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### IN THIS SESSION:

- Is meat the only protein option you have?
- Not all plants are equal...
- Yes, organic is better!

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# Health Mentor Programme -Plant protein

### MENTOR SESSION 10

# Plant protein. Can you really get enough?



# In this session, the 3<sup>nd</sup> about protein, we will:

I) See how plants can definitely provide the needed proteins in your diet

2) Find out how to consume 'complete' proteins (i.e. containing the 9 essential amino acids) from plants only.

3) Determine some dangers involved in eating plants.

Eating a variety of plants has numerous health benefits!

# Take note...

All the principles we've used up to now are valid and when we look at finding proper protein from plants we have to:

a) Apply good scientific rationale about what the shortages are in plants versus animal meat.

b) We definitely have to proceed with caution where humans have interfered.

c) We need to always remember that we do live on a polluted planet so be careful where you get your food from!



# Benefits of deriving your protein from plants...

Avoiding several dangerous

substances like:

•Hormones

Antibiotics

•Saturated animal fat



### •Unhealthy essential fatty acid composition •Pesticides and chemicals

### Consuming healthy substances like:

- •High quality protein (if plants are combined),
- •Life-giving and disease-preventing phytochemicals and antioxidants,
- •Fibre, which ensures a healthy intestine and digestive system.

# **Organic is cool!**

### **Pesticides and chemicals:**

Yes, plants can have residual pesticides on them and some of these can have harmful effects on your body, like endocrine disruption.<sup>1</sup> Many pesticides are known carcinogens.<sup>2,3</sup>

### Increased carcinogens:

Other problems with non-organic produce could include the formation of more toxic chemicals when they are cooked, for example potatoes that are grown using fertilizer will form more carcinogens when you cook them.  $^{6}$ 



Genetic modification:

Based on the principle of 'human interference' being a problem, we advise at this stage that you stick to foods that are the way they were originally designed to be and that you proceed carefully with the consumption food modified by humans.



# **Risks of non-organic...**

# There are definite risks in consuming non-organically grown produce. They are:

### **Decreased protective ingredients**

Numerous studies have shown that if plants are grown using certain pesticides many of the protective ingredients are definitely less like: •Cancer protective bioflavonoids <sup>5</sup>

- •Polyphenols <sup>4</sup>
- •Antioxidants <sup>4,5</sup>
- •Vitamin C <sup>4,5</sup>
- Alpha- and gamma-tocopherols<sup>5</sup>

### The solution (once again):

Stick to organically raised crops that don't use pesticides or unnatural fertilizers.

If you have the space and time why not start your own vegetable garden? (Many organisations exist that can assist you or a group of friends to plant your own vegetables using only natural pest and weed control).

# Where can you find plant protein?

Grains

These include wheat, barley, maize, rice, millet.



### **Seeds**

Great seeds to have in the house are: Sunflower Pumpkin Linseed Sesame



## Nuts

Nuts are a great source of protein and healthy fats (that's if you eat nuts that aren't fried or heated in any way). They also contain fat soluble vitamins and essential fatty acids.

I recommend that you have a variety of nuts stored in your fridge like almond, pecan, macadamia, cashew and hazel nuts. Mix these with raisins and you have a fantastic high protein, healthy snack.



Raw nuts are a source of protein, healthy fats and calcium

## Legumes

Legumes are edible seeds in a pod. They are a rich source of protein, low GI carbohydrates, fibre, vitamins and minerals.

Examples are beans, lentils, peas and peanuts.

Their protein content can be 22% and higher. <sup>8,9</sup>

Note: Beans contain an enzyme that inhibits the absorption of most of the carbohydrate it contains. This is VERY convenient as your body will determine when it needs more carbs by digesting this enzyme.<sup>8</sup>



### The soya bean as a master legume:

The soya bean has received quite a bit of bad press recently and so let me say a few words...

The consumption of soya is definitely associated with several health effects like the prevention of heart disease and cancer of the prostate, lung, breast and liver.<sup>10,11,12,13,14</sup>

From what we've read in several reviews we believe soya still is a great source of plant protein.

(Obviously we'll keep you up to date if we find anything new).

### Hummus wonderful hummus:

Remember the hummus recipe we gave in mentor session 7? Hummus is made from the chick pea legume and is a VERY handy food to have around the house. It's high in protein and healthy oils and you can eat it at any time of the day and with anything! (e.g. rice cakes) Hummus is also a great food for growing children.<sup>15</sup>



### Legume cooking note:

Remember to soak your legumes like lentils and chick peas in water overnight! This removes enzyme inhibitors that can upset your digestive system and make you lose the benefit of eating the legume.

# **Protein content of common plants**

# Higher protein group

•Soya products like tofu, tempeh, soya milk and other soya derivatives

- Beans like kidney and black beans
- Most legumes like chick peas, lentils

•Peanuts and peanut butter (if you have a chronic disease like HIV it's advisable to avoid peanuts due to the possibility of small amounts of aflatoxin being present)

- Almonds
- Pecans
- Sunflower seeds
- •Oatmeal
- •Peas





# Lower protein group

- Brown rice
- Barley
- •Raisin bran
- •Maize bran
- •Rye bread
- Collards
- Asparagus
- •Spinach
- •Green beans
- •Broccoli
- •Carrots





# Note to our vegetarian subscribers

### Note to our vegetarian subscribers;

If you avoid meat, eggs and dairy you need to be careful of the following deficiencies in your diet:

- •Vitamin B12
- •Vitamin D
- •Vitamin B2
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- •Calcium
- •Zinc

Make sure you do enough study on vegetarian diets to ensure that you're getting all the good stuff!

# **Practicalities**

Here are some ideas on combining foods to ensure 'complete' protein intake...

# **Option I**

Hummus on its own is a complete protein (clearly hummus is one of my favourites!).

You can eat this tasty food on bread, use it as a party dip, use it as a mid morning snack with rye crackers, paint your house with it...well maybe not that, but you can do a lot with it...





Remember in session 8 and 9 (about meats) I mentioned the Mediterranean d •People who eat a Mediterranean diet have a decreased risk for cancer and heart disease •It's advisable to have some days in the week where you don't eat animal protein

In light of these recommendations I advise that you have a vegetarian cookbook handy for those 'meat off' days so that your diet stays interesting and healthy!

# From the kitchen



# Lentil bobotie

### Serves 4-6

45ml red palm fruit oil 2 onions, chopped 500g butternut/pumpkin peeled, seeded and cubed 4-6 cloves garlic, crushed 5-7ml chilli paste 5ml medium-strength curry powder 2 dried bay leaves/4 fresh lemon leaves 6 ripe tomatoes, skinned and chopped/410g can whole tomatoes, undrained 15ml ginger paste/freshly grated ginger root 24 sprigs fresh coriander (optional) 10ml each sugar and salt Milled black pepper to taste 250g brown lentils, cooked jumbo eggs beaten into 400ml milk/soya milk, seasoned well with salt and pepper

Heat oil in large, heavy-based frying pan and sauté onions and butternut until onions are translucent, about 5 minutes.

Stir in the garlic, chilli paste, curry powder and bay leaves, then add tomatoes and sauté for 3-4 minutes. Stir in ginger, coriander and sugar, season to taste and simmer, covered, until butternut has just softened.

Remove lid and cook over high heat until liquid has almost evaporated, 15-30 minutes.

Layer lentils and vegetables in an ovenproof dish, starting and ending with lentils. Pour egg mixture over and bake at 180°C, till golden brown and set, 45-60 minutes.

### ΤΙΡ

Cook lentils in chicken stock for better taste. Use stock that doesn't contain MSG (available in most retail outlets).

Enjoy!

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# **About Dr Anton**



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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