Happy is the mother and fortunate is the home that possesses the intelligent services of a trained attendant during the early days of the baby's career. A century or more ago skilled nurses were unheard of, and both mothers and babies seemed to thrive on the unskilled but faithful and sympathetic care given by the willing neighbor who "thought I'd just run over and help out." Who of us cannot remember the days when mother was "gone to a neighbor's" to give this same willing but unskilled care at the time of "confinement."

**Modern Methods**

And why are we so concerned today about asepsis, sterilization, etc., when a generation ago they were not? We used to live more slowly than we do now. Then it took the entire day to do the marketing for the week, now we take a receiver from the hook and a telephone wire transmits the verbal message. Our days are literally congested with events that were almost impossibilities a century ago. The ease and leisure of former days are unknown and unheard of today. The artificial way in which we live exerts more or less of a strain upon the present generation; the average woman's nervous system is keyed up to a high pitch; her general vital resistance is running at a low ebb; while child-bearing brings a certain added stress and strain that requires much planning to avoid and overcome.

For many days and often weeks the mother is unfit - physically unable - properly to care for her child, and so whether it be the trained assistant in constant attendance or the visiting nurse in her daily calls, or the kind, willing, but unskilled neighbor - each helper must acquaint herself, in varying degrees, with the physical, nervous, and mental needs of the child, as well as take into account and anticipate the numerous habits and wants of the new born babe, such as urination, bowel movement, pulse, respiration, temperature, etc.

**The Head**

At birth, the head is remarkably large as compared to the rest of the body, for, surprisingly as it may seem, the distance from the crown to the chin is equal to the length of the baby's trunk; and, too, if birth has been prolonged this large head has also been pressed or squeezed somewhat out of shape.
This state of affairs, however, need give no cause for either alarm or anxiety, for the head will shape itself to the beautiful rotundity of the normal baby's head within a few days.

The general shape of the baby's head, as seen from above is oval. Just back of the forehead is formed a diamond-shaped soft spot known as the anterior fontanels which should measure a little more than one inch from side to side. On a line just posterior to this soft spot and to the back of the head, is found another soft spot somewhat smaller than the one in front. Gradual closure of these openings in the bones occurs, until at the end of six or eight months, the posterior fontanels is entirely closed; while eighteen months are required for the closure of the anterior fontanels.

These "soft spots" should not be depressed neither should they bulge. The head is usually covered with a growth of soft, silky hair which will soon drop out, to be replaced, however, by a crop of coarser hair in due season. The scalp should always be perfectly smooth. Any rash or crusts or accumulation of any kind on the scalp is due to not cleanliness and neglect, and should be carefully removed by the thorough application of Vaseline followed by a soap wash. The Vaseline should be applied daily until all signs of the accumulation are entirely removed. The eyes of all babies are generally varying tints of blue, but usually change to a lighter or darker hue by the seventh or eighth week. The whitish fur which often is seen on the baby's tongue is the result of a dry condition of the mouth which disappears as soon as the saliva becomes more abundant.

**Chest, Abdomen and Legs**

The baby's chest, as compared to the size of the head and abdomen, appears at a disadvantage, while the arms are comparatively short and the legs particularly so, since they measure about the same as the length of the trunk. They naturally "bow in" at birth so that the soles of the feet turn decidedly toward each other. All these apparent deformities, as a rule, right themselves without any help or attention whatsoever.

**Pulse and Respiration**

The respiration of the baby often gives us no small amount of real concern at the first. The baby may be limp and breathless for some few moments at birth, and this condition calls for quick action on the part of the nurse and doctor.

The utmost care to avoid the "sucking in" of any liquid or blood during its birth must be exercised, for this often seriously interferes with the breathing. Sometimes this condition is not relieved until a soft rubber catheter is placed in the throat and the mucus is removed by quick suction. When you are reasonably sure that there is no more mucus in the throat, then sudden blowing into the baby's lungs (its lips closely in touch with the lips of the nurse or physician) often starts respiration. Slapping it on the back also helps, while the quick dip into first hot then cold water seldom fails to give relief.

A quiet-sleeping infant breathes as shown below at varying ages. An increase of six to ten breaths per minute may be allowed for the time it is awake or otherwise active.
The Weight

The normal weight of the average baby is seven to seven and one-half pounds. Its length may range anywhere from sixteen to twenty-two inches.

There is an initial loss of weight during the first few days; however, after the milk has been established the child should make a weekly gain of four to eight ounces until it is six months old, after which time the usual gain is from two to four ounces per week.

If the weight has been doubled at six months and the weight at one year is three times the birth weight, the child is said to have gained evenly and normally.

The Skin

At birth the skin of the baby is red and very soft owing to the presence of a coating of fine down. A blue-tinged skin may be occasioned by unnecessary exposure or it may be due to an opening in the middle partition of the heart which should close at birth. As soon as the baby is born, it should be placed on its right side while the cord is being tied, as this position facilitates closure of this embryonic heart opening. With the provision for a little additional heat the blue color should disappear, if it is not due to this heart condition. At the close of the first week the red color of the skin changes to a yellow tint due to the presence of a small amount of bile in the blood. This sort of jaundice is very common and is in no wise evidence of disease. The "down" falls off with the peeling of the skin which takes place during the second week; by the end of which time, the skin is smooth and assumes that delightful "baby" character so much admired.

The Cord Dressing

The cut end of the tied umbilical cord is swabbed and squeezed with a sterile sponge saturated with pure alcohol. It is then wrapped in a sterile dressing made as follows: Four or five thicknesses of sterile cheese cloth are cut into a four-inch square with a small hole cut in the center and one side cut to this center. This is slipped about the stump of the cord and wrapped around and about in such a manner as entirely to cover the stump of the cord. The wool binder is then applied and sewed on, therefore avoiding both pressure and the prick of pins. If it remains dry this dressing is not disturbed until the seventh or eighth day, when the cord ordinarily drops off. Should it become moistened the dressing is removed and the second dressing is applied exactly like the first.

The Eyes

The closed eyes of the newly born child are generally covered with mucus which should be carefully wiped off with a piece of sterile cotton dipped in boric acid solution, in a manner not to disturb the closed lid. A separate piece of cotton is used for each eye and the swabbing is done from the nose outward. The physician or nurse drops into each opened eye two drops of twenty percent
argyrols, the surplus medicine being carefully wiped off with a separate piece of cotton for each eye. The baby should now be placed in a darkened corner of the room, protected from the cold.

The eyes are washed daily by dropping saturated solution of boric acid into each eye with a medicine dropper. Separate pieces of gauze or cotton are used for each eye.

The First Oil Bath

As soon as the cord and the eyes have received the proper attention and the mother has been made comfortable, the baby is given its initial bath of oil. This oil may be lard, olive oil, sweet oil, or liquid Vaseline. The oil should be warmed and the baby should be well covered with a warm blanket and placed on a table which is covered with a thick pad or pillow. The temperature of the room should be at least eighty degrees Fahrenheit. Quickly, thoroughly, and carefully the entire body is swabbed with the warmed oil - the head, neck, behind the ears, under the arms, the groin, the folds of the elbow and knee - no part of the body is left untouched, save the cord with its dressing. This oil is then all gently rubbed off with an old soft linen towel.

The First Clothing

After the oil bath, the silk and wool shirt (size No. 2), the diaper and stockings are quickly put on to avoid the least danger of chilling. The band having been applied at the time of the dressing of the cord, our baby is now ready for the flannel skirt. This should hang from the shoulders by a yoke of material adapted to the season, cotton yoke without sleeves if a summer baby, and a woolen yoke with woolen sleeves if a winter baby. The outing-flannel night dress completes the outfit and should be the only style of dress worn for the first two weeks. Loosely wrapped in a warm shawl, the baby is about ready for its first nap, save for a drink of cooled, boiled water.

This cooled, boiled, unsweetened water should be given in increasing amounts every two hours until the child is two or three years of age. It is usually given the child in a nursing bottle. In this way it is taken comfortably, slowly, can be kept clean and warm, and should the babe be robbed of its natural food and transferred to the bottle as a substitute for mother's milk, it will already be acquainted with the bottle and therefore one-half of a hard battle has already been fought and won.

Baby's First Nap

The baby's bed should be separate and apart from the mother's. It may be a well-padded box, a dresser drawer, a clothes basket, or a large market basket. A folded comfortable slipped in a pillow slip makes a good mattress. A most ideal bed may be made out of a clothes basket; the mattress or pad should come up to within two or three inches of the top, so the baby may breathe good fresh air and not the stale air that is always found in a deeply made bed. Into this individual bed the baby is placed as soon as it is dressed; and a good sleep of four to six hours usually follows.

Frequent observations of the cord dressing should be made as occasionally hemorrhage does take place, much to the detriment of the babe. If bleeding is at any time discovered the cord is retied just below the original tying. By the time baby has finished a six- or eight-hour nap the mother is wondrously refreshed and is ready to receive it to her breast.
The Urine

The urine of the very young child should be clear, free from odor and should not stain the diaper, nor should it irritate the skin of the babe. Often urination does not take place for several hours, sometimes not at all during the first twenty-four hours. If the infant does not show signs of distress, there is no cause for alarm; the urine should pass, however, within thirty hours. As a rule there are usually between ten and twenty wet diapers during each twenty-four hours. The following table shows about the amounts of urine at different ages:

<table>
<thead>
<tr>
<th>Age</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth to two years</td>
<td>8 to 12 ounces</td>
</tr>
<tr>
<td>Two to five years</td>
<td>15 to 25 ounces</td>
</tr>
<tr>
<td>Five to ten years</td>
<td>25 to 35 ounces</td>
</tr>
</tbody>
</table>

Handling The Baby

Let us thoroughly come to understand the very first day the little one's life, that it was not sent to us because the family needed something to play with; it is not a ball to toss up, neither is it a variety show. It is a tiny individual, and your responsibilities as parents and caretakers are very great. The child was sent to be fed, clothed, kept warm, dry, and otherwise cared for by you, until such a time as it will become able to care for itself. Remember, what we sow, that should we also reap. If we sow indulgence we should reap anger, selfishness, irritability, "unbecomingness" - the spoiled child. At two or three days the baby learns that when it opens its mouth and emits a holler, someone immediately comes. If we do it on the second and third day, why should we object to run, bow, and indulge on the one hundredth and second day?

Handle the baby as little as possible. Turn occasionally from side to side, feed it, change it, keep it warm, and let it alone; crying is absolutely essential to the development of good strong lungs. A baby should cry vigorously several times each day. If the baby is to be handled, support the back carefully.

The Early Baths

During the first week the baby is oiled daily over his entire body, with the exception that the cord dressing remains untouched. The face, hands, and buttocks are washed in warm water. After the third week the bathroom is thoroughly warmed and the small tub is filled with water at temperature of 100 F. The baby having been stripped and wrapped in a warm Turkish towel, is placed on a table protected by a pillow, while the caretaker stands by and Vaseline the creases of the neck, armpits, folds of the elbows, knees, thighs, wrists, and genitals; and then, with her own hands, she applies soap suds all over the body - every portion of which is more quickly and readily reached - than by the use of a wash cloth. And now, with the bath at 100 F., with a folded towel on the bottom of the small tub, the soapy child is placed into the water and after a thorough rinsing is lifted out again to a warm fresh towel on the table and the careful drying is quickly begun. After the bath all the folds and creases are given a light dusting with a good talcum.
During hot weather the bath should be given daily, soap being used twice a week. On the other days there should be the simple dipping of the child into the tub. During the cold weather the full bath is given but twice a week, while on the other days a sponge bath or an oil rub may be administered.

A weak, delicate child should not be exposed to the daily full bath, but rather the semi-weekly sponge bath and the daily oil rub should be administered. We have found the late afternoon hour to be better than the early morning hour for baby's bath. It requires too much vital resistance to react to an early morning bath, especially when the house is cool.

**Regarding Soap**

The use of soap is very much abused with young babies. I recall one mother who came into the office with her poor little baby which was constantly crying and fretting because of a greatly inflamed body - all a result of the too frequent use of soap. I said, "I am afraid you do not keep your baby clean." "O Doctor!" she replied, "I wash him with soap every time I change him; I am sure he is clean." And come to find out, the poor little fellow's tender skin had been subjected to soap several times a day. We ordered the use of all soap discontinued, Vaseline and talcum powder to be used instead, and the child's skin got well in a very short time.

**Care of the Umbilicus**

Tight bands should not be placed about the babe. If the umbilicus protrudes, do not endeavor to hold it in by a tight band, but consult your physician about the use of a bit of folded cotton and adhesive plaster, and then allow the child the freedom of the knitted bands, with skirts suspended from yokes. The day of tight bands and pinning blankets with their additional and traditional windings is over. After the complete healing of the cord, the need for a snug binder to hold the dressings in place is over. Should the baby cry violently, the umbilicus should be protected in the manner described above - the fold of cotton and the adhesive plaster.

The diaper, stockings, shirt, skirt, and dress with an additional wrapper for cold days completes the outfit at this age.

**Birth Registration**

"One of the most important services to render the newborn baby is to have his birth promptly and properly registered."

In most states the attending physician or midwife is required by law to report the birth to the proper authority, who will see that the child's name, the date of his birth, and other particulars are made a matter of public record. Birth registration may be of the greatest importance when the child is older, and parents should make sure this duty is not neglected.

A public health official some time ago epitomized some of the uses of birth registration as follows:

There is hardly a relation in life from the cradle to the grave in which such a record may not prove to be of the greatest value. For example, in the matter of descent; in the relations of wards and guardians; in the disabilities of minors; in the administration of estates; the settlement of insurance and pensions; the requirements of foreign countries in matters of residence, marriage, and legacies;
in marriage in our own country; in voting and in jury and militia service; in the right to admission and practice in the professions and many public offices; in the enforcement of laws relating to education and to child labor, as well as to various matters in the criminal code; the irresponsibility of children under ten for crime or misdemeanor; the determination of the age of consent, etc., etc.

Newborns - The Nursery: Baby's Bed, Crib

We wish it were possible for every mother who reads this book to have a special baby's room or nursery. Some of our readers have a separate nursery-room for the little folks, and so we will devote a portion of this chapter to the description of what seems to us a model arrangement for such a room; but, realizing that ninety-five percent of our readers can only devote a corner of their own bedroom to the oncoming citizen, we have also carefully sought to meet their needs and help them to take what they have and make it just as near like the ideal nursery as possible.

The Separate Nursery

The nursery should be a quiet room with a south or southwesterly exposure. The bathroom should adjoin or at least be near. A screened-in porch is very desirable.

Draperies that cannot be washed, and upholstered furniture, do not belong in the baby's room. A hardwood floor is better than a carpet or matting; while a few light-weight rugs, easily cleaned, are advisable. Enamelled walls are easily washed and are, therefore, preferable to wall paper or other dressings.

The windows should be well screened, for by far the greatest dangers to which the baby is exposed, are flies and mosquitoes - carriers of filth and disease. Flies, mosquitoes, cockroaches, bed bugs, cats, dogs, lice, and mice are all disease carriers and must therefore be kept out of baby's room.

Nursery Equipment

At each window should be found dark shades, and if curtains are desired they should be of an easily washable material, such as mull, lawn, voile, or scrim. The hardwood floor may be covered where necessary with easily handled rugs which should be aired daily. The other necessary articles of furniture are a crib of enamelled iron whose bedding will be described elsewhere in this chapter, a chest for baby's clothes and other necessary supplies, a screen or two, a low table and a low rocker, a small clothes rack on which to air the clothes at night, a pair of scales, and a medicine chest placed high on the wall.

If the room will conveniently admit it, a couch will add greatly to the mother's comfort; and, if possible, it should be of leather upholstery; otherwise, it should possess a washable cover, for all articles that promote the accumulation of dust are not to be allowed in the nursery. In these early weeks and months baby will not benefit from pictures or other wall decorations, and so let him have clean walls that are easily washed and quickly dusted.

The necessities for baby's personal care are:

**Baby's Bed**

Since the days of Solomon, accidents have occurred where mother and babe have occupied the same bed. Not only is there the ever-present danger of smothering the babe, but there are also many other reasons why a baby should have its own bed. The constant tendency to nurse it too often and the possibility of the bed clothing shutting off the fresh air supply, are in and of themselves sufficient reasons for having a separate bed for baby.

The first bed is usually a basinet - a wicker basket with high sides - with or without a hood. A suitable washable lining and outside drape present a neat as well as sanitary appearance. The mattress of the basinet is usually a folded clean comfort slipped into a pillow slip; this is to be preferred to a feather pillow, as it is cooler and in every way better for the babe.

Drapes about the head of the basinet are not only often in the way, shutting out air, etc., but they also gather dust and are unsanitary. Screens are movable - they may be used or put away at will - and are, therefore, very convenient about the nursery.

The basinet may be dispensed with entirely if the sides of the enameled crib are lined to cut off draughts and the babe is properly supported by pillows. After the baby is four to six months of age it is transferred to the crib. The basinet has an advantage over the crib during those early weeks in that its high sides protect the babe from draughts, and the comforts and blankets can be more easily tucked about the little fellow to keep him warm. The sides should not extend more than four inches above the lying position of the child.

**The Crib**

The enameled iron crib should be provided with a woven-wire mattress, over which is placed a mattress; hair is best as a filling for the mattress, wool next, and cotton last. Over the mattress should be placed a rubber sheet, and over all a folded sheet.

A pillow of hair or down is not to be discarded; for recent investigation has shown that the pillow favors nasal drainage, while lying flat encourages the retaining of mucus in the nose and nasal chambers - the sinuses. The pillow slip should be of linen texture.

During the winter a folded soft blanket over the rubber sheet increases both softness and warmth. No top sheet is used during the first months, particularly if the first months are the winter months. The baby is wrapped loosely in a light weight clean blanket or shawl, and other blankets - as many as the season demands are tucked about the child. These blankets should be aired daily, and the one next to the baby changed, aired, or washed very often.
The Sleeping Blanket

To prevent baby from becoming uncovered the sleeping blanket has been devised. The blanket is folded and stitched in such a way as completely to envelop the sleeping babe, and at the same time afford the utmost freedom. The babe may turn as often as he desires, but cannot possibly uncover himself. Bed clothes fasteners are also used - an elastic tape being securely fastened to the head posts and then by means of clamps or safety pins attachment is made to the blankets on either side. The elasticity allows considerable freedom to the child in turning.

Nursery Heating and Ventilation

The subject of ventilation has been so fully discussed by the authors in another work that we refer the reader to *The Science of Living, or the Art of Keeping Well*.

For the first two or three weeks the nursery temperature should be maintained at seventy degrees Fahrenheit by day and from sixty degrees to sixty-five degrees by night. In the third week the day temperature should be sixty-eight degrees Fahrenheit measured by a thermometer hanging three feet from the floor. After three months the night temperature may go as low as fifty-five degrees Fahrenheit, and after the first year it may go as low as forty-five degrees.

The heating of the nursery is usually controlled by the general heating plant, and no matter what system of heating is maintained, humidifiers must be used, the necessity for which is doubled when the system is that of the hot-air furnace.

Newborns - The Nursery : Fresh Air, Lighting

The Mother and Her Child

By William S. Sadler, M.D., Lena K. Sadler, M.D.

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These shallow pans of water with large wick evaporating surfaces will evaporate from three to four quarts during the twenty-four hours. The humidity should be fifty throughout the seasons of artificial heating.

Many colds may be entirely avoided by the use of humidifiers or evaporators. The open grate is one of the very best means of nursery heating. Gas and oil heaters should not be depended upon for nursery heat. Only in an emergency should they be used at all, and the electric heater is by far the best device for such occasions.

Baby's Corner in Mother's Room

It is probably a conservative estimate to say that ninety-five percent of all the babies occupy a corner of mother's and father's bedroom for the first two or three years. And believing this estimate to be correct, it is advisable to give the matter some consideration. To begin with, a lot of the non-essentials, ruffles of the average bedroom, must go. The good father's chiffonier may have to be put in the bath room; heavy floor coverings must be discarded, to be replaced by one or two small, light-weight rugs; wall decorations and the usual bric-a-brac of dressers, tables, etc., should be carefully packed away. In fact, there should be nothing in the room save the parents' bed, dresser
(several drawers of which must be devoted to baby's necessities), table, low rocker, a stool, baby's bed and a good big generous screen, made out of a large clothes horse enameled white.

Window draperies must be taken down and packed away, while they are replaced with simple muslin which can go to the laundry twice a month. If it be within the means of the family purse, it is well to renovate the walls just prior to the advent of the little stranger.

And now the baby's bed is placed in the corner most protected from draughts and the glare of the sunlight. If it can be so arranged that baby looks away from the light, and not at it, we are guarding it from defective vision in the future.

**Crib Substitutes**

Many a beautiful artistic creation so much admired in this world is found to be, on closer inspection, a very ordinary thing which has received an artistic touch; and so, many convenient, sanitary, and beautiful cribs are fashioned from market baskets fastened to tops of small tables whose legs are sawed off a bit; from soap boxes fastened to a frame, and from clothes baskets. A can of white enamel, a paint brush and the deft hand of a merry, cheery-hearted expectant mother can work almost miracles. Remember, please, that all draperies must be washable and attached with thumb tacks so as to admit of easy and frequent visits to the laundry.

A medium-sized clothes basket will take care of our baby for four or five months. The same general plan for the mattress and bedding is followed as before described.

**Extra Heat To The Crib**

If necessary - and it usually is, especially during the winter months - a hot-water bottle may be placed underneath the bedding on top of the mattress. This insures a steady, mild, uniform warmth and it not only saves the baby from the danger of being burned, but it also obviates the temporary overheating of the child which usually occurs when the bottle is placed inside the bed, next to the baby. If the bed is properly made - the blankets coming from under the babe up and over - there is little or no need for extra heat for well babies after the first month.

**Lighting Baby's Room**

If electric lighting is not an equipment of the home neither gas or oil lamps should be allowed to burn in the room for long periods. For emergency night lighting a well-protected wax candle should be used. However, don't go to sleep and allow a candle to burn unprotected as did one tired, exhausted mother. The father, suddenly aroused from his sleep, saw a large flame caused by the overturning of a wax candle into a box of candles, while the lace drapery of the basinet was within a few inches of the flame and the baby just beyond. Grabbing a pillow he smothered the flames and saved baby and all.

**Fresh Air**

Plenty of fresh air and lots of sunshine should enter baby's room. The large screen amply shields from draughts, and when therefore protected there need be no unnecessary concern about cool fresh air, especially after two or three months, as it is invigorating and prevents "catching cold." Warm,
stuffy air is devitalizing and even during the early weeks when the fresh air must be warm, an electric fan should be advantageously placed so that many times each day the warm fresh air may be put in motion without creating a harmful draught.

Warm stuffy air makes babies liable to catch cold when taken out into the open.

Throw open the windows several times each day and completely change the air of baby's room. In the absence of the large screen, a wooden board five or six inches high is fitted into the opening made by raising the lower window sash. Then as the upper sash is lowered the impure air readily escapes while fresh air is admitted.

**The Bath Equipment**

Make early preparations for bathing the baby in the easiest possible manner; in fact, the young mother should seek to attend to all her duties - the family, the home, and the baby - in the easiest way. For the administration of a bath during the early months, a table is needed, protected by oilcloth on which is placed a roomy bathtub with a folded Turkish towel on the bottom for baby to sit on.

**Nursery Cleanliness**

The nursery should furnish the baby's first protection from contagious diseases. It must be a veritable haven of safety. Therefore, no house work of any kind should be done in the room, such as washing or drying the baby's clothes. The floors and the furniture should be wiped daily with damp cloths. A dry cloth or feather duster should never be used to scatter dust around the room.

All bedding and rugs should receive their daily shaking and airing out of doors, remembering that particles of dust are veritable airships for the transportation of germs. In every way possible avoid raising a dust. So much of the lint which commonly comes from blankets may be avoided with the daily shaking out of doors.

Soiled diapers should not accumulate in a corner or on the radiator; their removal should be immediate, and if they must await a more opportune time, soak them in a receptacle filled with cold water. Even those diapers slightly wetted should never be merely dried and used again, but should be properly washed and dried. No washing soda should be used in the cleansing of diapers - just an ordinary white soap, a good boil, and plenty of rinse water, with drying in the sun if possible. They require no ironing. Hands that come in contact with soiled or wet diapers must be thoroughly cleansed before caring for the baby or preparing his food.

As before mentioned, and it will bear repetition often, all windows and doors must be well screened, for flies and mosquitoes are dreaded foes in any community and in baby land in particular. All used bottles and nipples as well as used cups, pitchers, bits of used cotton, should be removed at once. The washcloth is a splendid harbinger of germs. There should be one for the face, and one for the body and bath, and both should receive tri-weekly boiling. Bath towels should not be used more than twice, better only once.

The techniques of bathing, together with the location, furnishings, and cleanliness of the baby's sick room, will be taken up in later chapters.
It is surprising how soon even a young and inexperienced mother will learn to distinguish between the *pain cry* and the *plain cry* of her baby; for most crying can easily be traced to some physical discomfort which can be relieved, or to some phase of spoiling and indulgence which can be stopped.

**Normal Healthy Crying**

The young baby can neither walk, talk nor engage in gymnastics, except to indulge in those splendid physical exercises connected with a good hearty cry. To be good and healthy, an aggregate of an hour a day should be spent in loud and lusty crying. He should be allowed to kick, throw his arms in the air and get red in the face; for such gymnastics expand the lungs, increase general circulation and promote the general well-being of the normal child. As the child grows older and is able to engage in muscular efforts of various sorts, these "crying exercises" should naturally decrease in frequency and severity. When baby cries, see that the abdominal band is properly applied, that rupture need not be feared.

**The Birth Cry**

The sound most welcomed by both doctor and nurse is the cry of the newly born child, for it shows that the inactive lungs have opened up and the baby has begun to use them, for all the time baby was living in the uterine room he did not breathe once, the lungs having been in a constant state of collapse; and not until now, the very moment the air comes in contact with his skin, do the lungs begin to function as he emits his first lusty holler.

**Abnormal Crying**

The cry is said to be abnormal when it continues too long or occurs too often. It may be strong and continuous, quieting down when he is approached or taken up; or it may be a worrying, fretful cry, a low moan or a feeble whine. And now as we take up the several cries, their description, cause, and treatment, we desire to say to the young mother: Do not yourself begin to fret and worry about deciding just which class your baby's cry belongs to; for help, knowledge, and wisdom come to every anxious mother who desires to learn and who is willing to be taught by observation and experience.

**The Hunger Cry**

The continuous, fretful cry, accompanied by vigorous sucking of the fists, both of which stop when hunger has been satisfied, is without question the hunger cry.

If this cry is constant with regular feedings, then the quantity of the food must be increased, or the quality improved. The tired, fretful hunger cry must not be neglected; the cause must be removed, for it points to malnutrition.
The Cry of Thirst

One day when lecturing at an Iowa Chautauqua, I remained in the beautiful park for the noonday meal. It was a warm day and the tables in the well-screened dining tent were filled with mothers who, like myself, preferred the cool shade of the park to the hot ride through the city to the home or hotel dinner. At my table a baby was pitifully crying. The mother had offered the little child seated in a small uncomfortable go-cart, milk, bread, and a piece of cake - all of which were ruthlessly pushed aside. My little son, then only four and a half, said "Mamma, maybe the baby's thirsty," and up he jumped, hurried to the mother's side with his glass of water, saying, "I haven't touched it, maybe the baby's thirsty." The mother brushed the boy aside, saying, "No, I never give the baby water." In spite of the mother's remonstrance, the baby cried on and on, and finally on "trying" the water, the child drank fully one-half the glass and the crying was hushed.

Babies should be given water regularly - many times every day - from birth, in varying amounts from two teaspoons to one-half cup, according to the age of the child. The water should be boiled for the first few months, and longer if there is any suspicion of impurities.

Milk to the nursing infant is like beefsteak and potatoes to the adult; and many times the milk bottle or the breast is just as nauseating to the thirsty babe, as meat would be to the very thirsty adult whose hunger has previously been fully satisfied.

The Fretful Cry

The babe who is wet, soiled, too hot, or is wrapped too tightly, or who has on a tight, uncomfortable belly band, or whose clothing is full of wrinkles, has only one way to tell us of his discomfort, and that is to cry. It is a fretful cry and should command an immediate investigation as to the possible cause. It takes but a moment to discover a wet diaper; to run the hand up the back under the clothes; to sprinkle with talcum if perspiring; to straighten out the wrinkled clothing; to find the unfastened pin that pricks; or to loosen the tight band. Acquire the art of learning to perform these simple tasks easily, and any or all of these services should be rendered without taking the child from its bed.

Let the child early learn to rest happily and quietly in his own bed. The pillow or mattress may be turned or perhaps the mattress be raised nearer the edge of the basinet. One poor youngster instantly stopped his fretful cry when his mattress was raised four or five inches so he could get the air, at the same time taking him out of his hot room to a cooler room with raised windows. Babies like cold air. They cry when the air is hot, or even warm and close. Every day - rain or shine, wind or sleet - babies should nap out of doors on the porch, in a well-sheltered corner. A screen or a blanket protects from the wind, sleet, or rain; and if the baby's finger tips are warm, you can rest assured the feet and body are warm. Scores of babies will sleep out on the porch, on the protected fire escape, or in a room with opened windows, from one bottle or feeding to another; being aroused at the end of the three or four hour interval just enough to nurse, when back they go to their delightful, warm nest in the cool, fresh air to sleep for another period. Babies should never sleep in a room with closed windows.

One of the incidents that surprised me most in my early work with dispensary babies was the utter misconception of the purpose of the belly band. Invariably it was put on so tightly that I could not slip a finger between it and the babe. It is not a surgical instrument, neither is it a truss. These tight belly bands are a source of much fretting and crying.
Why Babies Cry: The Pain Cry, Habit Crying

The Mother and Her Child

By William S. Sadler, M.D., Lena K. Sadler, M.D.

The Pain Cry

The little pinched look about the face, the drawing up of the legs, the jerking of the head, arms, or legs, associated with a strong, sharp, unceasing or intermittent cry, demands immediate attention. Our first work should be to go about quietly, painstakingly, and systematically to locate the cause of this "cry of pain."

There are often some accompanying symptoms to the cry of pain which demand skilled medical advice and attention, such as the arching of the body backward, the drawing of the head strongly to one side, the inability to use one side of the body, or the presence of fever. There may be an earache, an abdominal complication, or a sore throat, any one of which will be detected by the skilled doctor.

Earache frequently occurs in young babies who have been taken out of doors without proper protection to the ears; or, it may be associated with a cold in the head, which is not detected until the mischief has already been done, while the resulting running ear tells the tale of woeful suffering. Earache must always be thought of as a possible cause when the cry of pain accompanies a cold in the head, and if medical aid is secured early, the abscess may be aborted and the deafness of later years entirely avoided. There is only one home remedy for earache, and that is the application of external heat, either by a hot-water bottle or hot-salt bag. Medical advice should be sought before anything whatsoever is dropped into the baby's ear.

In this connection should be mentioned the wild cry at night which so often accompanies tuberculosis of the bone. A careful X-Ray examination will reveal the disease, and proper medical measures should be instituted at once. Other fretful night crying will be mentioned further on.

Habit Crying

By the frequent repetition of actions, habits are formed. When the baby is two or three days old, he is so new to us and we have waited for him so long, and it is such a great big world that he has come into, that we jump, dance, and scramble to attend to his every need and adequately to provide for his every want. At this very early, tender age whenever he opens his mouth to cry or even murmurs - some fond auntie or some overly indulgent caretaker flies to his side as if she had been shot out of a gun, grabs him up and ootsey tootsey's him about as she endeavors to entertain and quiet him. The next time and the next time and the succeeding time he whimpers - like a flash someone dashes to the side of the basket, and baby soon learns that when he opens his mouth and yells, somebody comes. In less than a week the mischief has been done and baby is badly spoiled.

No other factor enters so largely into the sure "spoiled" harvest as picking a new baby up every time he cries. Often in the early days some indulgent parent will say, "Oh, don't turn out the light, something might happen to the dear little thing" - and old Mother Nature sees to it that a constant repetition of "leaving the light on" brings its sure harvest of "he just won't go to sleep without the
light." And then, "just once" he had the pacifier - perhaps to prevent his crying disturbing some sick member of the family - and so we go on and on. If a thing is bad, it is bad, and a supposedly good excuse will not lessen the evil when the habit has been therefore started and acquired.

The rocking of babies to sleep may be a beautiful portrayal of mother love, but we all pity the child who has to be rocked to sleep as much as we do the mother who sits and rocks, wanting, Oh, so much! to do some work or go for a walk - but she must wait till baby goes to sleep.

**The Temper Cry**

And so now we come to the temper cry - that lusty, strong outburst of the cry of disappointment when he finds that all of a sudden people have stopped jumping and dancing for his every whim. The baby is not to blame. We began something we could not keep up, and he - the innocent recipient of all our indulgences - is in no sense at fault. It is most cruel to encourage these habits of petty indulgence, which must cause so much future disappointment and suffering on the part of the little fellow as he begins to grow up.

Nobody is particularly attracted to the spoiled baby. After the over-indulgent parent and caretaker have completed their thoughtless work, they themselves are ashamed of it and not infrequently begin to criticize the product of their own making - the formation of these unpleasant bad habits. More than anything else, the spoiled child needs a new environment, new parents, and a new life.

**The Spoiled Baby**

Seek to find out if possible - and it usually is possible - just what he is crying for. It may be for the pacifier, for the light, or to be rocked, jolted, carried, taken up and rocked at night, or a host of other trifles; and if he is immediately hushed on getting his soul's desire - then we know he is "spoiled."

The unfortunate thing about it all is that the one who has indulged and spoiled the baby usually does not possess the requisite nerve, grit, and will power to carry out the necessary program for baby's cure. And the pity of it all is that overindulgence in babyhood so often means wrecked nerves and shattered happiness in later life. So, fond, indulgent parents, do your offspring the very great kindness to fight it out with them while they are young, even if it takes all summer, and therefore spare them neurasthenia, hysteria, and a host of other evils in later life.

This sort of "spoiled baby crying" can be stopped only through stern discipline - simply let the baby "cry it out." The first lesson may require anywhere from thirty minutes to an hour and thirty minutes. The second lesson requires a much shorter time, and, in normal babies with a balanced nervous system, a third or fourth lesson is not usually required.
The Cry Of Serious Illness

The cry of the severely sick child is the saddest cry of all. The low wail or moan strikes terror to the saddened mother-heart. It is often moaned out when the child is ill with "summer complaint" or other intestinal disturbances. Instant help must be secured, and, if medical help is not obtainable, remember, with but one or two exceptions, you are safe in carefully washing out the bowels, in applying external heat and giving warmed, boiled water to drink.

Another cry which demands immediate attention, and the faithful carrying out of the doctor's orders, is the hoarse, "throaty" cry indicative of croup or bronchitis.

The Colicky Cry

Perhaps the greatest cause of the most crying during infancy, next to that of over-indulgence, is ordinary colic which -

... manifests itself in every degree of disturbance from mere peevishness and fretfulness to severe and intensely painful attacks in which restlessness passes into grunting, writhing, and kicking; the forehead becomes puckered and the face has an agonized expression; the baby tends to scream violently and draws his thighs up against his belly, which will usually be found to be hard and more or less distended.

A colicky baby completely upsets the household and greatly disturbs the mother, who requires both quiet and rest that she may the better produce the life-sustaining stream so much needed for the up building and development of the growing child.

Colic in the Breast-Fed

While colic is so often seen in the bottle-fed babe, it often occurs in the breast-fed child, and is usually traceable to some error in the mother's diet or to some other maternal nutritional disturbance. One mother who was sure she had eaten nothing outside the diet suggestions she had received, was requested to bring to the office a fresh voiding of her own urine which was found to be highly acid. The administration of an alkaline such as simple baking soda or calcium magnesia to the mother, corrected this acidity, and the colic in the baby entirely disappeared. I recall the case of one mother who ate her dinner in the middle of the day, with a light meal in the evening and thereby stopped the colic in her babe.

Another source of colic in the breast-fed baby is the unclean nipple. The nipples should be washed with soap and water and rinsed in boric acid solution before each nursing. If the mother worries greatly, or thoughtlessly "gets very angry" just before the nursing hour, there is a substance known as "epinephrine" secreted by the glands located just above the kidneys which is thrown into the
blood stream and which raises the blood pressure of the mother and often produces not only colic in the babe, but many times throws him into severe convulsions.

**Colic In Bottle-Fed Babies**

There are many opportunities for colic in the bottle-fed baby; for instance, dirty bottles, dirty nipples, careless cleansing of utensils used in the preparation of baby's food, improper mixtures, too much flour, the wrong kind of sugar, too much cream or too little water - all these things help to produce wind under pressure in the intestine, which is commonly known as colic. Underfeeding or overfeeding, too rapid feeding or too frequent feeding also contribute their mite in producing colic.

As a rule, the bottle-fed child is fed too often. In the new born, the interval between feeds should be three hours from the start; after six months the interval may be lengthened to four hours.

**Colic and Chilliness**

Hiccough - a spasm of the diaphragm - often accompanies colic, and, in the case of infants, is usually due to the swallowing of air or over-filling the stomach; gentle massage, external heat, and a few sips of very warm water usually corrects the condition.

The chilling of the skin very often produces a temporary intestinal congestion with colic as the result. Cold feet, wet diapers, and loitering at bath are all very likely to produce colic; and when it is therefore caused by chilling, quickly prepare a bath at 100 F., and after immersing the child for five minutes, wrap up well in warm blankets.

**The Treatment of Colic**

Those of my mother readers who have electric lights in their home, will find the photophore to be a source of great comfort and convenience; for this simple contrivance is usually able to banish colic in a few moments. The photophore is simply radiant heat - heat plus light - and as this heat is applied to legs and buttocks of the crying child the diaper is warmed, the abdomen relaxes, gas is expelled, intestinal contractions relieved, and the baby is soon fast asleep.

Occasionally with the aid of the photophore, and even without it, the warm two-ounce enema containing a level teaspoon of baking soda and a level teaspoon of salt to a pint of water when allowed to flow into the bowel, will soon bring down both gas and feces to the great relief of the baby. Warm water to drink is also very helpful. Putting the feet in very warm water is also quieting to the crying colicky babe.

It is often necessary in cases of repeated and persistent colic, to give a full dose of castor oil to clear out the bowel tract. Do not jolt or bounce the baby, do not carry him about, and don't walk the floor with him.

Heat him up inside and outside, warm his clothing and his bedding, and therefore bring about relief without sowing seeds for future trouble - the sorrow of a spoiled child.

One very quiet little baby was one day brought to the dispensary whose mother said: "Doctor, I didn't bring him 'cause he's sick, but 'cause he looks so pale; he's as quiet as a mouse; he never cries
any more since I got to giving him medicine." On examination of the baby and on inquiring about the medicine, we found that the baby was dead drunk all the time. Some "neighbor friend" had told the tired out mother, "Give him a teaspoon of whiskey at each feeding and that'll fix him all right." If a few more states go dry maybe it will not be so easy for the ignorant mother to dope and drug her helpless baby.

And neither is paregoric to be administered wholesale for colic. It contains an opiate, and should not be given without definite orders from a physician. And so as a parting word on "Why Babies Cry," we ask each mother to run over the following summary of the chapter, and therefore seek to find out why her baby cries.