

THE DANGERS OF TRANS FAT

ADAPTING
TO A
TRANS FAT
FREE
LIFESTYLE

Trans fatty acids, present in food products like vanaspathi, margarine, bakery shortenings, reused cooking oil, etc. are major contributors to non communicable diseases like cardiovascular disease, stroke, diabetes, Alzheimer, hypertension and so on. Globally, intake of trans fat leads to around 500,000 deaths of people from cardiovascular diseases - World Health Organization (WHO) of which approximately 60,000 are from India. Therefore, there is an urgent need to eliminate trans fats from the food supply.

For more than a year now, Citizen consumer and civic Action Group (CAG) has been involved in supporting the implementation of trans fat policies in Tamil Nadu through advocacy, awareness programs, developing and sharing IEC materials like videos, posters, organizing workshops, multi-stakeholder meetings, signature campaign targeting different sets of population like school and college students, and engaging with oil manufacturers, bakery and restaurant owners and government officials in the state.

This booklet is one such attempt where we will be discussing about the following:

- Trans fats and its types
- Repurpose Used Cooking Oil
- Health impacts of trans fats
- Ways to reduce trans fats
- Children and trans fat-free diet
- Global and National policies of trans fat
- Myth busters about trans fat

INDUSTRIALLY PRODUCED TRANS FATTY ACIDS (IP-TFA)

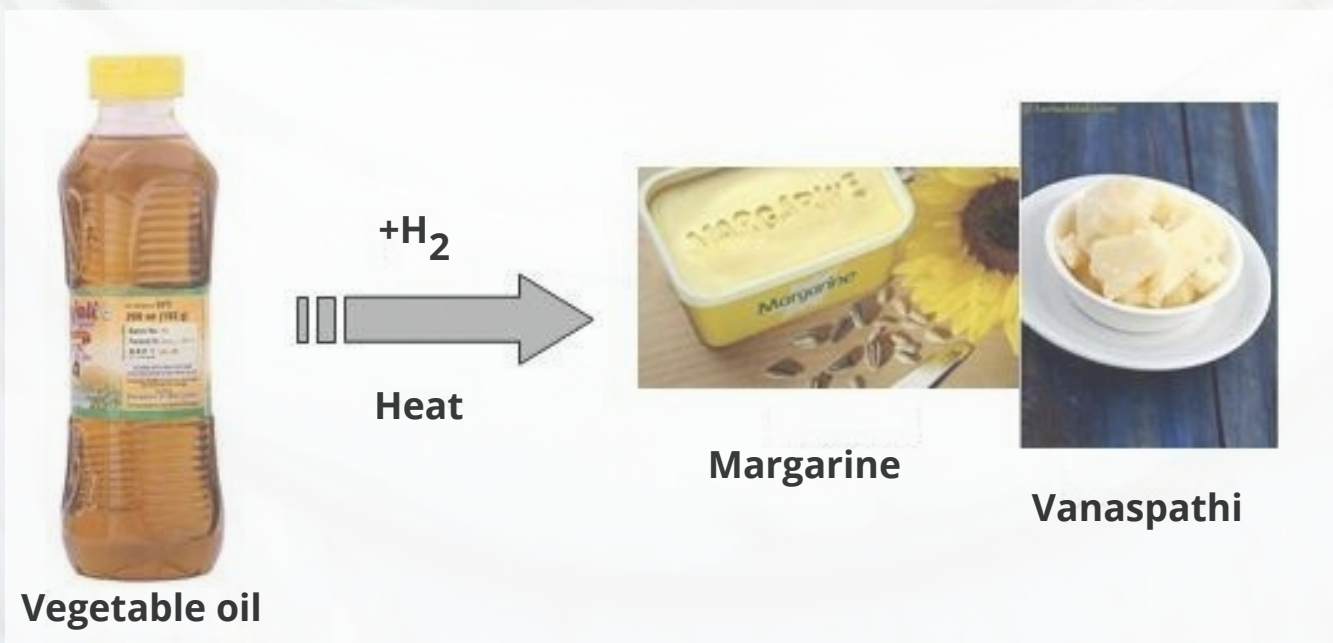
What are Trans fats?

Trans fatty acids (TFAs), commonly called Trans fats, are broadly of two types: naturally produced and industrially produced. Natural trans fats come from meat and dairy products.



Artificial trans fats are industrially produced by hydrogenation of vegetable oils. While natural fat contains only 2-5% of trans fat, partially hydrogenated oils (PHVOs) contain up to 60 % of total fatty acids.

Partially hydrogenated vegetable oils (PHVOs)



Partially hydrogenated vegetable oils were first introduced into the food supply in the early 20th century as a replacement for butter and became more popular in the 1950s through 1970s. Partially hydrogenated oil is formed when hydrogen is added to liquid vegetable oil turning it into solid fat. Partially hydrogenated oils such as vanaspathi, margarine, shortening, etc. are mainly used for baking and deep frying. They are popular as they are less expensive and are presumed to enhance taste and prolong shelf life of food.

Some foods that are rich in trans fats include: briyani, pizza, burger, chips, samosa, cakes, cookies, and the like.



Potato Kachori
(Trans fat - 30.3%)



Potato Puri
(Trans fat- 17.6%)



Biryani
(Trans fat -18.9%)



Fries
(Trans fat - 8-24%)



Samosa
(Trans fat - 11.6%)



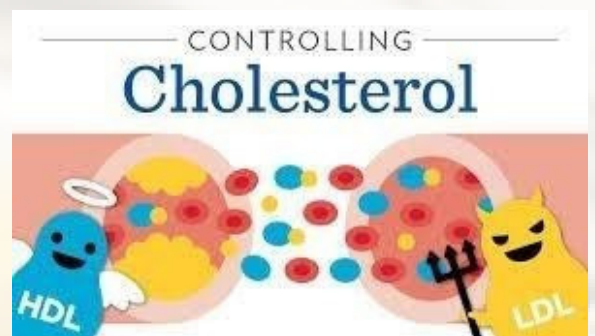
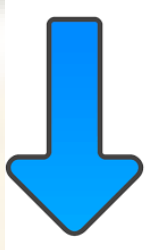
Popcorn
(Trans fat - 15%)

REPURPOSE USED COOKING OIL

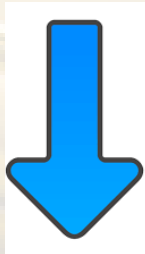
Repurpose of used cooking oil



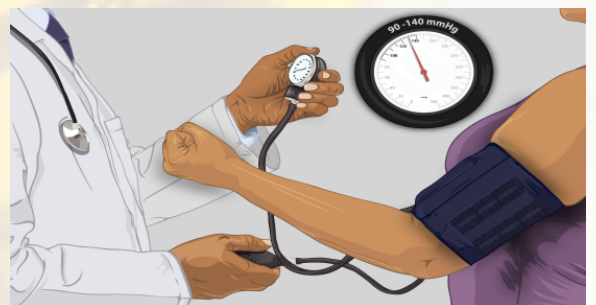
Produces trans fat as the cooking oil is reheated



Intake of food prepared from reused cooking oil



Prone to cardiovascular disease, blood pressure, etc.



Results in health risks and death.

WHY ARE PHVOs BAD?

Trans fats increase levels of Low Density Lipoproteins (LDLs) [LDLs transport cholesterol throughout the body]. Increase in LDLs narrow down the arteries resulting in increased pressure and chances of heart-attacks and strokes, and decreases levels of High Density Lipoproteins (HDLs) [HDLs carry away cholesterol from arteries and transport it to the liver].

Consumption of TFAs everyday has shown to increase the risk of cardiovascular disease by 29 per cent. Apart from this, consumption of trans fats also leads to diseases like hypertension, diabetes, failure of kidney and liver, and so on.



WAYS TO REDUCE TRANS FAT

Nutrition Facts	
8 servings per container	
Serving size	2/3 cup (55g)
Amount per serving	
Calories	230
% Daily Value*	
Total Fat 8g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%
<small>* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	

- Avoid baked/ fried/frozen food containing trans fat
- Replace whole fat dairy with low fat/no-fat milk or yogurt
- Replace meats with skinless chicken or fish for at least few days in a week
- Shift from solid margarine to soft margarine
- Use canola, olive oil, soybean, corn and sunflower oil
- Don't re-purpose used cooking oil
- Verify nutritional facts on labels and ensure 0% trans fat

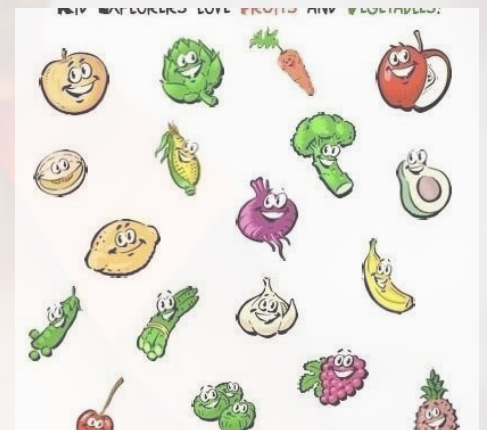
KIDS SECTION ON TRANS FATS



- Limit fast food and low-nutrient snacks, such as chips and candy
- Avoid sugary and carbonated drinks
- Limit fat intake by avoiding fried foods

Healthy Food Options for Children

- Choose healthier cooking methods such as broiling, grilling, roasting, and steaming. Choose a low-fat diet
- Include fruits and vegetables into the daily routine. Make it easy for kids to choose healthy snacks by keeping fruits and vegetables on hand and ready to eat. Vegetables in the form of salads will be an interesting option
- Other good snacks include low-fat yogurt, sprouts, poha, puffed rice, boiled corn, sesameladdus, peanut and coconut burfi, etc
- Serve lean meats and other good sources of protein, such as fish, eggs, beans, and nuts



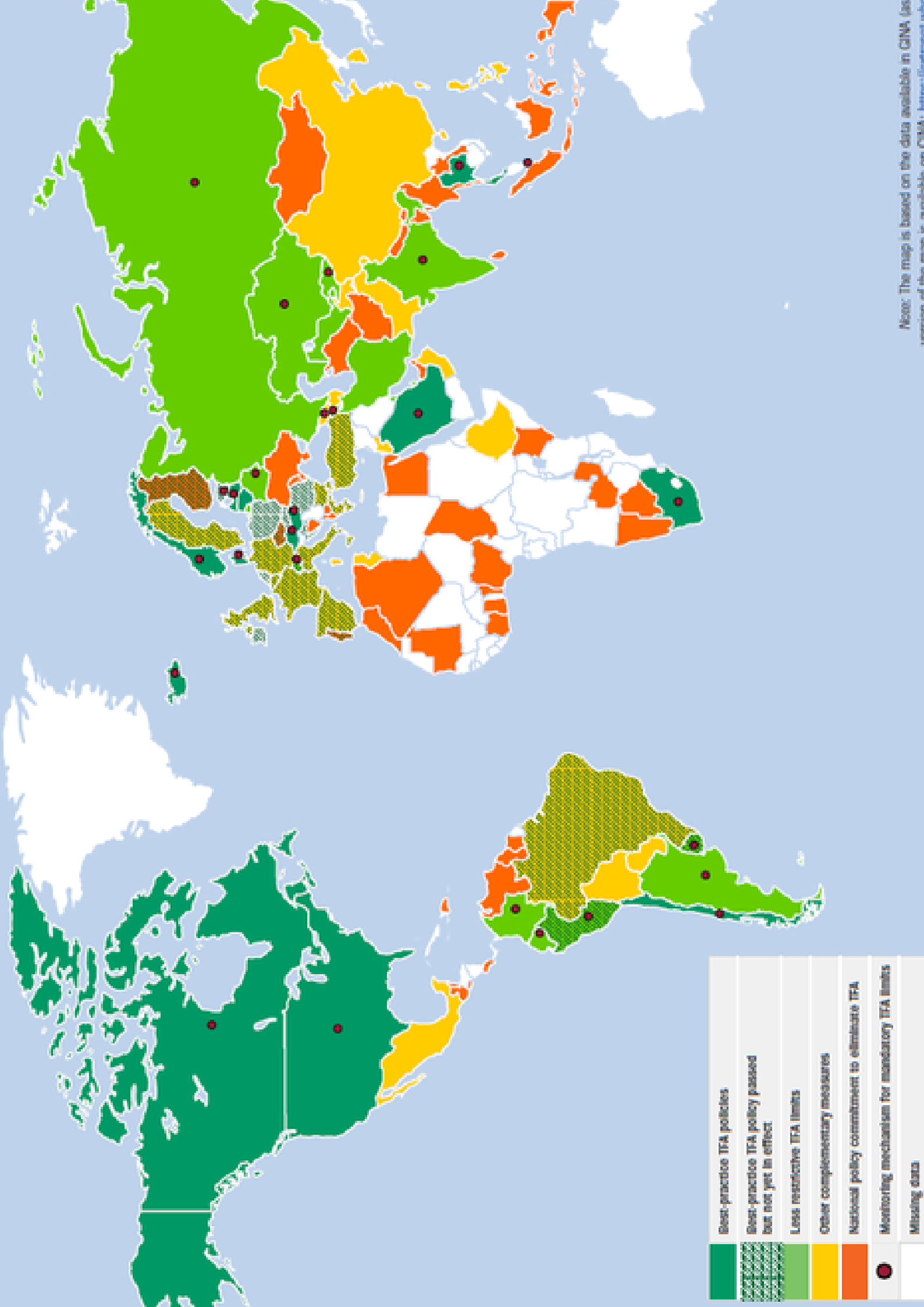
- Choose whole-grain breads and cereals so kids get more fiber
- Give fresh fruit juices, water, low-fat milk, buttermilk, tender coconut water, etc

TRANS FAT POLICIES

According to the first annual global progress report on trans fat elimination by WHO, six countries have restricted industrially produced trans fat since 2018 and another 24 countries, including the European Union, recently adopted trans fat regulations that will come into effect over the next two years. But there are still more than 110 countries that have no regulations against trans fat, resulting in five billion people at risk from industrially produced trans fat in their foods they eat every day. The report also shows most of the policy action against trans fat has been in high-income countries. No low-income country and only three lower middle-income countries (India, Kyrgyzstan and Uzbekistan) have trans fat policies. Denmark was the first country to limit artificial trans fat in 2003. The US, Canada, Latvia, Slovenia, Peru, etc brought in regulations to limit trans fats followed by Saudi Arabia, Lithuania, Brazil and Turkey. At this pace global elimination of artificial trans fat is achievable by 2023.

Different Phases of Trans fat policies world-wide

- Best-practice trans fat policy.
- Best-practice trans fat policy passed but not in effect yet.
- Less restrictive trans fat limits.
- Other complementary measures.
- National policy commitment to eliminate trans fat.
- Monitoring mechanism for mandatory trans fat limits.



	Best-practice TFA policies
	Best-practice TFA policy passed but not yet in effect
	Less restrictive TFA limits
	Other complementary measures
	National policy commitment to eliminate TFA
	Monitoring mechanism for mandatory TFA limits
	Missing data

Note: The map is based on the data available in CNA (as of 2014). For more information on CNA, please visit www.cna.org.

AN ACTION PACKAGE TO
**ELIMINATE INDUSTRIALLY-PRODUCED
TRANS-FATTY ACIDS**

REPLACE					
REVIEW	PROMOTE	LEGISLATE	ASSESS	CREATE	ENFORCE
dietary sources of industrially-produced trans fats and the landscape for required policy change	the replacement of industrially-produced trans fats with healthier fats and oils	or enact regulatory actions to eliminate industrially-produced trans fats	and monitor trans fat content in the food supply and changes in trans fat consumption in the population	awareness of the negative health impact of TFA among policy-makers, producers, suppliers, and the public	compliance with policies and regulations

Globally more than 500,000 deaths occur each year due to consumption of trans fats. Eliminating trans fats from the global food supply chain by 2023 can save more than 10 million lives worldwide by reducing cardiovascular disease.

WHO Recommendations on Trans fats

WHO launched REPLACE Package to eliminate industrially-produced trans fat from the global food supply by 2023. The WHO recommends that the total trans fat intake be limited to less than 1% of total energy intake.

TRANS FAT POLICIES IN INDIA

Recognizing the ill-effects of trans fat and with the aim to regulate it, Government of India notified the “Food Safety and Standards (Food Products Standards and Food Additives) Regulation, 2011 (FSSR)” which mandated for trans fatty acids to be not more than 10% by weight in (Source: FSSR, 2011) inter-esterified vegetable fats, margarine, vanaspathi and bakery shortenings.

Under these regulations, standards in terms of colour and levels of moisture, fat, gluten and fortification, etc., are given for the food products such as margarine, vegetable oils, fat spreads, and dairy products, and food business operators are required to act in accordance with the benchmarks/standards given in the regulations. The regulations also mandated the labelling of trans fat.

In 2015, the Food Safety and Standards Authority of India (FSSAI) amended the regulations to reduce the trans fat limit to 5% by weight. In 2019, the FSSAI released the draft of Food Safety and Standards (Food Products Standards and Food Additives) Amendment Regulations, 2019, which proposes “Food Products in which edible oils and fats are used as an ingredient shall not contain trans fatty acids of more than 2% by weight of the total oils/fats present in the product, on and from 1st January, 2022”, which is a year ahead of the target fixed by WHO.



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NEW DELHI, TUESDAY, AUGUST 4, 2015/SHRAVANA 13, 1937

MINISTRY OF HEALTH AND FAMILY WELFARE
(FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA)

NOTIFICATION

New Delhi, the 4th August, 2015

F. No. 4/15015/30/2011.—Whereas the draft of certain regulations to amend the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011, were published as required under sub-section (1) of section 92 of the Food Safety and Standards Act, 2006 (34 of 2006), *vide* notification of the Food Safety and Standards Authority of India Number F.No 4/15015/30/2011, dated the 11th November, 2014 in the Gazette of India, Extraordinary, Part III, Section 4, inviting objections and suggestions from the persons likely to be affected thereby, before the expiry of the period of thirty days from the date on which the copies of the Official Gazette containing the said notification were made available to the public;

And whereas the copies of the said Gazette were made available to the public on the 5th December, 2014;

And whereas the objections and suggestions received from the public in respect of the said draft regulations have been considered by the Food Safety and Standards Authority of India;

Now, therefore, in exercise of the powers conferred by clause (e) of sub-section (2) of section 92 read with section 16 of the said Act, the Food Safety and Standards Authority of India hereby makes the following regulations

further to amend the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011, namely:—

Regulations

1. These regulations may be called the Food Safety and Standards (Food Products Standards and Food Additives) Amendment Regulations, 2015.
2. In the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011, in regulation 2.2 relating to 'FATS, OILS AND FAT EMULSIONS', -
 - (a) in sub-regulation 2.2.2 relating to 'Interesterified vegetable fat', after clause (v), the following proviso shall be inserted, namely:-
 "Provided that the maximum limit of trans fatty acids shall be not more than 5% by weight, on and from the 27th of August, 2016;";
 - (b) in sub-regulation 2.2.5 relating to 'MARGARINE AND FAT SPREADS', in clause 2 relating to "Bakery and Industrial Margarine", after sub-clause (ii), the following proviso shall be inserted, namely:-
 "Provided that the maximum limit of trans fatty acids shall be not more than 5% by weight, on and from the 27th of August, 2016;";
 - (c) in sub-regulation 2.2.6 relating to 'HYDROGENATED VEGETABLE OILS', -
 - (i) in clause 1, in sub-clause (vii) after item (b), the following proviso shall be inserted, namely:—
 "Provided that the maximum limit of trans fatty acids shall be not more than 5% by weight, on and from the 27th of August, 2016;";
 - (ii) in clause (2), after sub-clause (a), the following proviso shall be inserted, namely:-
 "Provided that the maximum limit of trans fatty acids shall be not more than 5% by weight, on and from the 27th of August, 2016;";

YUDHVIR SINGH MALIK, Chief Executive Officer

IADVT.-III/4/Extv./187-O/15(154)I

Sections and Penalties under FSSR 2006

Sections	Offences	Persons Involved	Penalty
Section 50	Sale of food products of poor nature or poor quality	Seller	Upto 2 lakhs. Not exceeding Rs 25,000 for petty manufacturers
Section 51	Food products are of sub-standard nature	A seller, manufacturer, storage, distributor, importer	Upto 5 lakhs
Section 52	Misbranded food products	A seller, manufacturer, storage, distributor, importer	Upto 3 lakhs

Sections and Penalties under FSSR 2006

Sections	Offences	Persons Involved	Penalty
Section 53	Misleading advertisements	Publisher of an advertisement	Upto 10 lakhs
Section 58	If no specific penalty is mentioned	Any person contravening the provisions of the Act	Upto 2 lakhs
Section 64	When an offence is repeated by person who has been previously convicted punishable under the Act	A seller, manufacturer, storage, distributor, importer	Where the offence is of continuous nature, a fine of 1 lakh on a daily basis, and cancellation of license

MYTH BUSTERS

Myth: Trans fats are only found in fried food

Fact: Some trans fats are found naturally in small amounts in meat and dairy products but are not as bad as industrially produced.

Myth: Saturated fats and trans fats are similar

Fact: Trans fats resemble saturated fat in consistency and shelf life, but the chemical composition is still very different. While saturated fats are harmless, trans fats are highly toxic and should be avoided.

Myth: Processed margarine is better than natural butter

Fact: Margarine is an unhealthy food produced in factories, usually containing partially hydrogenated trans fats. Butter is a much healthier choice, especially if it comes from grass-fed cows.

Myth: Cooking olive oil destroys its health benefits

Fact: Even delicate extra-virgin oils can take the heat without sacrificing nutrition. Heart healthy mono-unsaturated fats aren't unfavorably altered by heat. Research shows that other plant based compounds that likely give olive oils their complex flavor profiles and healthful properties can also stand up to standard cooking procedures.

They're surprisingly stable, as long as the oil isn't heated past its smoking point, which for extra-virgin olive oil is pretty high—about 405°F.

Myth: All saturated fats raise blood cholesterol

Fact: New research shows that some saturated fats don't. Researchers have long known that there are many kinds of saturated fats, and they are handled differently by the body when consumed. Stearic acid, a type of saturated fat found naturally in cocoa, dairy products, meats, and poultry, as well as palm and coconut oils, does not raise harmful LDL cholesterol but boosts beneficial HDL cholesterol levels.

Myth: Are ruminant trans fat healthy

Fact: Contemporary researches in science show that there is no harm resulting from trans fats in their natural form, such as from dairy products and meats of ruminants (grazing animals). However, whether high amounts of natural trans fats pose any health risks is not known and current studies are conflicting.

Myth: Frozen diet entrees make a quick, healthy meal.

Fact: While low in calories, frozen food entrees are usually packed with sodium, unhealthy preservatives, and processed ingredients like partially hydrogenated oils.

Citizen consumer and civic Action Group (CAG)

is a 35 year-old non-profit, non-political and professional organization that works towards protecting citizens' rights in consumer and environmental issues and promoting good governance processes including transparency, accountability and participatory decision-making.



CAG

Citizen consumer and civic Action Group

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