

## METABOLIC SYNDROME AND OBESITY

Australians are now as overweight and obese as Americans and are at increasing risk of **The Metabolic Syndrome**.

Obesity has long been recognised as a major risk factor for cardiovascular disease. It is often associated with **The Metabolic Syndrome** that sees abdominal or central obesity as being a particularly health risk. This is the spare tire. It is brown unhealthy fat.

At times obesity is a cosmetic problem but at other times such with **The Metabolic Syndrome** it can give complications such as Diabetes, Hypertension and Hyperlipidemia. Other factors often present are Osteoarthritis, Sleep Apnoea, Depression and Gout.

- Excessive weight gain can lead to insulin supplies becoming inadequate. Insulin requirements increase and the body becomes insulin resistant leading to type 11 Diabetes.
- There is a close link between hypertension and weight. As weight increases so does blood pressure.
- Diets high in saturated fat diet often lead to increases in body lipids such as cholesterol. This is especially true of the Low Density Lipoprotein (LDL).
- Increasing weight puts increasing stress on the joints making osteoarthritis more painful.
- Gaining excess weight can increase fatty tissue in the throat, affecting breathing and increasing problems of Sleep Apnoea.
- Depression can either be from being depressed as a result of being obese or as a consequence of overeating when depressed. This can hinder weight reduction. It is easier to lose weight when psychological factors are not present. Sometimes the help of a counsellor or psychologist will be very beneficial.



## Body Mass Index and Abdominal Circumference

Obesity is best defined as “Increase in body fat resulting in impaired health or increasing the patient’s risk of disease”. This can be measured by **Body Mass Index (BMI)** or by **Abdominal Circumference**.

With a BMI of greater than 30 where ideal is 20 to 25, the BMI is calculated by dividing the weight in kilograms by height in metres squared. The abdominal circumference is the best measure of fat distribution. In men there is increased risk if the circumference is greater than 94 cm and substantially so if it is greater than 102cm. For women there is increased risk greater than 80cms or substantial risk greater than 88cms.



### SPECIAL POINTS OF INTEREST:

- *Causes of Obesity.*
- *Star Recipe*
- *A place for medication, replacement meals or surgery.*
- *When you don't like to drink milk*

## Causes of Obesity

Physicians previously considered that obesity was caused by excess food intake. It is now recognised the problem lies between the imbalance of energy intake and energy expenditure. We are less active in our lifestyles with modern conveniences. We still may expend energy in exercise but do less in physical activity such as chopping wood, washing clothes, cutting the lawn, cleaning house, and walking to the shop or up the stairs. Often there is excess fat

intake or restriction of energy through inactivity.

In 1994 a substance called Leptin was identified. It plays a roll in

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regulating body stores of fat and shows close correlation with body mass index (BMI) and with percent body fat. The majority of obese patients have high Leptin concentration and appear to be Leptin resistant. It could be that forty to sixty percent of obesity is through an inherited predisposition. The rest is life style. Even with a predisposition to obesity, greater care with nutrition and a higher level of physical activity can make all the difference.

## Suggested Targets

It is not always possible or practical to reach an ideal weight. If health risks can be reduced and there is an improvement in fitness then this is a good outcome. It is important to avoid the yo-yo dieting game.

Reduction in body weight of five to ten percent sustained over a period of five years is a reasonable goal. Even sometimes weight maintenance in itself can be an achievement. Sometimes weight can stay the same but

increasing muscle and decreasing fat will give an improvement in shape and a reduction in waist circumference. With improved diet there can be improved control of diabetes, hypertension, dyslipidemia and increasing ability to exercise.



## A Place For Medication, Replacement Meals or Surgery

It is felt that drug therapy may be appropriate when reducing fat intake and increasing activity have failed to achieve improvement in the metabolic risk factors. Orlistat, a lipase inhibitor known as Xenical can be recommended. It is the only one of its type available in Australia.

Orlistat or Xenical will induce severe fat malabsorption. If a person has a high fat meal, then this will induce significant fatty diarrhoea and even faecal incontinence. This can be valuable retraining for the person.

Very low kilojoule or low energy diets are useful in special circumstances where sufficient weight loss cannot be achieved and exercise is limited.

An example of this is Modifast. It is a complete replacement meal of 1800 KJ or 425 calories per day including 56 grams of protein. It is only prescribed through a doctor. Modifast works well under a Dietitian's supervision but is considered a last resort. Low kilojoule vegetables and some fruit may be combined with the Modifast. It is low in fibre so the addition of psyllium husks or bran can be very helpful in preventing constipation and increasing satiety.

Sometimes assistance with weight loss through fat malabsorption or a low energy replacement meal will give sufficient weight loss to allow more



## When You Don't Like To "Drink" Milk

**Increase your dairy and therefore your calcium intake in every day eating.** Milk and milk products are the best sources of calcium. But you may not like to drink milk. Here are 10 easy tips for including more milk products in your diet without ever drinking a glass of milk.

1. Make oatmeal or semolina porridge with milk.
2. Add milk to your coffee. (But watch how much caffeinated coffee you drink!)
3. Make soups such as tomato, chowders and cream-type soups with milk instead of water.
4. Add powdered milk to foods. One tablespoon is equal to 50 milligrams of calcium.
5. Make instant hot cocoa with milk instead of water. Or, when using packets of hot chocolate, add 1/3 cup of powdered milk. This is equivalent to a cup of milk.
6. Serve milk-based desserts such as puddings, tapioca, frozen yoghurt, custard and ice cream frequently.
7. Enjoy a cup of hot chocolate instead of coffee. A 250 ml serving of chocolate milk has only 2 to 7 milligrams of caffeine. 180 ml of coffee has about 100 milligrams of caffeine. Also, chocolate milk provides, on average, only about 240 KJ (60 calories) more per serving than unflavoured milk.
8. Use plain or flavoured yoghurt as a dressing for fruit salads. For example: Try vanilla yoghurt as a dressing over fruit. Low fat natural yoghurt works with Waldorf salads (typically made with apples and such ingredients as raisins or grapes, celery and walnuts).
9. Top baked potatoes with natural yoghurt. For added flavour, mix in some snipped fresh chives or dried chives.
10. Enjoy Smoothies for snacks. TIP: blend small frozen fruit pieces (berries work especially well) with milk or yoghurt. Use about a cup of milk or yoghurt; then add 1/2 to 1 cup- frozen fruit and blend until a smooth consistency. Yoghurt gives a tangier taste than milk. Or, use a combination of milk and yoghurt. Sweeten to taste with a teaspoon or two of sugar, honey or jelly crystals; or use an artificial sweetener. If desired, add about 1/4 teaspoon vanilla. Drink right away.
11. Preparing frozen fruit-You can freeze chopped larger fruit such as bananas, apricots etc or small pieces of fresh or canned fruit until solid. Freeze for a few hours or overnight in a single layer on a baking sheet or in shallow- pan. Transfer frozen fruit to freezer bags for later use or enjoy in a Smoothie right away!

- Adapted from the **FOOD REFLECTIONS Newsletter, University of Nebraska Cooperative Extension in Lancaster County** ([lancaster.unl.edu/food/foodtalk.htm](http://lancaster.unl.edu/food/foodtalk.htm))

## Star Recipe

### CHEESE AND CARROT SOUP

5 medium coarsely chopped carrots (500 grams)

1 coarsely chopped stick of celery (100 grams)

1 medium coarsely chopped onion (100 grams)

2 tbsp raw rice (30 grams)

6 cups of water (1500 ml)

4 teaspoons low sodium chicken stock powder (10 grams)

1 teaspoon Worcestershire sauce (5 ml)

1 tbsp finely chopped fresh thyme or 1 teaspoon dry

2 bay leaves

Tabasco sauce or chilli sauce to taste

1-cup non-fat powdered milk (100 grams)

1 cup reduced fat cheddar cheese (less than 10% fat) (120 grams)

*Cook carrots, celery, onions, rice and water together until carrot is soft.*

*Season with stock powder, Worcestershire sauce, thyme, bay leave, and Tabasco sauce.*

*Puree in blender or with a kitchen whiz.*

*Reheat and add milk powder.*

*Just before serving, add cheese, reheat gently and serve.*

*Do not boil after adding milk or cheese.*

*Not suitable for freezing.*

*Note: higher fat cheese may be served but the fat content per serve will be higher.*

**Serves 8- 1-cup serves**

#### Nutrients per Serve

**KJ-487, Calories-112. Carbohydrate-14 grams, Fat-1.4 grams, Protein-11 grams, Calcium- 350 mg**

*Here is a high Calcium winter warmer soup that is also very low in fat. This is suitable as a lunch meal and could be combined with a slice of toast or Cruskits.*