

PRACTICAL THERAPEUTIC DIETETICS

PART VII: MODIFICATION OF FAT

JOAN M. DREOSTI,* B.Sc., H.E.C. (DIETETICS), formerly Dietitian-in-Charge, Dietetic Department, Groote Schuur Hospital, Cape Town

TOTAL FAT RESTRICTION

Some patients with liver conditions and certain ill-defined dyspepsias do not appear to tolerate fats—in these cases a low-fat diet is of value. It is not mandatory in the post-nauseous phase of infective hepatitis—the rationale being that the inability to satisfactorily metabolize fat will merely result in excretion of the undigested nutrient and will not adversely influence the progress of the disease in any way. Furthermore, with the inclusion of fat in the diet, it can be made considerably more palatable and the total food intake will be invariably higher.

Individuals with chronic cholecystitis or gallstones also frequently experience postprandial pain and discomfort associated with the consumption of very fibrous, strongly flavoured, fried and oily foods. However, short-chain fats such as butter and cream, which cause less stimulation of the gallbladder and possess the advantage of avoiding stasis in the bile ducts, are often included in the diet.

Steatorrhoea, caused by chronic pancreatitis or similar conditions where there is inadequate production of digestive enzymes or absorption of fat, is also controlled with a low-fat diet.

It is not possible to compile a fat-free diet which is palatable and not highly artificial. Most so-called protein foods (except white fish and skimmed-milk cheese) are also sources of large amounts of fat—even lean beef contains about 8-10% of fat. However, on a low-fat diet, the intake can be restricted to approximately 20 G. per day—an amount which is satisfactory for most practical purposes. The approximate daily intake on a European-type diet is 100 G.

The Following Foods are Allowed:

- Milk—skimmed
- Vegetables—all, raw or cooked without fat
- Fruit—all except avocado pear
- Meat—lean, without visible fat
- Fish—all except snoek, pilchards, sardines, and other dark-fleshed fish
- Puddings—made with skimmed milk and cereals. All jelly and fruit puddings without added fat
- Cereals—all refined
- Sweets—no toffee or chocolate
- Preserves—all except lemon curd
- Beverages—all, if made with skimmed milk

The Following Foods are Forbidden:

- All foods not allowed in the above list
- All foods cooked in fat or oil such as potatoes, doughnuts, fritters, etc.
- Butter, margarine, oil, dripping, lard, cream, mayonnaise, and all dishes made with these
- Whole milk—fresh, condensed or sterilized; cheese (except skimmed-milk cheese)
- Chocolate, cocoa, toffee, caramel and marzipan

Fat meat such as pork, ham, bacon, and fat fish as mentioned above
Nuts and all foodstuffs containing these
Cereals—soya products and wheat germ
Pies, pastries, ice-cream, and cakes prepared with butter, oil or fat

SAMPLE MENU

Breakfast:

Fruit—stewed, fresh or juice
Cereal or porridge with skimmed milk and sugar
White fish; lean meat; grilled tomato; or sweetcorn
Bread or toast
Marmalade, jam or honey
Tea or coffee with skimmed milk and sugar

Morning tea:

Tea or coffee with skimmed milk and sugar
Sandwich made with skimmed-milk cheese mixed with shredded lettuce, diced tomato and cucumber, grated carrot and seasoning

Dinner:

Lean meat or fish—grilled, baked, stewed or steamed
Potato; rice; or mealie-rice
Vegetables, prepared without fat
Skimmed-milk pudding, fruit, jelly, or alternative

Afternoon tea:

Tea or coffee with skimmed milk and sugar
Meringues; plain biscuits; or bread and jam

Supper:

Lean meat or alternative as at dinner or breakfast
Potato; rice; or mealie-rice
Salad without added oil or mayonnaise
Bread or toast with jam or meat extract ('bovril')
Pudding or fruit as at dinner
Tea or coffee with skimmed milk and sugar
Calories: approximately 2,000.

ANIMAL-FAT RESTRICTION

Dietary Recommendations in Coronary Heart Disease

Coronary heart disease is the commonest cause of death in civilized countries today. Research has shown that high serum lipid levels are statistically associated with the development of this condition and that environmental factors influence atherogenesis.

While diet is but one of the factors concerned—genetic predisposition, endocrine secretions, stress, lack of exercise, and smoking all appear to be involved—it is an important and easy therapeutic measure. Although the following diet is based on a likely hypothesis and not on an established fact, there is sufficient experimental and theoretical justification to warrant this long-term adaptable way of controlling serum-cholesterol levels.

Feeding experiments throughout the world have established that animal fats will generally give rise to an increase in the serum-cholesterol concentration and promote atheroma. Vegetable and marine oils will lower the serum-lipid concentration. For this reason, butter and other dairy products (except skimmed-milk products), dripping and

*At present part-time dietitian to the Department of Medicine, University of Cape Town.

lard are forbidden, and sunflower-seed oil, corn oil, soya-bean oil and oils present in sardines, pilchards, etc., are recommended.

However, when liquid oils are hydrogenated (i.e. saturated to alter the texture, melting point and other qualities) as in the production of certain margarines and cooking fats, they lose their cholesterol lowering ability and are similar in effect to animal fats. Also, coconut oil, although of vegetable origin, is a saturated fat and has an adverse effect on the serum cholesterol. For this reason the general rule is that all fats which are liquid at room temperature are permitted whereas fats which are solid at room temperature are forbidden.

Foods with inherent high cholesterol levels were restricted in the past, but it was subsequently found that these foods generally contain large amounts of animal fats and it was the latter that were responsible for the raising of the cholesterol level. Today, the cholesterol content of foods is ignored in this regime.

While it is emphasized that the role of fat should be seen in its correct perspective and the patient prevented from becoming obsessed with every detail of his diet, there are three main principles governing the diet for patients with raised serum-cholesterol levels and those with a history of coronary thrombosis:

(a) *The fat content* of the diet should be reduced to approximately 50-60 G. per day and, where practical, liquid oils should replace solid fats in the diet.

(b) *Overweight patients* should reduce their weight to their recommended weight.

(c) *Food intake* should be evenly spread over the three normal meals every day. By avoiding the consumption of the major part of the food intake at one meal, there is less unnecessary demand on the circulatory system.

The following Foods are Forbidden:

All dairy products *except* skimmed-milk products and egg white; fatty meats and meat products, e.g. mutton, pork (including ham and bacon), sausages (except as given below), polony, tongue; margarine, lard, suet and dripping.

The Following Foods are Unrestricted:

All vegetables and fruit. Cereals and cereal products—*except* when prepared with any of the forbidden foods. Fish—either fresh, smoked or canned. Lean meat, e.g. veal, liver, kidneys, tripe, brains, poultry. Peanut butter, fish paste, jams, syrup, honey and extracts such as 'marmite'. Oils, nuts *except* coconut. Jellies, pudding powders and custard powder.

The Following Foods may be Taken in Limited Amounts:

Eggs—one only per week (egg white is unrestricted)
Lean beef—*once* only per day

SAMPLE MENU

Breakfast

Stewed fruit
Grilled tomatoes on toast
1 slice bread and jam
Coffee with skimmed milk and sugar

Dinner

Liver and onions (fried in oil)
Boiled potatoes
Cabbage
Banana custard (made with skimmed milk and custard powder)

Supper

Fat-free vegetable soup
Baked fish
Chip potatoes
Tomato salad, lettuce, beetroot salad
Jelly and fruit salad

Bedtime snack

Coffee with skimmed milk and sugar
Meringue
Calories: approximately 2,000

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A dietetic bibliography will appear with the last article in this series.