

The article below was first published in an English medical journal in 1895. While others were aware in a general way that breastfeeding spaced babies, the Dr. Leonard Remfry was apparently the first to analyze and quantify this phenomenon. His finding that only "six percent" of breastfeeding mothers in his study became pregnant before their first menstruation is still significant. Actually, he rounded up; the actual percentage of mothers who became pregnant while still in amenorrhea was 5.77 percent.

We have retained his spelling and usage. Some terms are quite unfamiliar. "Catamenia" is menstruation. "Puerperal" refers to the time around childbirth. The quoted assertion that nursing while pregnant may cause an abortion is dated and no longer accepted. Regarding the first paragraph, it should be noted that today mothers worldwide are encouraged to breastfeed for at least two years for the health of their babies. The value of this article is not the indirect exposition of medical knowledge and practice in 1895 but rather his research into breastfeeding infertility.

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## THE EFFECTS OF LACTATION ON MENSTRUATION AND IMPREGNATION

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One of the most popular beliefs among married women is that suckling prevents conception; and among the poorer classes it is no uncommon thing to see a child eighteen months, or even two years old, still at the breast,—the mother very weak, the child puny and unhealthy.

With the view of inquiring into the subject generally, the author has taken notes of several hundred cases, and as a result many interesting facts have been elicited. Now, as is well known, there is an intimate connection between the function of the breast and that of the uterus. When the breasts are active and secreting, menstruation is commonly absent. If a mother does not suckle her baby, the catamenia appear some time during the puerperal period, after the mammary glands have become quiescent. Again, when a child is weaned, the rule is that the woman will soon menstruate as before pregnancy.

Not only has the breast function this connection with menstruation, but it has also an acknowledged relation with the process of involution.

The uterus in a healthy suckling woman will gradually return to its normal size in about six weeks. The condition of sub-involution is frequently found in patients who have not suckled their children. Again, after miscarriage sub-involution is more often seen than after full-time labour; for several reasons, such as getting up too early, fragments of placenta or membranes being retained, and lastly because there has been no lactation.

Therefore many will give ergot during the puerperal period to aid involution in cases in which the child is not nursed. Suckling often causes pain in the region of the uterus, due

to uterine contraction. Again, as Galabin says, "continuing to suckle an infant after pregnancy has recurred may lead to abortion, suckling having a well-known tendency to set up uterine contraction." The application of the child to the breast in cases of post partum haemorrhage is a practice commonly followed. Lastly, irritation of the breasts is known to have been applied with the view of criminally producing abortion.

Taking all these facts together, the connection of lactation with uterine function and uterine contraction is made a strong one.

What the condition of the uterine mucous membrane is in during suckling the author can only surmise. When amenorrhoea is present it must certainly be an anaemic one, presumably associated with little or no growth, though this may occur to a slight extent, and undergo degeneration, the products passing away unnoticed. *Per contra*, when menstruation is complete and regular during lactation, probably the mucous membrane and the changes which take place in it are identical with those associated with the usual catamenia. The difficulty of examining post mortem the uterus of a healthy suckling woman is obvious. Whether the local appearances in suckling when menstruation is not present are similar to those in chlorosis does not concern the objects of this paper.

In order to arrive at any satisfactory results it has been necessary to question a large number of women on the following points: (1) number of pregnancies; (2) number of children nursed, and how long each time; (3) whether after delivery amenorrhoea had been present during suckling, and if not, when and how soon the catamenia had come on; and (4) whether pregnancy has commenced during suckling; (5) whether, if menstruation had appeared, it had been regular or otherwise. In this investigation the lactation-periods and the events associated with them have been studied. The histories of about 900 lactations have been inquired into, and various interesting facts made prominent. Firstly, 503 were attended with amenorrhoea, and 388 with menstruation more or less marked (this latter will be expressed more clearly later). Therefore 57 per cent. of the lactations were associated with complete amenorrhoea, and 43 per cent., with menstruation at some time—a difference of only 14 in 100. Out of the 388 cases, that is 43 per cent. of the total number, 226 became pregnant while suckling, which comes to about three-fifths. In 245 cases out of the 388 menstruation began within three months post partum, and continued regular till in the majority of cases conception occurred, or in others till the weaning of the child. In the remaining 143 a definite classification cannot be well given, owing to times of amenorrhoea being followed by times of menstruation or "shows."

The 245 should be called cases of "absolute regularity," and the 143 cases of "relative regularity" and "relative amenorrhoea" in the same woman. This combination is illustrated by the following case taken from the list. A suckling woman had amenorrhoea for six months, then three monthly periods at monthly intervals. After the third one she became pregnant. The above is a lactation period of relative amenorrhoea and relative regularity. In 57 per cent. of the cases there was absolute amenorrhoea, and in 26 percent. absolute regularity,—that is, nearly twice as many women have amenorrhoea as have regular menstruation during suckling. The odd 17 per cent., however, is most important in adding evidence to support the principal fact demonstrated in the paper,

namely, that menstruation during lactation very strongly favours impregnation. Take the figures:—In 503 lactation periods associated with absolute amenorrhoea, only 29 impregnations took place. In those associated with more or less menstruation, namely 388, there occurred 226 impregnations. In other words, out of 100 women who have absolute amenorrhoea, only 6 became pregnant, while out of 100 who are either regular throughout suckling, or have catamenia at some part of the lactation period, 60 are impregnated, that is ten times as many. Two typical cases are given to illustrate the above.

1. Aged 85. Pregnancies ten. Suckled, as a rule, nine months. Always saw her periods at the third month post partum, being quite regular till impregnation, which took place ten times during suckling, *i.e.* on every occasion.
2. A woman had had four pregnancies. In three of them she became regular at an early date, and in each case soon became pregnant. The same woman during one lactation did not menstruate at all. She did *not* become pregnant. This was not after her last or fourth child, for then it might have been inferred that she had ceased child-bearing.

The explanation of these facts would seem to be that in the menstruation cases the mucous membrane has grown to such an extent as to be a suitable nidus for the impregnated ovum, and *vice versá*. There are cases of pregnancy occurring during lactation in which there has only been a show on one day: *e.g.* Mrs. M— suckled a child for nine months; at six months she had a slight show for two days, and three months after, that is at nine months, she had an abortion of three months. Thus it might be conjectured, on taking one step farther, that of the 6 per cent. who became pregnant during amenorrhoea the mucous membrane had grown to an extent sufficient to lodge the ovum; in other words, if impregnation has not occurred then, menstruation would have appeared. Such a theory as this cannot be supported by any direct evidence, but there may be some truth in it.

As bearing on the subject of the association of amenorrhoea and non-impregnation may be mentioned the fact that a woman often becomes pregnant on weaning her baby without having any catamenia at all.

To recapitulate:

1. Of suckling women, 57 per cent. only have absolute amenorrhoea.
2. Forty-three percent. menstruate more or less, but 26 per cent. have absolute regularity.
3. Impregnation does not take place so readily during lactation as at other times, but this is not true to such an extent as has been imagined.
4. If absolute amenorrhoea is present during lactation, the chances of impregnation occurring are only 6 out of 100.
5. If menstruation occurs during lactation the chances of impregnation are 60 in 100.
6. the more regular a woman is during lactation, the more likely is she to become pregnant.

7. During a menstruating lactation the changes in the uterus are presumably similar to those connected with the ordinary monthly periods, and the mucous membrane forms a nidus for the ovum.
8. In the woman who does not suckle at all the menses appear, as a rule, some time in the first six weeks after delivery.