

postponed until after midnight, then the soundest and most refreshing sleep is missed and recuperation is delayed. Sleep is deeper in winter than in summer. It is calculated that 8 hours should be the average duration of sleep for adults, but this varies with the individuals. Many well-known and celebrated persons have carried on with much less; nevertheless, all young people should have longer sleep than adults, but, again, much depends on the age. Infants up to one year old sleep for 22 hours out of the 24, which is almost for the whole day. At 5 years of age 15 hours are needed and children of 10 require at least 9 hours. The length of sleep decreases normally with advancing age.

Loss of sleep in childhood means ill-health—bodily and mentally, the sleepless child becomes fatigued, restless, anxious and nervous; unable to concentrate, because its nervous system is unrefreshed and uncontrolled, for the body is unable to throw off its fatigue products and it is known that only during sleep do the neurons undergo repair, and only in sleep is the nervous system restored.

As to the causes of sleeplessness in adults, probably the most common is worry or anxiety during the day and just before bedtime, the excessive mental activity producing over-fatigue. If comfortable rest is to be secured, any irregularity of life must be corrected and personal hygiene should be observed, but you must know the habits of your patients before offering them advice.

So many children in India do not get enough sleep. They have no regular bedtime; often they are taken out by the parents and kept up until they themselves go to bed, or the children drop asleep anywhere when they are tired or stay up playing, bright-eyed and with far too active minds, until some one thinks of putting them to bed. All children tend to wake early, and so the lost sleep (the best hour, too) is not made up. Again the mid-day rest is very rarely the regular part of the child's daily time-table. I think we all know the restless, unhappy child, whom we see only too often at our Centres. He is always crying and he does not gain weight, though his food and general hygiene seem satisfactory, until we find that his hours of sleep are very short. It is not an easy thing to teach parents to see that their children get sufficient sleep, as it so often interferes with home arrangements and with the parents being able to get out together at the end of the day; but it is essential for the child that they should understand that his whole future is dependent on it.

Yours sincerely,
MURIEL E. RAYNOR.

THE MOTHERCRAFT SECTION

Articles for this section will be welcomed by the Editor,
Miss Diana Hartley

Modified Milk Mixtures for the Artificial Feeding of Infants

Leaflet II (Recipes).

Measure with standard spoons and level dry ingredients with a knife. Sets of accurate measuring spoons can be obtained from Messrs. Whiteaway Laidlaw & Co. for As. 9. It is quicker to measure the larger amounts in ounces and the smaller amounts in spoonfuls, an accurate glass measuring from $\frac{1}{8}$ to 2 ozs. can be obtained from the chemist but a medicine glass can be used.

Mixtures III to IX, XI and XIII are full strength. Start babies under one month old on I or II, but use only 1/3 amount of milk, work up gradually to full amount, according to requirements of baby. Some cannot take full strength mixture IV until 3 months old, others need it earlier. (See tables in Leaflet III.)

Caution. Give mixture for 8 days, if well tolerated start C.L.O. or C.L.O.E. Never give more than 5 drops C.L.O. or 10 drops C.L.O.E. in 24 hours to begin with, increase according to tolerance of baby. Decrease in hot weather, discontinue in cases of diarrhoea. The amount given in the recipes is the maximum. (See Leaflet III containing useful tables).

These mixtures resemble Mother's Milk as closely as possible, but as nothing can really replace it, it is essential to use recipes that can be modified to meet the requirements of each individual baby.

For Mixtures V and VI only plain full cream dried or condensed milk should be used, it should not be 'humanized' or sweetened, otherwise the percentages of Sugar, Fat and Protein will be wrong. Dried or condensed, skimmed or half cream milk, are useful in some cases of gastro-enteritis and fat intolerance. Many starved babies do better on skimmed milk to begin with and cream, C.L.O. or C.L.O.E. must be added very slowly.

Until the normal amount of fat can be taken $\frac{1}{2}$ teaspoonful of Lactose (or $\frac{1}{4}$ teaspoonful Lactose and $\frac{1}{4}$ teaspoonful Glucose D) can be added to each 10 ounces of mixture to partly replace the deficiency in calories, although some babies can make up this deficiency by taking extra protein, especially if the milk is treated with Lactic Acid. These babies should be rubbed with C.L.O. and given sun baths to prevent rickets through lack of Vitamin D.

Cod Liver Oil Emulsion should be 50 per cent. without hypophosphates, Brestol is useful for very young or delicate babies. Kariol is excellent if obtainable.

Cod Liver Oil or Cod Liver Oil Emulsion should be given in a spoon immediately before the feed and not added to the mixture.

Fresh cream is hard to get but amounts are added for comparison. Milk can be set and a top milk mixture used, when the climate is cool and the cows are reliable.

Feeds should be given at 100° F. or blood heat.

Abbreviations—S.=Sugar, F.=Fat, P.=Protein, P.C.=Percentage Composition, Cals.=Calories, Tabs.=Tablespoonfuls, Teas.=Teaspoonfuls, C.L.O.E.=Cod Liver Oil Emulsion.

Mother's Milk. P.C.=S. 7: F. 3.5: P. 1.3

Modified Milk Mixture I

P.C.=S. 6.6: F. 3: P. 1.3. Cals. per oz. 18.

Milk 1 part to Water $1\frac{1}{2}$ parts.

To make 10 oz.

Milk	4 oz. or 6 Tabs.
Lime Water	$\frac{1}{2}$ oz. or 3 Teas.
Sugar of Milk	$\frac{5}{16}$ oz. or $2\frac{1}{2}$ Teas.
or	
Sugar	$\frac{1}{2}$ oz. or 2 Teas.
Water	$5\frac{1}{2}$ oz. or 8 Tabs. and 2 Teas.
Cod Liver Oil	$\frac{1}{8}$ oz. or 1 Teas.
or	
C.L.O.E.	$\frac{1}{2}$ oz. or 2 Teas.
or	
Dairy Cream	2 to 4 Teas.

Modified Milk Mixture II

P.C.=S. 6.9: F. 3.1: P. 1.3

Cals. per oz. 18.

Diluted with whey and water. To make 10 oz.

Milk	3 oz. or 4 Tabs. and 2 Teas.
Whey	$3\frac{1}{2}$ oz. or 5 Tabs.
Lime Water	$\frac{1}{2}$ oz. or 3 Teas.
Sugar of Milk	$\frac{5}{16}$ oz. or $2\frac{1}{2}$ Teas.
or	
Sugar	$\frac{1}{2}$ oz. or 2 Teas.
Water	$3\frac{1}{2}$ oz. or 5 Tabs. and 1 Teas.
Cod Liver Oil	$\frac{1}{8}$ oz. or 1 Teas.
or	
C.L.O.E.	$\frac{1}{2}$ oz. or 2 Teas.

Modified Milk Mixture III*(For Special Cases.)**Calories per oz. 19.**Diluted with Whey. To make 10 oz.*

Milk 5 oz. or 7 Tabs. and 2 Teas.
 Lime Water $\frac{3}{4}$ oz. or 1 Tabs.
 Sugar of Milk $\frac{5}{16}$ oz. or $2\frac{1}{2}$ Teas.
 or
 Sugar $\frac{1}{2}$ oz. or 2 Teas.
 Whey $4\frac{1}{2}$ oz. or 6 Tabs. and 2 Teas.
 Cod Liver Oil $\frac{1}{8}$ oz. or 1 Teas.
 or
 C.L.O.E. $\frac{1}{4}$ oz. or 2 Teas.

Modified Milk Mixture V*Unsweetened full Cream Condensed Milk.*
*To make 10 oz.**P.C. = S. 6:7 : F. 3:1 : P. 1:5.**Calories per oz. 18.*

Ideal Milk $1\frac{3}{4}$ oz. or 2 Tabs. and 2 Teas.
 Sugar Milk $\frac{1}{16}$ oz. or $2\frac{1}{2}$ Teas.
 or
 Sugar $\frac{1}{2}$ oz. or 2 Teas.
 Water $8\frac{3}{4}$ oz. or 12 Tabs. and 2 Teas.
 Cod Liver Oil $\frac{1}{8}$ oz. or 1 Teas.
 or
 C. L. O. E. $\frac{1}{4}$ oz. or 2 Teas.

Modified Milk Mixture VII*Asses milk. To make $7\frac{1}{2}$ oz.**P.C. = S. 7:1 : F. 3:4 : P. 1:5.**Cals. per oz. 19.4.**This is more like human milk than any other.*

Asses' Milk $6\frac{1}{2}$ oz. or 9 Tabs. and 3 Teas.
 Water 1 oz. or 1 Tabs. and 2 Teas.
 Cod Liver Oil $\frac{1}{8}$ oz. or 1 Teas.
 or
 C.L.O.E. $\frac{1}{4}$ oz. or 2 Teas.

Modified Milk Mixture IX*Goat's Milk. To make $7\frac{1}{2}$ oz.**P.C. = S. 7:3 : F. 3:3 : P. 1:6.**Cals. per oz. 18.2.*

Goat's Milk 3 oz. or 4 Tabs. and 2 Teas.
 Lime Water $\frac{5}{8}$ oz. or $3\frac{1}{2}$ Teas.
 Sugar $\frac{5}{16}$ oz. or $2\frac{1}{2}$ Teas.
 Water 4 oz. or 6 Tabs.
 Cod Liver Oil $\frac{1}{8}$ oz. or $\frac{3}{4}$ Teas. or 45 drops.
 or
 C.L.O.E. $\frac{1}{4}$ oz. or $1\frac{1}{2}$ Teas.

Modified Milk Mixture No. X**LONG BOILING**

Measure required quantity of milk, bring quickly to the boil and boil over a slow fire for 20 minutes, stirring quickly all the time to prevent skin

Modified Milk Mixture IV*P.C. = S. 7:1 : F. 3:4 : P. 1:6.**Cals. per oz. 19.3**Milk 1 part to water 1 part.*
To make 10 oz.

Milk 5 oz. or 7 Tabs. and 2 Teas.
 Lime Water $\frac{3}{4}$ oz. or 1 Tab.
 Sugar of Milk $\frac{5}{16}$ oz. or $2\frac{1}{2}$ Teas.
 or
 Sugar $\frac{1}{2}$ oz. or 2 Teas.
 Water $4\frac{1}{2}$ oz. or 6 Tabs.
 Cod Liver Oil $\frac{1}{8}$ oz. or 1 Teas.
 or
 C.L.O.E. $\frac{1}{4}$ oz. or 2 Teas.
 or
 Dairy Cream 2 to 4 Teas.

Modified Milk Mixture VI*Dried Milk (such as Cow and Gale etc.)*
*To make 10 oz.**P.C. = S. 7:2 : 3:3 : 1:6. Cals. per oz. 19.3.*

Dried Milk $\frac{3}{4}$ oz. or 2 Tabs. and $2\frac{1}{2}$ Teas.
 Sugar of Milk $\frac{1}{16}$ oz. or $2\frac{1}{2}$ Teas.
 or
 Sugar $\frac{1}{2}$ oz. or 2 Teas.
 Water 10 oz. or 15 Tabs.
 Cod Liver Oil $\frac{1}{8}$ oz. or 1 Teas.
 or
 C.L.O.E. $\frac{1}{4}$ oz. or 2 Teas.

Modified Milk Mixture VIII*Buffalos' Milk. To make $7\frac{1}{2}$ oz.**P.C. = S. 7 : F. 3:4 : P. 1:6**Buffalo's milk is richer than cow's and therefore has to be more diluted.*

Buffalo's Milk $2\frac{1}{2}$ oz. or 3 Tabs. and 3 Teas.
 Sugar $\frac{3}{8}$ oz. or $2\frac{1}{2}$ Teas.
 Lime Water $\frac{1}{2}$ oz. or 3 Teas.
 Water $4\frac{1}{2}$ oz. or 6 Tabs. and 3 Teas.
 Cod Liver Oil $\frac{1}{16}$ oz. or $\frac{1}{2}$ Teas. or 10 drops
 or
 C.L.O.E. $\frac{1}{4}$ oz. or $\frac{1}{2}$ Teas. or 20 drops.

Modified Milk Mixture II*Half Milk, half Water, simplified for Mothers.**To make $7\frac{1}{2}$ oz. To make 15 oz.*

Boiled Milk $\frac{1}{2}$ ollock. Boiled Milk 1 ollock
 Boiled Water $\frac{1}{2}$ ollock. Boiled Water 1 ollock
 Sugar $\frac{1}{4}$ small Sugar $\frac{1}{2}$ smak
 Pahl Pahl
 Adai. Adai.
 Cod Liver Oil up to 45 drops. Cod Liver Oil up to 90 drops.
 One Madras Standard Oilck = $7\frac{1}{2}$ ozs.
 One Small Pahl Adai (Baby's Feeding Spoon) = 1 Tab.

forming. Measure again and make up to original quantity with plain boiled water.

Make up as for mixtures No. I, II or III or IV.

Modified Milk Mixture No. XI (For babies over 6 months)

Make as for modified milk mixture No. II adding Barley Water instead of water.

Barley Water.

Robinson's Patent Barley 2 Level Teaspoonfuls. Mix into smooth paste with cold water;

Add water 1 pint and a pinch of salt, boil 1 hour in double saucepan and strain.

or

Wash two tablespoonfuls of pearl barley in cold water; place in half a pint of cold water and bring to the boil; throw the water away, add two pints of cold water, bring to the boil and allow to simmer gently until reduced to 1 pint, viz. about 2 hours, strain.

Modified Milk Mixture No. XII

Peptonized. To make 10 ozs.

Take 5 ozs. unboiled whole milk, place in a small saucepan and add $\frac{1}{4}$ oz. boiling water to each ounce of milk viz. $1\frac{1}{4}$ oz. to 5 ozs.

Mix $\frac{1}{4}$ of a tube of Fairchild's Zymine Powder thoroughly in 2 teaspoonfuls cold boiled water.

Bring milk and water to 98° F. and pour into jug, stir in prepared powder.

Stand the jug in a basin of water at 120° F. keeping the thermometer in the milk set at a temperature of between 98° to 100° F. for the specified time.

If allowed to go above or below, the action of the Zymine Powder will stop.

When peptonised pour into a saucepan and bring quickly to 195° F. stirring all the time, keeping the thermometer in the milk.

Add other ingredients as for Mixtures I, II or IV strain and cool rapidly.

If whey is used it must be cooled before being added, or it will curdle the milk.

If magnesia is an ingredient, the mixture must be cold before it is added.

Always taste peptonised milk, as if the powders are not absolutely fresh they make it bitter.

Modified Milk Mixture No. XIII

P.C. = 7·2 : 3·4 : 1·8.

Cals. per oz. 19·6

Pancreatised. To make 10 ozs.

Milk ... 5 ozs. or 7 Tabs. and 2 Teas.

Benger's Food ... $\frac{1}{4}$ oz. or 3 Teas.

Sugar of Milk ... $\frac{3}{16}$ oz. or $1\frac{1}{2}$ Teas.

or

Sugar ... $\frac{1}{8}$ oz. or 1 Teas.

Water ... $4\frac{1}{8}$ ozs. or 6 Tabs. and 2 Teas.

Cod Liver Oil ... $\frac{1}{8}$ oz. or 1 Teas.

or

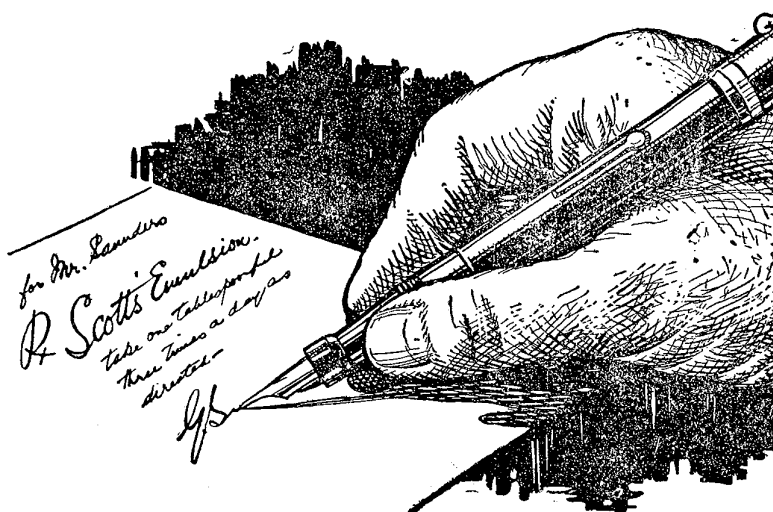
Cod Liver Oil Emulsion $\frac{1}{8}$ oz. or 2 Teas.

When measuring Benger's Food use level teaspoonfuls lightly filled.

Mix the Benger's Food to a smooth paste with cold water, in a bowl.

Bring the milk to which a quarter of an ounce of boiling water has been added to the ounce up to 190° F. and pour it into the Pancreatizing Powder, stirring all the time.

When you write prescriptions...



... for cases of anaemia, rickets, scrofula, marasmus and nervous debility — make SCOTT'S Emulsion your strengthening tonic.

The unique Scott process precludes the possibility of oxidation and retains the full potency of the vitamin content.

Stringent tests have demonstrated the purity and stability of SCOTT'S Emulsion under Eastern climatic conditions. Patients appreciate its agreeable flavour and ready digestibility.



Scott's Emulsion

of Pure Cod Liver Oil

Cover and set aside on a shelf (out of a draught) for the specified time. This should keep the mixture between 120° F. and 160° F.

Pour back into a saucepan and bring to boil quickly stirring all the time.

Strain into a jug, add cold boiled water and other ingredients, and cool rapidly.

When making milk mixtures it is easier to pour the milk, sugar, etc. into a measure if there is one available and bring it up to 10 ozs. with the necessary water.

Modified Milk Mixture No. XIV

Lactic Acid Milk.

If milk is to be skimmed set it for four hours (it must not be put in a refrigerator but stood in running water in hot weather) and take off cream.

Take one pint of skimmed milk, boil it and when cold, add drop by drop, 45 drops of lactic acid (B.P.), stirring well all the time.

Modify with cool boiled water and sugar. Must not be warmed to more than blood heat. Recipes I, II and IV may be used, or it can be given undiluted or 2 parts to water 1 part, according to doctor's orders.

Another method is to add the Lactic Acid to the milk when slightly warm, 100° to 120° F. As it is not always easy to obtain good results, it is well to try both ways. If the milk is too hot large curds will be produced.

Modified Milk Mixture XV

With Bone Broth

Use modified Milk Mixtures I, II, III, IV to which the following broth is added.

Veal bones 1 lb. (chopped to expose red marrow), water 1½ pints, Malt vinegar 1 tablespoonful. Bring to boil and allow to simmer gently for 8 hours, in a covered pot. The last hour add 1 handful fresh vegetables, e. g. Cabbage, a little Carrot or Turnip, 6 dried peas and 6 dried beans (previously soaked overnight). Effective substitutes may be used but not onions. Allow vegetables to simmer for an hour, then strain. Should cooking have reduced broth to less than one pint make up to that amount with boiling water.

Give ½ oz. to 1 oz. in first month, increase slowly 1½ oz. at a time, until 4 oz. are reached. Reduce water according to amount of broth. This suits some babies very well but it is inclined to be too stimulating for others, therefore results should be watched carefully.

Modified Milk Mixtures containing Alkaline Chemicals

(a) Lime water is used in Mixtures Nos. I, II, III, IV, VII and IX.

(b) Sodium bicarbonate can be used in any of the above mixtures instead of lime water.

3 grs. to each ounce of milk—60 grs. or Z. 1 to each pint of milk. Plain boiled water should be used to make up for the lime water.

(c) Sodium Citrate is used instead of lime water.

1 or 2 grains to each 1 oz. of milk, but more than 8 grains should never be given at once. Plain water should be added to make up for the lime water.

(d) Fluid magnesia may be used instead of lime water in cases of constipation.

Whey

Whey from under milk for fat intolerance and protein intolerance.

Measure out half as much more milk, than whey needed, i.e. to make 10 ozs. whey you will need 15 ozs. of under milk.



DURING PREGNANCY

Horlick's is made from full-cream fresh milk and the nutritive extracts of malted barley and wheat, and is an excellent food for the expectant mother. Tests show that Horlick's contains vitamins A, D and B complex, and stimulates blood regeneration in nutritional anaemia.

It is partially pre-digested and is ideal in cases where the digestive powers are impaired. It tends to correct constipation and leads to the formation of regular bowel habits.

Horlick's possesses a high anti-ketogenic value and, taken at bed-time or before rising, prevents morning sickness. In the opinion of many physicians it acts as a galactagogue.

HORLICK'S

THE ORIGINAL MALTED MILK

Available Everywhere