

## Premature Infants.

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### THE MANAGEMENT OF THE PREMATURE.

In seeking to provide adequate means for giving the premature infant its best chance of life, it is well to consider the natural conditions for development of which it has been untimely deprived. The *intra-uterine state*, in so far as it can be imitated, must be reproduced. Of course, the profound changes, organic alterations, functional awakenings, although they may have come with the disordering force of a physical "shock," have to be accepted as unavoidable. Still, much may be done, or at all events, much wrong doing may be left undone, if we approach the problem in a scientific manner, and in a common-sense manner consider what is practicable in the infant's home.

What are the chief elements we may hopefully aim at reproducing, at least in some measure? They are these:—

1. The preservation of a constant temperature.
2. Protection and rest.
3. As far as possible shelter from bright light.
4. A constant supply of pure air.
5. Regular and suitable feeding.

The chief points essential for the proper care of a premature baby may thus be grouped under two heads:—

I. *The maintenance of a suitable environment.*

II. *The provision and administration of a suitable food.*

Now, how may these be best provided for?

#### I.—ENVIRONMENT.

The most essential element is the preservation of a constant temperature suited to the infant.

The rectal temperature at birth of a healthy normal child is about 100 F. It then usually falls to 97 F., but soon settles at about 98.8 F. This, or 99 degrees F., may be taken as the normal rectal temperature of infancy and childhood. Our fundamental aim in practice is to afford the best possible conditions for the maintenance of the body temperature. In providing for this it is desirable to ensure as many of the other factors which go to consti-

tute a proper environment as possible.

How can this best be done? Here we have a considerable difference of opinion and wide divergence in practice.

#### APPLIANCES FOR MAINTAINING TEMPERATURE AND PROVIDING PROTECTION.

1. The *incubator*, or brooder, as it might more properly be called, has been advocated and extensively used by French physicians.

A number of different forms have been invented. Through the courtesy of Messrs. Arnold and Sons, I am enabled to demonstrate to you two of the most usual type.

The construction and method of working an incubator was then described, and its advantages and disadvantages discussed.

#### II.—SPECIALLY WARMED CRADLE AND HEATED ROOM.

When an incubator is not available, some other means for keeping up the temperature must be provided. Indeed, many recognising the risks and inconveniences and disadvantages inseparable from the use of an incubator, advocate the employment of a specially warmed cradle placed in a room the temperature of which is maintained at a high level.

#### SPECIAL PRECAUTIONS FOR THE PREMATURE.

1. The newly-born premature child should not be washed in water, but rubbed over very gently with warm sweet oil.

In some few cases the infant has been given a hot bath—but this is generally undesirable.

2. It must be wrapped up entirely, save for its face, in cotton wool. A separate piece must be provided for that part of the body which will be soiled by excretions.

3. It should be surrounded by hot-water bottles—or much better if electricity is available—by an *electrotherm* placed between blankets, and on which the infant lies.

[An illustration of Holt's *Electrotherm* was here shown on the screen.]

A thermometer must always be kept in position, and where the exact temperature can be seen and registered.

Much discussion has taken place regarding the temperature which should be maintained in the incubator or in the room in which this special cradle containing the premature infant is kept. The chief point to consider is not to impart an artificial heat from without, but to maintain such heat as will best allow the processes in the infant's own body to provide a natural and normal temperature.

The regulation of the temperature must depend upon the size and weight and vitality of the infant. Generally speaking, a temperature of from 85 degrees F. to 95 degrees F.

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