IN THIS MENTOR SESSION:

- How oils are damaged through manufacturing.
- The really great oils are revealed!

Health Mentor Programme - Fats and Oils part 2

MENTOR SESSION 12

Oils to cook with

In this session I will:

- Expose how oils are abused before they reach your plate
- Determine which oils are the most stable and healthy to use in the home

Shady deal...

Industrial success:

Remember in the first session I explained how oils are sensitive to heat, light and oxygen? Well, keep that in mind as we explore the shady world of commercialised oil preparation.

Processed to 'white oils' (refined oils)[1]

During the industrial revolution mass production of oils became a more common-day practice and that's where the problem with oils started. The issue is that polyunsaturated oils (i.e. unstable oils that cannot handle heat) are used to produce the most common oils. (These oils are usually the cheapest and that's why they're used).

Before oils reach the bottle they are:

- Cleaned and heated
- Mechanically expelled
- Extracted using solvents
- De-gummed
- Bleached
- Deodorised

These oils end up being:

- Highly refined
- Devoid of naturally occurring nutrients
- Loaded with toxins

And yes, these oils end up being changed and dangerous…

INSIDE THIS ISSUE:

Inherent stability

This is one of the major topics we have to consider when looking at oils. A high IS figure indicates low stability especially in the presence of heat (i.e. toxins are formed when heated)

Soyabean oil	7.0
Sunflower oil	6.8
Canola	5.5
Cottonseed	5.4
Olive oil	**1.5**
Palm olein (palm fruit)	**1.3**

Note: Most fast food outlets use either soya, sunflower or cottonseed oil. (Now look back at the session on french fries and you'll understand why deep fried fast foods are just not a good idea!)

The oil crisis!

Because of the use and re-use of 'weak' oils a major toxin build-up occurs in these oils! Some of these toxins are referred to as 'polymers' and, although governments try to prevent the build up of polymers in oils through strict measures, many fast food outlets use their oils past the point of safety.
Newer toxins have also recently been discovered that are (a) highly toxic and (b) form after heating polyunsaturated rich oils (weaker oils) for as little as half an hour![2]

At least 1 in 8 fast food outlets in South Africa have dangerously high levels of polymers in their oils when routinely tested (but who wants ANY polymers in their oil?!)

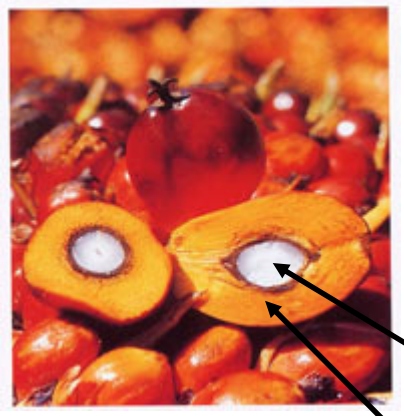
Polymers can cause the following

- Growth retardation
- Diarrhoea
- Teratogenicity (developmental abnormalities in the unborn)
- Tissue damage
- Increased liver and kidney mass
- Cellular damage to testes and epididymides
- Pre-cancerous growths
- Death

This is the reason why people living with HIV who eat a lot of weak and overused oil have decreased liver function[3] and why young girls should avoid foods like french fries because it increases their risk of developing breast cancer as adults![4]

Oil focus - Palm Fruit Oil

I advise the use of Palm Fruit Oil especially for heating purposes but only if the product carries a label that the oil was farmed responsibly (this has to do with the destruction of forests that displace Orangutans).
Palm fruit oils' low inherent stability of **1,3** is probably one of the biggest reasons why we like this oil...but there are even more reasons!



Note:
It's important to distinguish between palm **kernel** and palm **fruit** oil.
Oil from the **kernel** is also very stable to heat but it can raise cholesterol levels slightly whilst the oil from the **fruit** does not. The fruit oil also contains carotenes and vitamin E.

Health benefits of using palm fruit oil

Health benefit of using palm fruit oil:

- Very stable when heated and does not form toxic compounds as easily as unstable oils
- 1 Tablespoon contains the adult RDA for Carotenes (vitamin A) and Vitamin E
- Contains 40 – 50 x more carotenes than tomatoes
- Contains both fractions of Vitamin E, especially the active ones
- Lipoprotein-A is reduced in your blood (potent risk indicator for heart disease)
- Cancer rates are reduced
- Palm fruit oil is 97 – 99% digestible

Uses:
-Use over salads instead of salad dressing,
-Take it just like it is as a supplement,
-Use to fry and bake.

Note on repetitive use:
Any oil will lose stability with repetitive high heat exposure. Make sure you don't overheat even palm fruit oil if you are frying . What is high heat then? Try to stay below 200 degrees Celsius or make sure that when deep frying the food boils gently and not vigorously.

Note:
In winter the **true** Palm Fruit Oils solidify completely in colder countries. Just dip the bottle in hot water to make it usable.

Oil focus - Olive oil

I advise the use of Olive oil on a daily basis!
Olive oil has a favourable inherent stability of **1.5**

Cold pressed?
The process of removing olive oil from the olive should involve very little heat (actually preferably below 50°C)

Virgin?
Here is the official classification of extra virgin and virgin olive oil straight from the International Olive Oil Council[5]

Extra virgin olive oil: **Purest**
From the first pressing of the olives
Free acidity ≤ 0.8 gr/100 gr

Virgin olive oil: **Very pure**
Free acidity ≤ 2 gr/100 gr

So yes, extra virgin and virgin are the way to go!

Extra virgin home test:
Place a small quantity of olive oil in a glass bowl and refrigerate for few days.

Becomes crystalline = Extra-virgin olive oil

Forms a block = Most likely chemically refined oil with added first-pressed oil

Health benefits of using olive oil

- Stable when heated and does not form toxic compounds as easily (use over low heat)
- Decreases rates of cardiovascular disease and cancer
- Helps keep arteries supple
- Central part of the Mediterranean diet
- Retains the natural flavours, vitamins, minerals, antioxidants of ripe olive fruit
- One tablespoon provides 8% of RDA Vitamin E
- Contains vitamin K
- **Antioxidants:** Flavonoid polyphenols

There are as many as 5 mg of antioxidant polyphenols in every 10 grams of olive oil

Uses:
-Use to fry and bake. (Note: I prefer that any oil not be used repetitively for frying and that olive oil be used for lower temperature cooking)
-Use over salads
-Take it just like it is as a supplement

Summary

Guidelines for using oil in cooking

Frying	Butter and Palm fruit oil (Use frying in moderation)
Low temp frying	-Olive oil -Refined peanut and avocado oils -High Oleic acid sunflower and safflower oils (Hard to find) -Organic canola oil (unrefined form) -Organic coconut oil

Cooking techniques

- Learn to cook with water (which is how it was done before the commercialisation of oils)
- Add water or vegetables to a dish first
- Choose grilled rather than fried food
- If you don't have access to vegetables that are stir fried in olive oil rather choose the steamed variety
- Sprinkle oil onto vegetables only **after** baking them in the oven

Habit changes after this session

- **Exchange your usual cooking oil for palm fruit oil or olive oil**
- **Avoid eating deep fried foods especially from fast food outlets**
- **Experiment with new cooking techniques like using water and steaming**

Recipe

Palm fruit oil muffin

- 6 cups bran
- 2 cups boiling water
- 1 cup oil or butter
- 3 cups sugar
- 4 eggs slightly beaten
- 750 ml yogurt or sour milk
- 10 ml salt
- 25 ml bicarbonate dissolved in 250 ml sour milk
- 625 ml nutty wheat
- 625 ml cake flour

Optional: Add banana if you like

Mix the ingredients

Bake at 220^{0}C for +/- 20 min.

(This recipe makes +/- 50 muffins)

References

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3. Oosthuizen W, van Graan A, Kruger A, Vorster HH. Polyunsaturated fatty acid intake is adversely related to liver function in HIV-infected subjects: the THUSA study. Am J Clin Nutr. 2006 May;83 (5):1193-8.
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About Dr Anton

Dr Anton Janse van Rensburg is a practising medical doctor who has devoted himself to the study of unique, scientifically sound solutions to modern diseases. He is also a qualified metal toxicologist and has a master's degree in Applied Human Nutrition.

He has written on a variety of wellness topics for numerous South African magazines and newspapers and in 2009 co-authored the book 'Diamonds in the Dust – crafting your future landscape'. Dr Anton is no stranger to radio and has been able to guide scores of listeners with his passion for wellness education.

Dr Anton is an established public speaker and is also a wellness coach to company executives. He specialises in motivating people to adopt healthier habits through well researched lifestyle and food approaches.

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