Become 'Label Wise'?

Labels help us compare products more easily, choose better foods according to their nutritional value and are particularly helpful when one has to follow a special diet like, say, have low sodium foods (to prevent hypertension) or have a high fibre diet (to prevent constipation). Even if there is no special need, reading labels is an excellent habit that adds tremendously to a healthy lifestyle and helps people stick to healthier eating.

### Look Out For

All those names and numbers mean something:

**Serving Size:** Always check this first. This will tell you the amount to eat - and if you stick to that amount, the amount of calories and other nutrients that you will ingest. For example, if the serving size mentioned is say, two biscuits but you have four, you will need to double the counts of everything right away.

**Calories:** We all need to monitor our intake; the amount that we ingest in a day should be lower than the amount we burn off. Usually for a sedentary worker it is around 1660 calories for a woman, and around 2110 calories for a man. So, make your calculations accordingly. For example, if one serving of the ready-to-eat food that you are eyeing is giving you upwards of 1000 calories, maybe you need to rethink - as managing the rest of the day's meals in the leftover calories from your quota will not be practical.

To do a quick check, follow this general guideline: Per Serving of food items providing of 150 calories or less would be low-calorie, between 150-400 would be medium and anything beyond would definitely be high calorie.

**Fats:** Here, first of all you need to look up the Total Fats. It is best to keep this as low as possible (we all know how bad fats are for our body in excess).

Also understand here that 1 gram of fat has 9 calories. So, if your food has 10 grams of fat, it contains 90 calories from fat. It is best to keep calories from fat less than 25% of the total calories in a day. And then it helps to read the finer print. Look up the saturated fats (SF) and opt for foods that keep these low. According to general guidelines, it is best to keep SF less than 1/3rd of the total fat intake in a day - that is about 8% of total calories. Polyunsaturated

and monounsaturated fats are the good fats but most labels don't mention these. Be careful with trans fats (the worst kind, so best to keep these nil).

If you see the any mention of the words "hydrogenated" or "partially hydrogenated" or "shortening," then the food contains some amount of trans fat... whether the label mentions it or not. Cholesterol is not as terrible as trans fats but it helps to keep this low as well, as excess may clog the arteries. High cholesterol foods include beef, eggs (the yolk), cheese, poultry, organ meats, cream and foods made from these.

**Sodium:** This refers to salt and our daily intake ideally should not be more than 2400 mg per day.

**Total Carbohydrates:** This reading usually includes carbohydrates, dietary fibre and sugars, so make sure to check the breakup given carefully. As long as the fibre content is high (say 3 gm or more per serving or 6g /100g) then the food has sufficient complex carbohydrates for it to be good for you. Very low fibre means refined, so it is better avoided.

**Protein:** The average protein requirement of protein is between 40 to 55 grams for most people. Higher protein foods are better for you, so check this number carefully too.

# The Good Work!

Very effective regulations have been passed by FSSAI to ensure safe and fair labelling, and these are enforced very strictly. FSSAI has also been educating people about the labels for a long time now. One of the areas that FSSAI is working on extensively is educating India, rethinking Food Labelling to help make the consumer smart and learn how to eat safe and eat right.



# Become a Label Wizard

Look out for these red flags



## Chips

**Red flags:** They mention nil trans fats but check the ingredients list as often you'll find hydrogenated fat mentioned, which are trans fats really! Plus, their sodium content is universally high - and a cause of concern.

## Packaged Juice

**Red flags:** Even if there is no added sugar, most juices have about 30 gm plus natural sugar in a 250 ml glass. Also, juices have close to nil fibre - less than 3 gm in a 250ml serve. Whereas just one fruit (say an apple) will give you the same amount of fibre with far less calories. Very low fibre is bad news for our gut.

## Instant noodles/soups

**Red flags:** Fat content: While most soups tend to be low in fat, instant noodles are huge on them, often hiding more than 10 gm per serving.

Plus, instant soups tend to be really high on salt; even half of a packet at a time will give you more than half of your daily requirement of sodium right away!

## Cookies and biscuits

**Red flags:** They tend to be very high in calories. If you stick to the serving size (2-3 biscuits) you will have down controlled calories (around 100 calories) but if you (like most of us) wolf down the 8-10 biscuits packet then it is upwards of 450 calories for most cookies (cream or even otherwise). That's about one fourth to one-fifth of the daily requirement of calories for most sedentary people. Think!

Plus, most of the cookies tend to be really high in sugar - often making up to about 1/3rd of the ingredients weight.

## Ready-to-fry meats (kebabs, nuggets)

**Red flags:** A 100 gm serving (measly few nuggets) has about 8 gm fat, even before they have been fried - whereon the fat content just gets ballistic.

The kebabs or chicken nuggets you wolf down at one time could give you upwards of 1000 calories; that's staggeringly high for a snack.