

Nonalcoholic Fatty Liver Disease

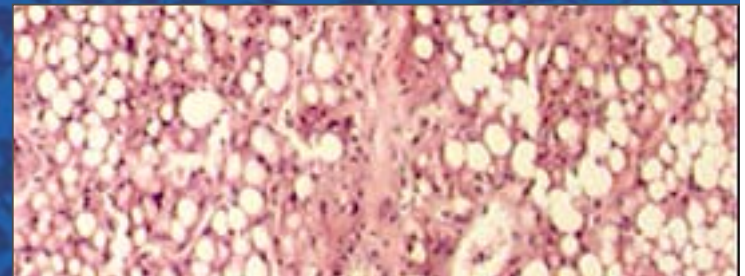
Dietary and Lifestyle Guidelines

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Risk factors for NAFLD

- Typically, but not always seen in patients who are overweight.
- May have
 - Diabetes and or insulin resistance
 - high cholesterol and/or high triglycerides
- Benefit from weight loss as well as better control of cholesterol, triglycerides and diabetes.

General Guidelines

- The guidelines for treating NAFLD are similar to the general recommendations for:
 - Type 2 diabetes
 - Insulin resistance
 - High blood pressure
 - High cholesterol or high triglycerides
 - Simple obesity.

GUIDELINES

1. Eat less fat, especially saturated fat
2. Keep blood sugars normal
3. Drink less or no alcohol
4. Exercise regularly
5. Match kilojoules to energy requirement
6. Don't smoke

Eat Less Fat

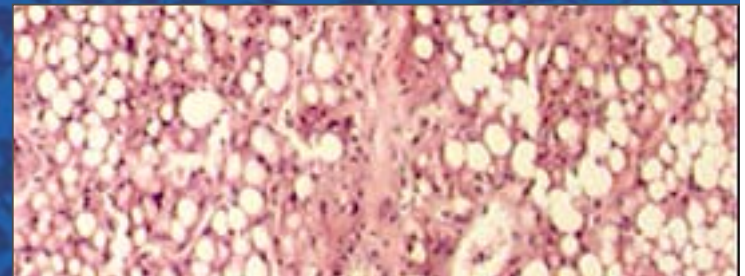
Less food, longer life

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Fat

- Excess dietary fat is easily stored in adipose tissue with a 97% efficiency (CHO-76%).
- Fat is a major source of energy for the body and aids in the absorption of essential vitamins.
- Fat makes food more palatable leading to overeating.



- Eat less fat
- 1 teaspoon fat equals 5 grams.
- Note that the fat content of a Commercial quiche is greater than a meat pie. Not that either is recommended.
- Chips depend on their surface area. Thin chips per 100 grams have more fat.
- Watch take-away food.





MILK AND MILK PRODUCTS

The background of the slide features a microscopic view of milk components. The upper portion is a light gray field filled with numerous small, circular, and irregularly shaped particles, representing fat globules and other milk constituents. The lower portion is a solid, dark blue horizontal band, also containing a pattern of similar circular and irregular shapes, suggesting a different view or a specific component of the milk's structure.

Milk and Milk Products-Contain 60 % saturated fat

- The serve of cheese in the next slide is 70 grams.
- Regular cheese is 34% fat
- 25% reduced is 24% fat
- 7% fat cheese is 7% fat
- Full cream milk is 3.8% Fat
- Hi low is 1.8 % fat
- Calcium Plus or Light Start is 1% fat
- Non-fat is 0.01 % fat

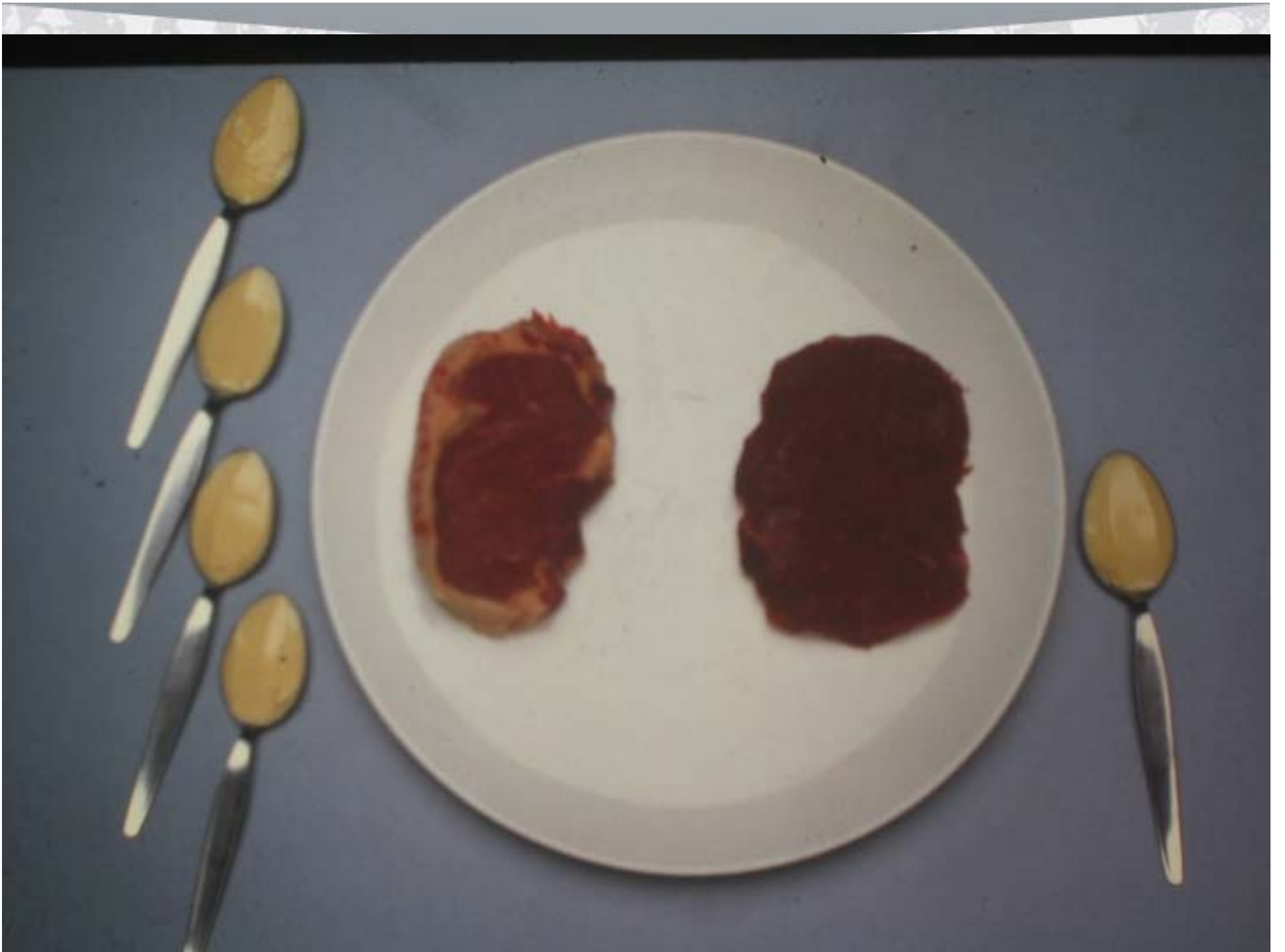






Saturated fat

- Found in meats, baked goods, fast foods and full cream dairy products
- Can raise low-density lipoproteins
- No known benefits at any level in the body.
- Because they occur in so many types of foods an all-out ban is virtually impossible.







Dietary Advice

- Limit the use of oil and margarine.
- Try not to fry food. Grill, bake, steam, poach, boil, microwave instead.
- Eat leaner portions of meat and chicken removing visible fat.
- Fill up on grains and vegetables.
- Eat fish more often than red meat.
- Use low fat mayonnaise, mustard or chutney on bread.
- Use fat free rather than full cream or even low-fat dairy products.
- Avoid coconut milk and palm oil. Often hidden in biscuits, cakes and desserts.
- Check food labels and choose the lower fat alternatives.



Crisco
100% Light
POLYUNSATURATED
SAFFLOWER
OIL

Gold'n
CANOLA
MONO-UNSATURATED
VEGETABLE OIL
Low cholesterol

BERTOLLI
EXTRA
LIGHT
OLIVE OIL

Meadow Lea
CANOLA
CHOLESTEROL • LOW IN SATURAT
500g NET

Polyunsaturated
MIRACLE
POLYUNSATURATED MARGARINE

Watsonia
BUTTER
Watsonia
BUTTER
500g NET





INSULIN RESISTANCE

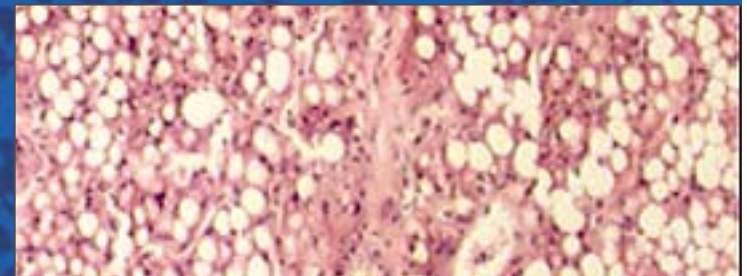
METABOLIC SYNDROME

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Insulin resistance is found in:

- Obesity
- Inactivity
- Those predisposed to diabetes
- PCOS
- Fatty liver

Insulin Resistance

- The following cluster of symptoms can appear together in some individuals and increase their risk of diabetes and NASH:
 - high blood pressure,
 - high triglycerides,
 - decreased high density lipoproteins
 - obesity,
- Termed “Insulin Resistance”.

Insulin Resistance

- Cells respond sluggishly to the action of insulin.
- Results in elevated glucose circulating in the blood and prevents fat burning.
- Signals for more insulin to be released from the pancreas until the glucose is taken up by the cells.
- 10 – 15% of the adult population may be resistant to insulin to some degree.
- People who are overweight show signs of insulin resistance more than people who are normal weight.
- Exercise reduces insulin resistance.

GLYCAEMIC INDEX

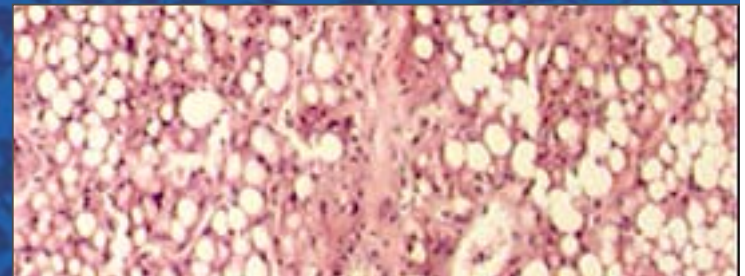
GLYCAEMIC LOADING

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Glycaemic Index (GI)

- Foods are ranked on the basis of a scale of 0-100 according to the extent to which they raise blood sugar levels.
- Pure glucose is ranked 100. All other foods are ranked in relation to this.
- Foods with a high GI release glucose into the bloodstream quickly causing blood sugars to rise rapidly.
- Foods with a low GI release glucose more slowly and help keep blood sugar levels stable.

What is the significance of GI?

- Low GI means
 - a smaller rise in blood sugar levels after meals
- Low GI diets
 - can help people lose weight
 - improve the body's sensitivity to insulin
- Low GI foods
 - Can increase carbohydrate stores after exercise
 - improve diabetes control
 - keep one fuller for longer
 - prolong physical endurance

Rating Foods on GI

- HIGH GI:
 - Mash potatoes, gluggy rice, white bread, soft drinks, Ice cream, ripe bananas, watermelon, lollies,
- MODERATE GI (50-60):
 - most pastas, baked beans, green peas, sweet potato, orange juice, long grain rice
- LOW GI (under 45):
 - dried beans and lentils, high fibre low sugar cereals, low fat unsweetened plain yoghurt, grapefruit and apples

Drawbacks of GI ratings

- GI ratings are less accurate when foods are eaten in combinations at mealtimes.
- High fat products slow digestion and may have a low GI rating but are not recommended.
- There is evidence of a correlation between fat, fast food and rates of obesity.

GLYCAEMIC LOADING

- Glycaemic loading is the the grams of carbohydrate times the %glycaemic index.
- This gives a better indication of how it will react in a varied diet.
- Quantity is important.



How to switch to a low GI diet

- Use breakfast cereals based on oats, bran and barley.
- Use 'grainy' breads with whole seeds.
- Eat potatoes with skins.
- Enjoy most types of fruit and vegetables
- Eat plenty of salad vegetables with "lite" vinaigrette.
- Incorporate low GI foods while controlling quantity (GI Loading).

Drink little or no alcohol

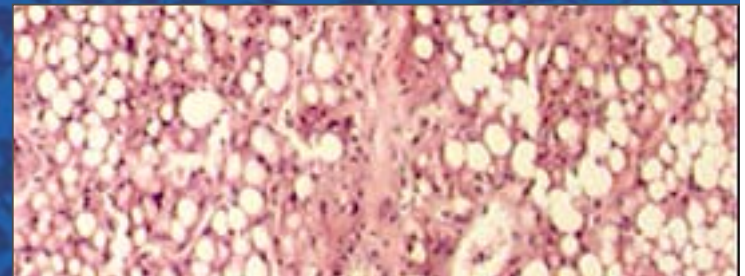
less abdominal fat lowers
triglycerides

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Drink little or no alcohol

- Oxidation of alcohol is given priority over oxidation of other macronutrients.
- Order of usage- alcohol, CHO, protein and fat.
- Results in a great portion of the energy from these foods being stored as fat, particularly in the abdomen.

Abdomen Fat cells start to release fat into the blood stream 3 hours after the last meal compared to many hours for other fat cells.

- Results in high triglycerides and free fatty acids.
- Free fatty acids cause insulin resistance and make it more difficult to lose weight.



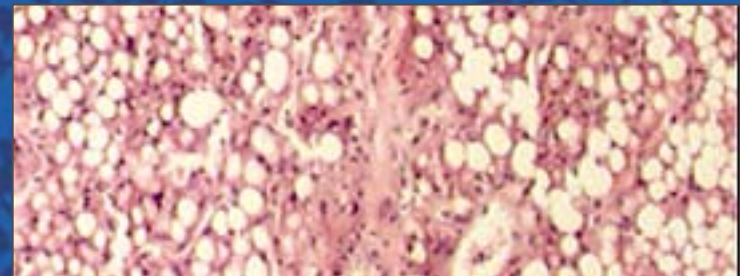
Exercise regularly

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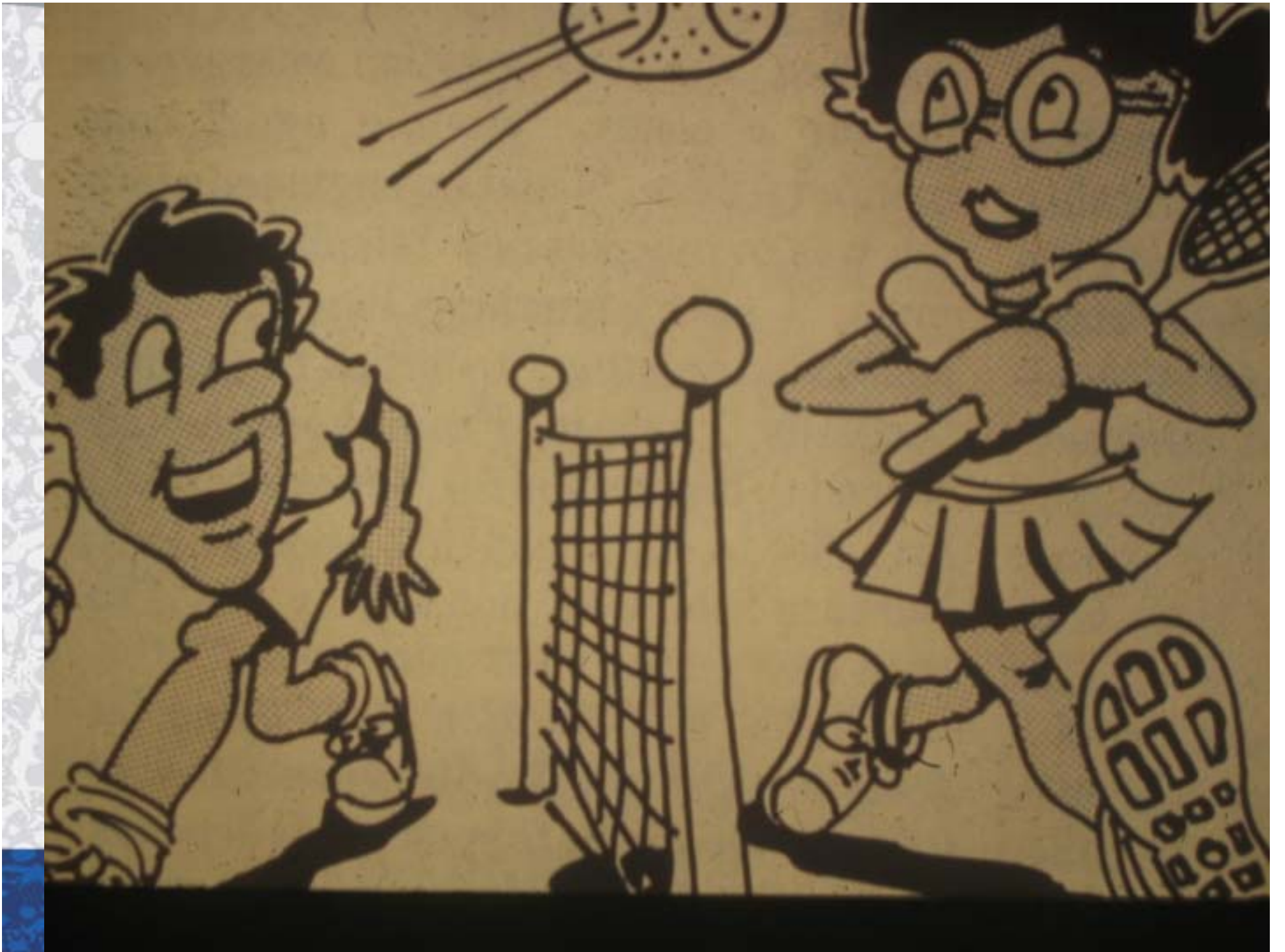
Exercise regularly

- There is general agreement that our modern sedentary lifestyles have much to answer for in the aetiology of obesity.
- There is an important role for exercise in the management of overweight combined with dietary control.





Exercise

- After the initiation of exercise
- Energy requirements increase immediately.
- The resting metabolic rate increases.
- Exercise must be maintained or the metabolic rate will drop.





Exercise

- Studies have shown that regular physical activity over a prolonged period of time results in significant improvements in:
 - body fat content, especially intra abdominal fat
 - HDL-cholesterol  LDL cholesterol 
 - Triglycerides  blood sugars 

Physical Activity



Food Vs Exercise

Exercise

- Exercise alone has been shown to be less effective than diet in terms of weight loss.
- Weight loss maintenance after 1 year is more successful in those who combined physical activity in association with diet.
- With insulin resistance 45 minutes to 1 hour is preferred.

NO QUICK FIX

- The prevalence of obesity and its related diseases, compels the desperate dieter to seek quick success.
- Dr Atkins and such is a quick fix and doesn't re-educate while encouraging eating more fat.
- Obesity in most individuals is caused by a combination of environmental and genetic factors.

BEHAVIOURAL CHANGE

- Often behavioural change is the most important.
- Many studies have shown that obese adults can lose 500g per week and achieve a 5-15% weight loss by consuming just 500-1000Kcal (125-250cals) per day, less than their current intake.

Summary

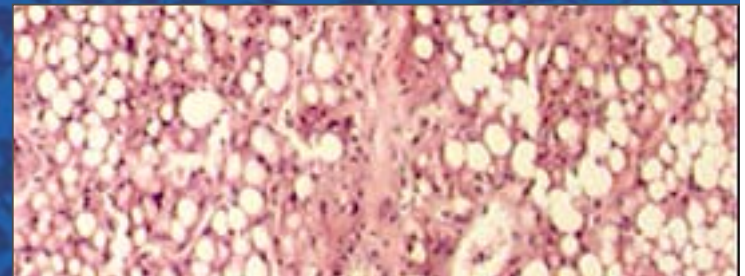
Dietary and Lifestyle treatment of NAFLD

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Summary

Eat less fat especially saturated fat

Choose low fat protein sources

Address behavioural problems

Dine out wisely

Exercise more

Be more physically active



