The consumer case for EU legal restrictions on the use of artificial trans-fats in food

BEUC Position Paper

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Summary

This position paper outlines BEUC’s views on industrially-produced trans fatty acids (IP-TFAs) and aims at informing policy makers about the consumer perspective on this issue. It is based on data provided by BEUC member organisations - who carried out tests on the presence of IP-TFAs in a wide variety of food products - and academic researchers working in this field.

It gives concrete examples of the persisting presence of IP-TFAs in food which puts the health of many consumers at risk, especially vulnerable ones. Indeed alarming amounts of IP-TFAs can still be found in many pre-packed and takeaway products such as margarine, biscuits, cakes, waffles, pizzas and chips. Regular consumption of these products puts certain consumer in risk categories of developing chronic diet-related diseases, in particular coronary heart disease. Indeed recent research has shown young consumers and low-income families still consume high levels of IP-TFAs, while eastern European consumers are currently more exposed to IP-TFAs than their western neighbours.

After acknowledging the fact that IP-TFAs are still an issue in the EU and continue to affect the health of many consumers, it is necessary to compare the effectiveness of different policy measures. One of them, legally binding restriction, was introduced in Denmark in 2004 and proved to be a great success. Indeed it led to a significant and harmonised reduction of the presence of IP-TFAs within a year. While the changes benefited consumers’ health, as trans fats were mainly replaced by healthy mono-saturated fat, it also proved not to be burdensome for the industry.

The Danish success even inspired other countries, in the EU and abroad, who decided to enact similar restrictions to protect the health of their citizens. On the contrary other policy options, namely mandatory labelling and voluntary reformulation, failed to protect consumers. Indeed mandatory labelling requires consumers’ knowledge and can be misleading. On the other hand voluntary reformulation relies on companies’ willingness to reformulate, and as such it cannot lead to a homogeneous decrease of IP-TFAs in food and a harmonised level of consumers’ protection.

Voluntary labelling is not addressed in this paper as BEUC believes this option should not even be considered by regulators.

Consequently, BEUC urges the European Commission to introduce legally binding restrictions on the use of IP-TFAs. It is the only policy option which can ensure all consumers, including vulnerable ones, are protected.

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1 Also referred as ‘ban’ in our document. The term ban is currently used to describe restriction of use because it virtually eliminates partially hydrogenated vegetables oils in the food supply.
Introduction

Industrially produced trans fats (IP-TFAs) were invented in the 1890s but it was only in the 1970s and 1980s that their use in food processing really took off. Indeed at that time saturated fats were found to be bad for health and because trans fats were derived from the more healthy vegetable oils it was assumed they would be healthy products. Before long, the industry started using trans fats as they were found to be a cheap stabilising agent in processed foods. Their use was also favoured by industry because they can withstand repeated heating. Yet it turned out that partial hydrogenation, which turns liquid oil into solid fat, impacted the physiochemical and functional properties of the unsaturated fatty acids. Indeed after hydrogenation trans fats have properties more like saturated fats while they are classified as unsaturated fats. At present there is scientific consensus3,4 that trans fatty acids (TFAs) should be eliminated from the global food supply as they have harmful consequences on human health, specifically on cardiovascular health, while not providing any nutritional value. In fact they are considered as the most harmful fats associated with dietary intake since they increase levels of LDL cholesterol, the ‘bad’ cholesterol, while decreasing levels of HDL cholesterol, the ‘good’ cholesterol. In comparison saturated fat only increases levels of LDL cholesterol but does not lower HDL cholesterol. Moreover their effects can be witnessed even at very low levels5.

As a consequence European and international bodies, including EFSA and WHO, agreed there was no tolerable intake level for trans fatty acids and they called on governments to take steps to support alternative fats or oils for TFAs replacement. In the meantime a transitional limit of 1% of the total energetic intake was suggested by the World Health Organization (WHO) and has been interpreted by several countries as a limit of 2g of TFAs/100 g of fat.6 If BEUC acknowledges that TFAs in general are an issue we call for specific actions to tackle the industrially produced type TFAs also known as IP-TFAs7, which represent the biggest percentage of our total TFAs intake. As such TFAs which naturally occur in dairy and meat products of ruminant animals at very low levels should be exempted from the legislative provisions.

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2 Trans Fats and health, Briefing paper from the BMA Board of Science, August 2011.
4 EFSA Scientific Opinion on Dietary Reference Values for fats, including saturated fatty acids, polyunsaturated fatty acids, monounsaturated fatty acids, trans fatty acids, and cholesterol, March 2010.
7 Trans Fats and health, Briefing paper from the BMA Board of Science, August 2011.
In recent years some countries have taken steps to tackle this issue either by implementing bans or by issuing recommendations or labelling requirements but EU harmonized rules are still missing. Yet it is urgent to implement rules at EU level to efficiently protect all consumers. **BEUC believes the introduction of legally binding restrictions is the only valuable option that should be retained by the European Commission.** Restrictions are necessary since two of the liveliest myths about IP-TFAs have been dismissed:

- **MYTH #1:** Intake levels of IP-TFAs is not an issue in the EU anymore as average intake levels have significantly decreased: if this is true that in recent years average intake levels have dwindled it does not mean that all consumers are actually consuming very low levels of IP-TFAs. Indeed several products still contain harmful levels of IP-TFAs, and by eating only two or three of these products certain subgroups of the population, particular vulnerable and poorer ones, remain exposed to high intake levels and are consequently more at risk of diet-related chronic diseases such as coronary heart disease. At the same time results from product testing showed consumers in Eastern EU countries are more exposed to IP-TFAs than their Western neighbours. These arguments are corroborated by BEUC members’ test results and by publications in scientific journals. BEUC believes such inequalities should be combated by means of coordinated European measures. Moreover we should keep in mind that there is no acceptable dietary intake of TFAs as they have harmful effects even at very low levels. Therefore the long-term objective remains to eliminate trans fat from the food supply chain altogether.

- **MYTH #2:** Voluntary efforts and mandatory labelling are valuable options to protect consumers: BEUC firmly believes legally binding restrictions on IP-TFAs are the only option to realise a consistent approach not dependent on industry’s willingness to reformulate or a consumer’s ability to read nutrition labels. These policy interventions have too many limitations and do not effectively protect all consumers. The 2004 Danish restriction, which set a maximum limit for IP-TFAs of 2g of fat per 100 g of foodstuff other than dairy and meat, proved to be a success on all aspects, including price, texture and quality. Indeed it led to the almost disappearance of IP-TFAs in the food supply chain, which is the long-term objective in terms of public health, without creating any burden for the industry.

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10 Pizzas de jamon y queso refrigeradas, Organizacion de Consumidores y Usuarios (OCU), February 2012.
I. The presence of IP-TFAs is still an issue in the EU

a. Several products on the EU market still contain harmful levels of IP-TFAs: results of consumers organisation tests

1. Margarine products
A test carried out by our Czech member dTest in November this year found that of 22 popular margarines tested, 11 contained more than 2g of TFAs/100g and two products contained alarming amounts above 20g/100g (28,06g/100g for Albert Quality Margarine and 24,27g/100g for Palma Cera).  

Other studies have looked at TFAs levels in margarines: a German study found that 22% of the margarines tested had IP-TFAs levels between 2% and 6% on a total fat basis while in Belgium IP-TFAs were found to account for 15% to 20% of the total fat content in lower quality spreads and margarines tested.

2. Popular processed food such as biscuits, waffles and pizzas
IP-TFAs can also be found in many popular food including pizzas, waffles, biscuits, cakes and sweets. In January this year our Czech member dTest found that 6 out of 10 wafers (60%) and 5 out of 17 chocolate waffles (30%) tested contained more than 2g IP-TFAs/100g of fat. One wafer was even found to contain almost 10g of IP-TFAs (9.95g/100g of fat).

In 2012 our Spanish member OCU tested “ham and cheese” pizzas sold in supermarkets for their nutritional quality and found up to 4.6% IP-TFAs in the pastry of one pizza.

That same year the Danish researcher Steen Stender, who chaired the Danish Nutrition Council’s subgroup dealing with trans fats and health when Denmark passed legislation to limit food content of trans fats, found that out of 10 biscuits bought in Latvia and tested for TFAs, two were found to contain more than 5g of TFAs per 100g, with one reaching the dangerous level of 17g per 100g.

3. Takeaway products
Takeaway products can also be a frequent source of IP-TFAs. A test on chips sold in ‘friteries’ carried out in 2011 by our Belgian member Test-Achats found that while the situation had improved since 2002 (on average, samples from 2011 were found to contain 2.4% IP-TFAs as opposed to 4.5% in 2002), further efforts were still

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12 Jedlé nejedlé tuky, D Test, November 2013 <www.dtest.cz>
13 Trans fatty acid isomers and the trans-9/trans-11 index in fat containing foods, Department of Nutritional Physiology, Institute of Nutrition, Friedrich Schiller University, Jena, Germany, 2011.
15 Test hořických trubiček a plněných oplatek, D Test, January 2014 <www.dtest.cz>
16 Pizzas de jamon y queso refrigeradas, Organizacion de Consumidores y Usuarios (OCU), February 2012.
needed with some samples containing up to 8% IP-TFAs on a total fat basis. In the same year in Germany two samples of French fries from local unaffiliated snack bars bought in Thurngria were found to contain high TFAs content (i.e. 15.2% and 12.3%). This study also revealed that products from local bakeries generally contain twice the TFAs content of the discounter products. In another survey carried out in 2012 to look at trans fatty acid content of selected UK processed food products, the two takeaway fish and chips items tested were found to contain more than 2% of TFAs. This proves that take-out food, for which data is difficult to find, is an important source of TFAs.

b. Some consumers are more at risk of developing diet-related chronic diseases

1. Consumers exposure through a ‘high trans fat menu’
As stated before some very popular food still contain high amounts of IP-TFAs and by only eating two or three of them consumers can reach intake levels that go far above the nutrition recommendations of 2g/100g of fat.

This is usually referred to as a ‘high trans fat menu’, composed of a large serving of French fries and nuggets, 100g of microwave oven popcorn and 100g of biscuits, which can provide 20-30g of IP-TFAs. Yet some consumers eat a ‘high trans fat menu’ on a regular basis and consequently are more at risk of developing diet-related chronic diseases.

2. Age and social inequalities: ‘at risk’ groups of vulnerable consumers
Those vulnerable groups are young adults, teenagers and kids, as well as low-income individuals. Indeed in the UK a report published by the National Institute for Health and Clinical Excellence (NICE) in 2010 noted that people from disadvantaged groups are likely to consume more products with high TFAs levels.

In Germany it was recently found that 30% of young adults, between 14 and 34 years of age, consumed TFAs above the WHO limit of 1% of the total energy input. Similarly in Canada, research showed intake by teenage boys was double the national recommended level - which is 2% of the dietary energy intake.

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19 Trans fatty acid isomers and the trans-9/trans-11 index in fat containing foods, Department of Nutritional Physiology, Institute of Nutrition, Friedrich Schiller University, Jena, Germany, 2011.
20 Trans fatty acids in a range of UK processed foods, Mark Roe, Hannah Pinchen, Susan Church, Selvarani Elahi, Margaret Walker, Melanie Farron-Wilson, Judith Buttriss, Paul Finglas, 2012.
3. **Regional inequalities: Western vs. Eastern EU countries**

At the same time consumers in eastern EU countries are more exposed to IP-TFAs than their western neighbours. A recent study found that products in three eastern countries still contained substantial amounts of IP-TFAs whereas products bought in three western countries had a minimal content (<1g). Differences were even observed in products bought at the same retailers in different EU countries.

The test on margarines carried out by our Czech member confirmed that reformulation efforts have not been equal in eastern and western EU countries. This inevitably has consequences on the average intake level of TFAs in Eastern EU countries. In Poland, for instance, the average daily intake of TFAs for adults was estimated to be 2.8g to 6.9g, which exceeds the recommended daily maximum of 2g/day.  

4. **Products high in IP-TFAs sold in eastern countries are traded across the whole EU**

Food produced in EU12 can harm the health of western consumers also, as we live in an open market. This is the conclusion reached by Professor Steen Stender who bought several products, such as cakes and waffles, in Oslo in six different ethnic food stores. It turns out that 13 out of 21 items purchased in those stores, selling foodstuffs from eastern EU countries, contained exorbitant amounts of 20-30% of TFAs per 100gm of fat meaning immigrants, as well as other consumers who shop in those stores, are exposed to harmful amounts of TFAs. His latest research confirmed that those products are currently available in big supermarket chains in Poland, the Czech Republic and Bulgaria, putting eastern consumers’ health at greater risk, but also in ethnic shops in London, Paris and Berlin.

Of even greater concern, Prof. Stender recently found that those products are also sold in large western supermarkets. Indeed a pack of waffles commonly found in ethnic shops, and sold as a family product, was bought by Mr Stender in Malmö (Sweden) in February 2013. It had the alarming content of 35g/100g of IP-TFAs .  

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28 Trans-fatty acids – effects on coronary heart disease, Karbowska J, Kochan Z, Gdansk University, 2011.

II. Only legally binding restrictions can guarantee equal protection of consumers

a. The success of the Danish restriction

1. A significant and harmonised reduction of the presence of IP-TFAs in food within a year
The Danish decision in 2004 to set a maximum limit for IP-TFAs of 2g per 100g of fat in foodstuffs other than meat and dairy products was a great success. Indeed it almost eliminated their consumption within a year.\(^{30}\)

It pushed the food industry to reduce IP-TFAs to the lowest possible levels in both packaged food and take-away products. It is also critical to note that the ban was introduced while the average intake of IP-TFAs in Denmark was estimated to be approximately 1g per day, which is considered very low. Yet it has been demonstrated it was possible to consume 20-30g of IP-TFAs by eating a ‘high trans-fat menu’ while an estimate pointed out that 1% of the population, equivalent to 50,000 people, were still consuming more than 5g of IP-TFAs per day.\(^{31}\)

2. A move not burdensome for the industry and beneficial to consumers’ health
In the end the restriction ensured uniform protection of all consumers, including vulnerable ones, while products characteristics including texture, quality, shelf-life but also price remained the same. An additional positive outcome was that IP-TFAs were replaced by heart-friendly, mono-unsaturated fat, despite critics alleging they would be replaced by saturated fat. A recent WHO research paper also confirmed that TFA reduction leads to increased levels of mono and polyunsaturated fatty acid levels to reformulate products and that total fat levels remain relatively constant.\(^{32}\)

Finally, the industry supported the restriction as it was not financially burdensome and they already had the technical knowledge to make the appropriate changes.\(^{33}\) As such it did not result in higher food prices.\(^{34}\)

3. The Danish success: an inspiration for other countries
The success of the Danish initiative, which achieved the objective of reaching the lowest TFA levels possible for all food sold within the country encouraged many countries, such as Austria, Switzerland, Iceland and Norway as well as several cities in the US (including New York City and Boston) to implement similar policies. In these countries the introduction of a limitation on the use of IP-TFAs also had a very positive impact as most products are now free from the harmful fat.\(^{35,36}\)

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\(^{30}\) Bull World Health Organ – Potential cardiovascular mortality reductions with stricter food policies in the United Kingdom of Great Britain and Northern Ireland, Martin O’Flaherty et al., 2012.

\(^{31}\) Restriction of Produced Trans Fatty Acid works better than labelling – The Danish experiences, Forbrugerradet The Danish Consumer Council, 2012.


\(^{33}\) Restriction of Produced Trans Fatty Acid works better than labelling – The Danish experiences, Forbrugerradet The Danish Consumer Council, 2012.

\(^{34}\) Trans Fat Bans : Policy Options for Eliminating the Use of Artificial Trans Fats in Restaurants, Public Health Law Center, January 2009.

\(^{35}\) La margarine: meilleure que le beurre? Observatoire des graisses, FRC, 2013 <http://www.frc.ch/tests/la-margarine-vraiment-meilleure-que-le-beurre%E2%80%89/>.

\(^{36}\) Les pates industrielles: c’est pas de la tarte, Observatoire des graisses, FRC, 2013 <http://www.frc.ch/tests/les-pates-industrielles-cest-pas-de-la-tarte%E2%80%89/>.
Other countries such as Hungary and Sweden are now considering adopting restrictions on the basis of the Danish model.\textsuperscript{37,38}

\textbf{b. The limits of mandatory labelling and voluntary reformulation}

\textit{1. Mandatory labelling limitations: the Canadian and American examples}

Mandatory labelling cannot effectively protect all consumers as it requires sufficient knowledge of nutrition to understand and use information in the nutrition declaration.

Moreover, labels can lack clarity. This is the case in the US where companies can say their products contain zero trans-fat provided it contains less than 0.5 gram per serving. It means some manufacturers continue to use a little with the result that trace amounts can add up. Consequently, IP-TFAs are still present in many American popular goods such as microwave popcorn, margarine, coffee creamer, frozen pizza and takeaway meals. The Food and Drug Administration (FDA) recently proposed a ban on use of trans-fat as mandatory labelling failed to get the industry to definitely stop using partially hydrogenated oils.\textsuperscript{39}

Another major flaw with mandatory labelling is that it excludes takeaway products.\textsuperscript{40} Canada has also had mandatory nutrition labelling of TFAs since 2003. However, in 2005, it was still possible to buy a “\textit{high trans-fat menu}” (a large serving of French fries and nuggets, biscuits/cakes/wafers and microwave popcorn) with 37g IPTFAs\textsuperscript{41} and in 2009 baked goods were found to contain harmful levels of TFAs with 75% of croissants, 71% of donuts and 64% of pies exceeding the 5% TFA limit.\textsuperscript{42} Moreover some margarine companies offered products with low IP-TFAs levels while continuing to sell products with a high level at a lower price.

Similarly, in Belgium IP-TFAs were found to account for 15% to 20% of the total fat content in lower quality spreads and margarines tested as opposed to 1% to 2% in higher quality, reformulated margarines.\textsuperscript{43} Consequently, low-income consumers who choose the least healthy alternative increase their risk of diet-related chronic disease.\textsuperscript{44}

\begin{footnotesize}
\begin{itemize}
\item[37] Codex Committee for Europe, Nutrition issues within the region, CX/EURO 12/8/8, September 2012
\item[38] A trans European Union difference in the decline in trans fatty acids in popular foods: a market basket investigations, BMJ, 2012.
\item[39] F.D.A. Ruling would all but eliminate trans fats, 2013. \url{http://www.nytimes.com/2013/11/08/health/fda-trans-fats.html?_r=0}
\item[43] Trans fatty acid isomers and the trans-9/trans-11 index in fat containing foods, Department of Nutritional Physiology, Institute of Nutrition, Friedrich Schiller University, Jena, Germany, 2011.
\end{itemize}
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2. **Voluntary reformulation does not lead to a homogeneous reduction of IP-TFAs: the German experience**

Voluntary reformulation cannot reduce IP-TFAs consumption to the lowest possible levels and equally protect consumers as there is no consistent reduction of the use of these harmful fats. Indeed it depends on companies’ willingness to change recipes. For instance, in Germany, where authorities have always relied on the industry’s voluntary reformulation to reduce IP-TFA levels in foods there was no homogeneous reduction of IP-TFAs.\(^{45}\)

A 2011 study by Jena University found they were still high in many products, especially in bakery products and confectioneries, while important variations were noted in the TFA contents of products within the same food categories (from 0% to 40% of IP-TFAs for confectioneries such as biscuits and from 0% to 35% of IP-TFAs for bakery products).\(^{46}\)

Therefore, depending on the kind of products bought, consumers might increase their risk of chronic dietary disease. A voluntary agreement was signed in 2012 but the non-binding guidelines do not apply to all food categories as it was argued that the 2% TFAs target is technically unachievable for some products and those which are not pre-packed.\(^{47}\) It is also of interest to note that New York City’s regulation banning IP-TFAs was enacted after a year-long (albeit unsuccessful) educational campaign urging the city's restaurants to voluntarily eliminate IP-TFAs. Likewise, California eventually turned to a ban on the use of IP-TFAS in restaurants after its voluntary reduction programme had failed to meet its objective.\(^{48}\)

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\(^{45}\) Trans fatty acid isomers and the trans-9/trans-11 index in fat containing foods, Department of Nutritional Physiology, Institute of Nutrition, Friedrich Schiller University, Jena, Germany, 2011.

\(^{46}\) Trans fatty acid isomers and the trans-9/trans-11 index in fat containing foods, Department of Nutritional Physiology, Institute of Nutrition, Friedrich Schiller University, Jena, Germany, 2011.

\(^{47}\) Trans Fatty Acids – the German Initiative. Presentation given by the German Food Industry Federation BLL in February 2012.

BEUC demands

Recent surveys\textsuperscript{49,50,51,52} carried out by our members as well as studies published in leading medical journals clearly show that a broad range of products still contain substantial amounts of IP-TFAs. Consequently many consumers are still exposed to, and consume, high levels of IP-TFAs.

In BEUC’s view, protecting all consumers, wherever they live or whatever they eat, can only be achieved by way of European legislation banning/limiting IP-TFAs. Indeed a ban would benefit all consumers, without exception. Harmonised measures will also push industry to reduce IP-TFAs to the lowest levels possible, which is the long-term goal in terms of public health.

The WHO recently stated that national and local bans are far more effective in protecting consumers than mandatory IP-TFAs labelling and voluntary measures as both policies have several limitations. Furthermore, the Danish ban was a great success as the objective of reaching the lowest IP-TFAs levels possible for all food sold within the country was achieved within a year. In addition the Danish experience proved the industry has the technological knowledge to replace IP-TFAs with healthier alternatives without changing the texture, quality, shelf-life or price of their products. Therefore, implementing restrictions on IP-TFAs is not burdensome for the industry.

Consequently we see no reason why a maximum limit for IP-TFAs in food, whether pre-packaged or sold in restaurants/take-away premises, such as that in force in Denmark (i.e. 2g per 100g of fat) could not be extended to the whole EU. Therefore, BEUC urges the Commission to introduce restrictions on IP-TFAs as this is the only policy intervention that can significantly reduce IP-TFAs in the food supply chain and ensure a high level of consumer protection.

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\textsuperscript{49} Test-Achats, Analyse : Friteries, Janvier 2011.
\textsuperscript{50} Jedlé nejedlé tuky, D Test, November 2013, <www.dtest.cz>
\textsuperscript{51} Pizzas de jamon y queso refrigeradas, Organizacion de Consumidores y Usuarios (OCU), February 2012.
\textsuperscript{52} Test hořických trubiček a plněných oplatek, D Test, January 2014, <www.dtest.cz>