Diet and The Milk Drip

By ROSE SIMMONDS, S.R.N.

*Chief Dietitian, Hammersmith Hospital.
Editor, 'Nutrition, Dietetics and Catering'*

The amount of milk given in 24 hours with the milk drip varies from two to five pints. The caloric value of five pints of milk is 1900, rather more, in fact, than half the patient's needs. In order therefore to satisfy his requirements in full, various types of fortified milk mixtures are required and with these a properly balanced diet may be easily achieved. Eggs, butter, dried milk, glucose and casinal can be added to give the necessary balanced calorie intake, whilst vitamins, salt and iron supply other essential factors.

Well-beaten eggs, not more than one per pint of the mixture, supply protein and fat; butter melted in the mixture adds fat; dried milk adds carbohydrate, protein and fat; casinal (Glaxo) is very useful in providing pure and suitable protein (26 gm. per ounce of casinal), whilst the carbohydrate requirements are easily met by the addition of sugar, glucose or lactose.

Such a mixture is deficient in salt and in iron. These two substances are, therefore, added, one teaspoonful of salt and one ounce of Mist. Ferri et Ammon. Cit. daily being adequate. Vitamins are added as thought fit, the routine recommended being to add a compound vitamin B preparation such as Benerva (2 tablets), ascorbic acid (200 mgm.) and cod liver oil (2 teaspoons) daily to the feeds. This will more than cover the daily vitamin requirements, namely, vitamin A, 5,000

I.U.; aneurin, 600 I.U.; riboflavin, 2.7 mgm.; niacin 18 mgm.; vitamin C, 75 mgm.; and vitamin D, more than 400 I.U.

Mixtures so fortified should always be put through a fine strainer before use and should be put into the reservoir flask (preferably of Thermos type) at 100° F. From time to time the flask should be stirred to prevent coagulation. In hot weather it is wise to citrate the feeds by the addition of sodium citrate (2 teaspoons to the pint). More eggs or larger amounts of dried milk than those recommended in the diets below will be found to make the mixtures too thick, blocking the drip or the tip of the Ryle's tube; the content is, therefore, better diluted by increasing the bulk of fluid. It is wise, in any case, to disconnect the drip from time to time and to syringe it through with water.

For most patients requiring a milk drip, the specific requirements will be best met by giving a calorie intake equivalent to that required for moderate activity, that is, slightly more than required to maintain the body weight whilst in bed. For a man of average size suffering from a duodenal ulcer, therefore, the fifth mixture below should be adequate and should cause an increase in weight. To counteract the constipating effect of such a diet, liquid paraffin as necessary, perhaps $\frac{1}{2}$ ounce t.d.s., is recommended.

With a cooperative patient such a drip may be well tolerated and may be continued for an indefinite period.

It is hoped that the following tables of nutritive values and basal requirements may be helpful.

BASIC MILK MIXTURES FOR THE DRIP METHOD OF FEEDING

MIXTURE		Carbo- hydrate Gm.	Protein Gm.	Fat Gm.	Ca Mgm.	P Mgm.	Fe Mgm.	Na Mgm.	Cl Mgm.	Calories
1. Milk	40 oz.	60	40	40	1380	1080	0.80	568	1112	750
Sugar or Glucose	2 oz.	60	—	—	—	—	—	—	—	240
2 Eggs	—	—	14	14	64	248	2.88	154	180	182
Ascorbic Acid	200 mgm	—	—	—	—	—	—	—	—	—
Benerva Co	2 tablets	—	—	—	—	—	—	—	—	—
Cod Liver Oil	2 teaspoons	—	—	—	—	—	—	—	—	—
TOTAL		120	54	54	1444	1328	3.68	722	1202	1182
2. Milk	40 oz.	60	40	40	1380	1080	0.80	568	1112	760
Sugar or Glucose	2 oz.	60	—	—	—	—	—	—	—	240
Full Cream Dried Milk ..	2 oz.	22	15	16	544	430	0.40	226	444	292
Ascorbic Acid	200 mgm.	—	—	—	—	—	—	—	—	—
Benerva Co	2 tablets	—	—	—	—	—	—	—	—	—
Cod Liver Oil	2 teaspoons	—	—	—	—	—	—	—	—	—
TOTAL		142	55	56	1924	1510	1.20	794	1556	1292
3. Milk	40 oz.	60	40	40	1380	1080	0.80	568	1112	760
Sugar or Glucose	2 oz.	60	—	—	—	—	—	—	—	240
Casinal (Glaxo)	2 oz.	—	52	—	680	—	—	—	—	208
Ascorbic Acid	200 mgm.	—	—	—	—	—	—	—	—	—
Benerva Co	2 tablets	—	—	—	—	—	—	—	—	—
Cod Liver Oil	2 teaspoons	—	—	—	—	—	—	—	—	—
TOTAL		120	92	40	2060	1080	0.80	568	1112	1208
4. Milk	40 oz.	60	40	40	1380	1080	0.80	568	1112	760
Sugar or Glucose	2 oz.	60	—	—	—	—	—	—	—	240
Butter, which should be melted in the milk ..	2 oz.	—	—	48	8	14	0.10	126	188	432
Ascorbic Acid	200 mgm.	—	—	—	—	—	—	—	—	—
Benerva Co	2 tablets	—	—	—	—	—	—	—	—	—
Cod Liver Oil	2 teaspoons	—	—	—	—	—	—	—	—	—
TOTAL		120	40	88	1388	1094	0.90	694	1300	1432
5. Milk	80 oz.	120	80	80	2760	2160	1.60	1136	2224	1520
1 Egg	—	—	7	7	32	124	1.44	154	180	91
Casinal	½ oz.	—	13	—	170	—	—	—	—	52
Butter	3 oz.	—	—	72	12	21	0.15	189	282	648
Sugar, Glucose or Lactose ..	6 oz.	180	—	—	—	—	—	—	—	720
Benerva Co	1 tablet	—	—	—	—	—	—	—	—	—
Ascorbic Acid	200 mgm.	—	—	—	—	—	—	—	—	—
Cod Liver Oil	2 teaspoons	—	—	—	—	—	—	—	—	—
Mist. Ferri et Ammon. Cit.	½ oz.	—	—	—	—	—	12.00	—	—	—
Salt (1 teaspoonful) ..	3 gm. approx.	—	—	—	—	—	—	1100	1700	—
TOTAL		300	100	159	2974	2305	15.19	2579	4386	3031

COMPARE DAILY REQUIREMENTS

Moderately active man ..	—	—	70	—	800	—	12	1940	2830	3000
„ „ woman ..	—	—	60	—	800	—	12	—	—	2500
Active man	—	—	70	—	800	—	12	—	—	3600
„ woman	—	—	60	—	800	—	12	—	—	3000