

# Oils and Fats Applications

## UK Perspective

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RESEARCH

We are NOT in the oils  
and fats business. We are  
in the.....

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REUTERS

...enjoyment business!!

Let me tell you why.

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RESEARCH

# Why do we eat?

- Well answer obvious – to survive
- One standard food or a super pill??
- No. We want:
  - Variety
  - Flavours
  - Interest
  - **ENJOYMENT**

**Fats make food taste nice!**

Let me show you a few examples.....

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# Pastries & Biscuits



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# Choccie and Crisps



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# Famous Fish & Chips



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BEVERAGES

# Mouth-watering Patisseries



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REKREASJON

# The (Double) Whopper



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Which fats make them  
taste nice??

All of them!

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Palm stearine

Palm Oil

PKS  
&  
PKO



Palm Oil

Rapeseed oil

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Palm Oil  
Palm Stearine



Palm Olein



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Palm Oil

Palm Oil

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BEVERAGES

Hydrogenated Rapeseed Oil

Rapeseed oil

Palm Oil



Palm stearine

PKS  
& PK

Palm Mid Fraction

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Rapeseed oil

Hydrogenated  
Rapeseed oil

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# Where does AUUK fit in?

- UK uses 1,000,000 tonnes of veg oil
- AUUK sells c380,000 tonnes pa
- Sectors:
  - Bulk : 35% share
  - Foodservice: UK branded market leader
  - Bakery fats: UK market leader
  - Retail: >20 countries plus UK
  - Personal Care : non-food
- Palm volume c 200,000 tonnes pa

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REFINERS



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REFINERS

# Current UK Issues

- Several UK food scares in recent years
- Low confidence in government FSA
- Frantic media interest
- Powerful and reactive retailers

# Frankenstein Foods!!

- A real headline (sold a lot of papers)
- GM immediately “banned” by retailers
- Segregation impossible!
- Only sell I P soya
- Just no consumer demand now!

# Frankenstein Foods Part II:

## Trans Fatty Acids

.....and hydrogenation!!!

# "Trans Fats linked to hydrogenation" Read all about it!!!

'The Mail found the following Supermarket products contain Hydrogenated vegetable oil'

By **Sean Poulter**  
Consumer Affairs  
Correspondent

THE recipe of the Mars bar has been changed amid health concerns about an ingredient.

Within the last few weeks the manufacturer has removed hydrogenated vegetable fat as evidence mounts that it may be dangerous.

The substance is used in thousands of processed and fast foods, including products which market themselves as being healthy, such as low-fat spreads and breakfast cereals.

But it is linked to the 'bad' LDL (low-density lipoproteins) cholesterol, which is associated with the clogging of arteries, heart disease and death.

The chemical - also known as trans fat - is considered so harmful that U.S. government experts have declared that there is no safe level of consumption.

The American Food & Drug Administration is considering ordering manufacturers to put a health warning on products containing it.

The decision by **Mars**, UK, maker of Mars bars, to

## 'There is public concern'

remove the suspect ingredient from Britain's biggest-selling chocolate bar, will put pressure on other leading manufacturers, including Cadbury, Kellogg's, Nestle and Kraft, to follow suit.

Hydrogenated oils have absolutely no nutritional benefit, but are a useful processing and manufacturing agent.

The oil is treated with hydrogen at high temperatures which alters its molecular structure to improve its shelf life and that of the products it is used in.

But the trans fat this creates is particularly likely to lead to a build-up of LDL cholesterol in the blood and arteries.

The small LDL particles squeeze beneath the blood vessel linings, narrowing the passageways with a build-up of fatty 'plaques' that can lead to heart attack and stroke.

Britain's Food Standards Agency is concerned about trans fats, but it has not gone as far as the American authorities in warning consumers.

Its website acknowledges the





Mars: Recipe had to be changed

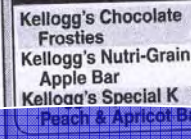

## NOW WILL THESE HAVE TO FOLLOW SUIT?

A snapshot survey by the Mail found the following supermarket products contain hydrogenated vegetable oil:


### BISCUITS AND CRACKERS

	Carr's Table Water Biscuits	M&S Ginger Snaps
	Jacob's Club Chocolate Biscuits	M&S Milk Chocolate Digestives
	Jacob's Cream Crackers	M&S Wheaten Crackers
	Jacob's Original Cheddars	McVitie's Boasters
		McVitie's Hob Nobs
		TUC Biscuits

### BREAKFAST FOODS

	Kellogg's Chocolate Frosties	McVitie's AM Cereal Bites	
	Kellogg's Nutri-Grain Apple Bar	Nestle Cookie Crisp Cereal	
	Kellogg's Special K Peach & Apricot Bar	Safeway All-Butter Croissants	

### PUDDINGS

	Ambrosia Devon Custard	Mr Kipling's Bramley Apple Pies
	Angel Delight (raspberry flavour)	Muller Corner Crunch Strawberry Orange Balls
	Asda Frozen Apple Pie	Safeway Bread and Butter Pudding
	Cadbury's Mini Rolls	
	M&S Teatime Selection	

### SWEETS

McVitie's Penguin		Argento Clover
Rowntree's Rolos		St Ivel Gold Low Fat
Nestle Toffee Crisp		Tesco Olive

### SAVOURIES AND SNACKS

	Act 2 Microwave Popcorn	Jacob's Twiglets
	Bernard Matthews' Turkey Escalope	Knorr Minestrone Soup
	Colman's Spaghetti Bolognese Sauce	Old El Paso Flour Tortillas
	Dairylea Lunchables Chicken Burgers	Safeway Melton Mowbray Pork Pie
	Ginsters Cornish Pasty	Young's Salmon en Croute

reason we have been working on a programme to reduce our use of trans fats. The industry works to a code of practice on the use of trans fats.

# Firms outlaw killer fats in food to fight obesity crisis

By Sean Poulter  
Consumer Affairs Correspondent

BRITISH food firms have pledged to remove a 'killer fat' from their products amid mounting concerns about an obesity epidemic.

Cadbury, Kellogg, Nestle and United Biscuits will reduce or eliminate the use of hydrogenated vegetable fat and oil, which has been identified as a health risk.

Nestle is starting by changing the recipes of Rolo and Toffee Crisp. Products from the other companies that contain the fat include McVitie's digestives, Double Decker and Caramel bars and Hunny Bs and chocolate Frosties cereals.

Hydrogenated vegetable fat and oil — also known as trans fats — is used in thousands of processed foods, particularly biscuits, chocolate snacks and cereals, and the rest of the UK industry will now come under increased pressure to banish them.

Earlier this week, U.S. firm Kraft announced plans to remove or reduce them as part of a radical policy shift towards healthy eating and Masterfoods UK has decided to take them out of Mars bars. The dramatic changes come



Product	Fat per 100g
Nestlé Toffee Crisp snack bar	27.9g
Breakaway snack bar	25.4g
Quality Street chocolates	21.5g
Drifter chocolate bar	21.5g
Rolo chocolates	20.5g
Dairy Box chocolates	19.4g
Cheerios cereal	3.9g
Kellogg's Crunchy Nut Red cereal	10g
Chocolate Frosties cereal	4.5g
Hunny Bs cereal	2.5g
Cadbury Time Out chocolate bar	29.9g
Chocolate Fingers	26.9g
Milk Tray chocolates	26g
Caramel chocolate bar	22.7g
Double Decker chocolate bar	20.9g
McVitie's Penguin chocolate bar	27.5g
Chocolate digestive biscuits	24.2g
Digestive biscuits	21.9g
Hob Nobs biscuits	21.5g

## 'Manufacturers face increased regulation'

with the food industry running scared of a backlash from consumers, government health watchdogs and the City.

In America, Kraft and McDonald's have been the target of legal action over what lawyers claim are 'hidden killers' in our food.

City experts have warned that snack food firms face an 'obesity backlash' which poses a threat to sales, future profits and share prices.

Hydrogenated vegetable oil is made by treating ordinary oil with hydrogen at high temperatures. This changes the oil's molecular structure and makes it easier to use in processed foods. It also improves shelf-life.

But it has absolutely no nutritional value and is considered more harmful than the natural saturated fats in dairy products, against which consumers have been warned for years.

U.S. research has persuaded government medical experts there that there is no safe level of consumption. They are considering ordering producers to put warnings on labels.

Last night, a spokesman for Nestle in the UK said: "We are reformulating a small number of brands to remove or minimise the hydrogenated vegetable fat content."

We are in the process of removing it from Rolo and Toffee Crisp and are investigating how we can remove it from other brands."

Cadbury said: "We are aware of the rising levels of public concern and are looking at the available options to remove partially hydrogenated fats from the small number of products they are used in."

Daily Mail - 5th July

'Hydrogenated vegetable fat and oil — also known as trans fatty acids (TFA's)'

Sunday Times - 6th July

# Big Food acts to forestall fat attacks

IN the beautiful Swiss town of Lausanne, with its views of the Alps and Lake Geneva, Nestlé employs an army of white-coated researchers to make sure that its food meets exacting standards. Ever since the company became controlled in a row over powdered milk to mothers in the Third World, it has invested heavily to avoid controversy.

With obesity spreading, particularly among children, Nestlé is more sensitive than ever. And it is not alone. Kraft is leading the way in making its snacks healthier to ward off lawsuits from consumers. By Dominic Rushe and John O'Donnell

part to reduce the risk of legal action. "If we are producing food that is nutritionally good and marketing them in a responsible way, then there wouldn't be any real case against us as a company."

Banzhaf, founder of the anti-smoking lobby Ash and one of the first lawyers to sue tobacco companies, says food companies will have to go further. In the past 15 years obesity in America has reached epidemic proportions. It is a big problem across the Western world.

Food companies — not consumers — have to face up to their responsibilities, says Banzhaf. "One sudden explosion of obesity is not down to genes, and there is no evidence that we all suddenly got less responsible," he says. He points to a study by the National Bureau of Economic Research

that says 65% of obesity is down to fat food. Obesity and related illnesses are now costing America \$117 billion a year and causing 300,000 premature deaths.

The fast-food industry has spent millions promoting its food and much of its marketing is misleading, says Banzhaf. He points to the sharp rise in sales of "low fat" foods as obesity levels have soared against McDonald's will argue that the company should have warned consumers that Chicken McNuggets contain more fat than burgers. Banzhaf says companies spend more effort warning people not to let their children choke on the plastic toys they give away than they do on warning of the dangers of eating too much sugar or fat. "That is going to change," he says.

American states have sued tobacco firms for billions in healthcare costs. Banzhaf says food companies are next.

Kraft has been under pressure since May when Stephen Joseph, a British-born lawyer, threatened to sue the company over its use of artery-clogging trans-fats in Oreos, a top-selling range of biscuits in America. The case drew huge public attention in the United States, where food is an increasingly political issue.

Joseph, who has now withdrawn his action, says: "Everybody knows about this issue now and that was the point of the case. I never imagined that word would spread so quickly."

Banzhaf says attitudes among food companies and the legal community are changing fast. At a recent conference on obesity and legal action Banzhaf says there were more than 100 lawyers. "When I started with the tobacco cases there were just a handful of us," he says.

The legal threat is putting pressure on some of the world's biggest food groups such as Cadbury Schweppes to follow its lead. Banzhaf says different



The big issue: with obesity reaching epidemic proportions, food is becoming the new tobacco

ing, many of these companies hope that, like Kraft, they will diffuse a legal timebomb. It is a problem that has long occupied the minds of Nestlé's brightest scientists. Edward Fern, deputy head of the Swiss company's nutrition department, says: "We have been aware of the obesity issue for a number of years and we take it seriously. I don't come to work every morning worried that someone is going to sue us. But that could be a risk for some companies. People are trying to find a scapegoat and that may cause changes in the way some companies operate."

Like many other companies, Nestlé emphasises that food can hold only part of the blame for the growing levels of obesity. "We think food is an important factor but not the only fac-

lower fat levels and sugar levels but it's not always possible to get them to the recommended level. It's impossible to make chocolate without more than 30% of the calories coming from fat — the recommended dietary amount. It wouldn't be chocolate any more."

Over the next two years the food giant will put health warnings on most of its chocolate bars to remind consumers of the need to exercise.

Cadbury Schweppes, which was recently named by analysts at JP Morgan as being at highest risk of being sued because of the predominance of unhealthy products in its portfolio, has tried to move its emphasis into natural products. A spokeswoman says: "Every company that is involved in food is looking at its complete

to develop lower-calorie and natural products. But if you lead a balanced lifestyle why shouldn't you have some enjoyment? A little of what you fancy does you good."

The marketing spin hides a deeper concern about increasing levels of fatness, according to Laura Haynes, a brand consultant whose clients include Cadbury, Schweppes and Kraft. Haynes has had a growing number of food companies approach her to re-market their products in light of health fears.

"The issue has risen to the top of the agendas of the companies that have come to us," she says. "And what they're beginning to realise is that it takes more than simply tinkering around with products — it needs a complete rethink."

Remember when a Mars day

# Anti-trans Campaign Getter Hotter

- Rece
- Retail
- Move
- [www.](http://www.bantransfats.com)
- [www.](http://www.bantransfats.com)  
[nated](http://www.bantransfats.com)
- World



pace

[www.bantransfats.com](http://www.bantransfats.com)

acids??

A Little technical stuff...

Apologises!!

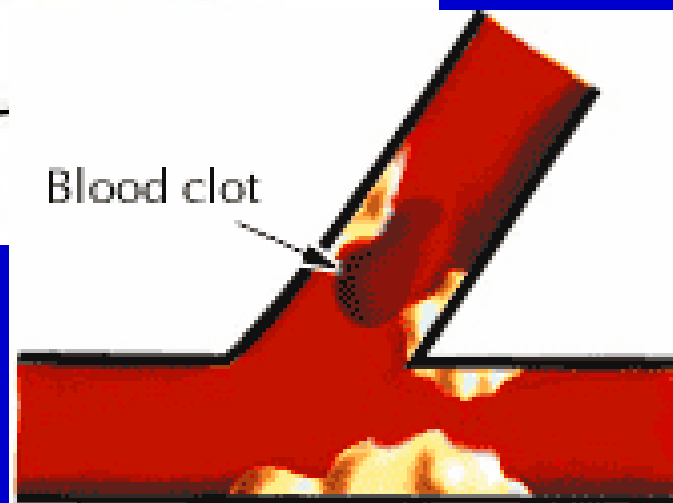
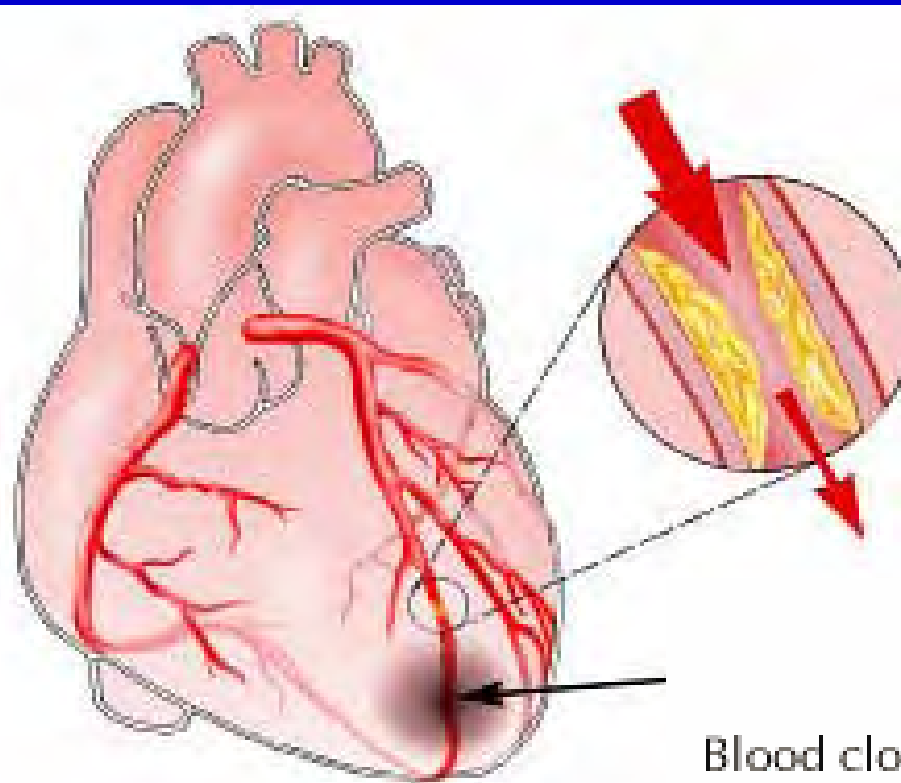
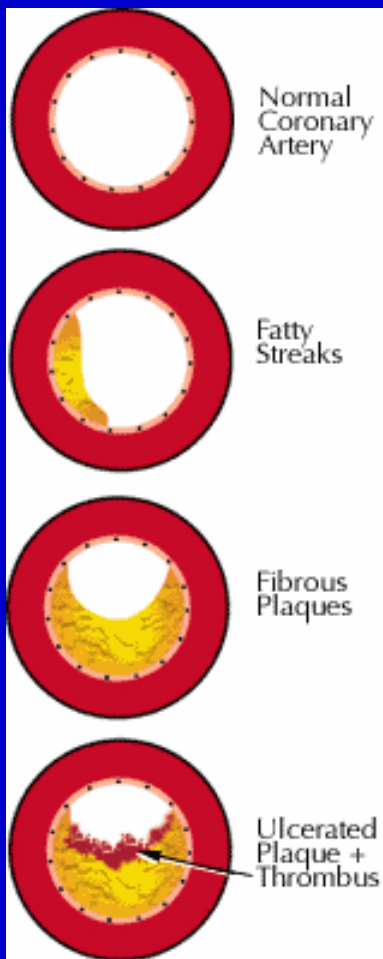
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# Influence of Fatty Acids on Blood Cholesterol

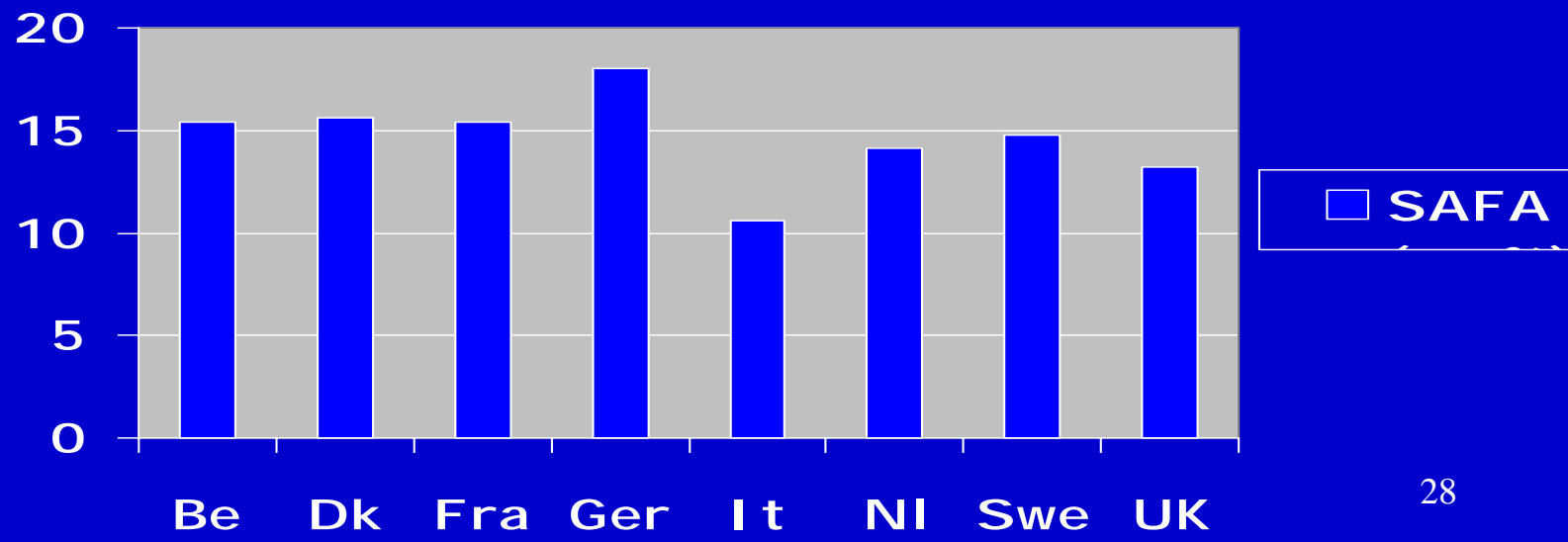
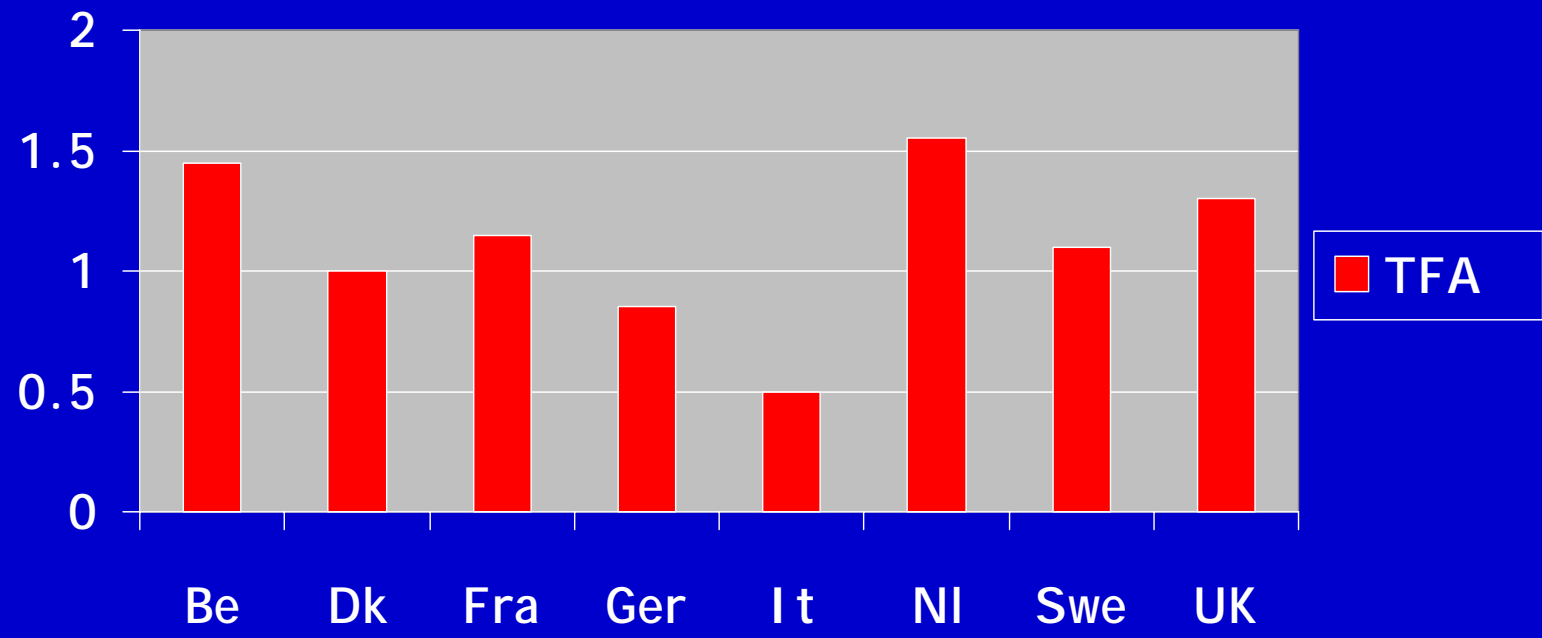
Fatty Acid Type	Total Serum Cholesterol	HDL Level (Good Cholesterol)	LDL Level (Bad Cholesterol)
Saturated	<b>RAISE</b>	NO EFFECT	<b>RAISE</b>
Monounsaturated	LOWER	RAISE	LOWER
Polyunsaturated	LOWER	<b>LOWER</b>	LOWER
<b>Trans Fatty Acids</b>	<b>RAISE</b>	<b>LOWER</b>	<b>RAISE</b>

Oils high in monounsaturates, e.g. olive oil and high oleic sunflower oil are better as these RAISE good cholesterol and LOWER bad cholesterol

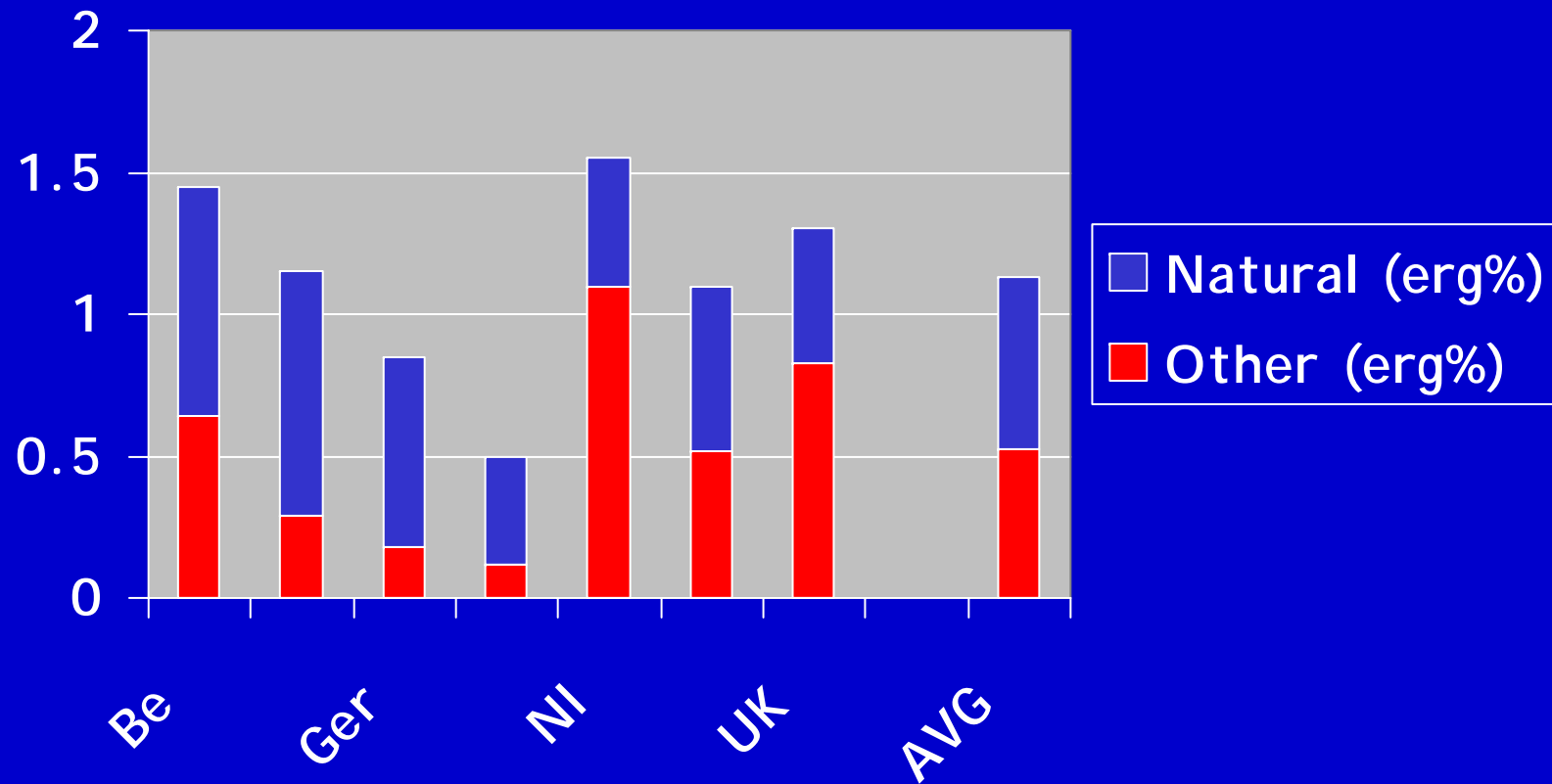
# Blocked Artery



# TFA and SAFA Intake in Europe



# Origin of TFA Intake in Europe



# Noteworthy points

- Hydrogenation v Partial Hydrogenation on labels
- Removing hydrogenation and / or trans fats will not alone solve the problem of obesity
- Leading advice : limit total fat intake to 30% calories and saturated fat to no more than 10% of calories.
- The average U.K. consumption of trans fat is 1-2% of calories: saturated fat consumption is about 12-14% of calories.
- Campaign should be for total reduction.

# Opportunity or Threat?

- AUUK will sell what the market wants
- Too small to really influence
- No GM sold or on site!
- Soon no TFA?
- But what of Hygrogenation?

# So what's to do?

- Reformulate products and blends
- Develop new processes
- Create new blends with same functionality
- Sell more palm???

# Palm - TFA saviour?

- Can be further processed
  - Olein /Stearine
  - DFO/ PMF
  - Hyrogenated
- Blended for specific functionality
- Its non GM
- Can be organic
- A highly sustainable and energy efficient crop.



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And to conclude.....

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# Oils and fats industry must...

- Understand consumer moods and influences
  - Be cogniscent of health issues
  - Communicate the technical stuff
  - Be technically competent and responsive
  - **Sell what the market wants**
- ...and enjoy the business!!**

as we do.....

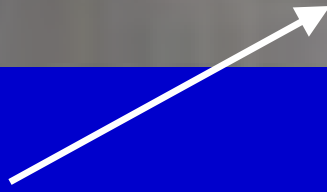
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# Introducing our newest customer



Palm Oil



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Thank you

[www.aarhusunited.com](http://www.aarhusunited.com)

[ian.mcintosh@aarhusunited.com](mailto:ian.mcintosh@aarhusunited.com)

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