

THERMAL DIAGNOSIS OF EARLY PREGNANCY¹

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THE diagnosis of very early pregnancy has long been a medical problem. In addition to the usual symptoms and scanty physical findings, a multitude of tests are available, including the various biological, chemical and dermatological phenomena. In my own experience, none of these approaches the 95 per cent accuracy claimed for them, especially during the first few weeks of gestation.

The basal body temperature (B.B.T.) has been widely described and utilized in the treatment of infertility. This same thermal technique, however, has not received the attention and popular use it deserves in the diagnosis of early pregnancy—hence this preliminary report.

METHOD AND PROCEDURE

In this study, B.B.T. is defined as a daily oral temperature taken for five minutes in bed, at approximately the same time upon awakening and before any activity or ingestion of food or liquids. A typical B.B.T. graph of a normal ovulatory menstrual cycle is shown in Figure 1. Commonly the B.B.T. is below 98 F. in the first 14 days of the cycle, and above this figure in the last 14 days, with a differential of approximately one degree, *i.e.*, 97.4 F. preovulatory and 98.6 F. postovulatory.

One hundred patients whose menses were from one day to three weeks late were subjected to B.B.T. studies. Many of these were infertility patients with previous temperature graphs of their normal cycles.

RESULTS AND COMMENT

The basal body temperature in early pregnancy is a continuation of the post-ovulatory or progesterinal secretory phase of the menstrual cycle. Therefore, instead of the usual temperature drop which occurs just prior to the onset of menstruation, the temperature remains at a relatively high level, characteristically a steady plateau with practically no daily variation (*fig. 2*). At about 12 to 14 weeks

of gestation the temperature becomes irregular with apparently no characteristic curve, unless marked irregularity can be called typical. It has been conjectured that the reason for the marked change in the temperature graph at this time is related to the death of the corpus luteum and the secretion of the necessary hormones by the fully formed placenta.

Since menstruation usually occurs 14 days after ovulation, the B.B.T. should be recorded for longer than two weeks for a definite diagnosis of pregnancy. Infertility patients who have graphs of previous normal menstrual cycles, can suspect pregnancy within a few days after the first missed menses.

Eight of the 100 patients studied proved to be not pregnant. None of them had a graph typical of early pregnancy. One patient, whose menses was two weeks late, had positive Friedman and Frog tests before the author saw her. Her B.B.T. was 97 and 97.4 F. on two successive mornings followed by a normal menstruation.

Ninety-two of the patients were pregnant and all but two had B.B.T. typical of early pregnancy, *i.e.*, above 98 F. The two exceptions had a persistent B.B.T. of 97.2 and 97.6 F. respectively. Subsequently it was shown that their pre-ovulatory temperatures were normally 96.8 and 97 F. Of the 90 pregnancies with typical graphs, 11 had received negative Friedman and/or Frog Reports, performed by many different laboratories.

It follows, therefore, that a persistent basal body oral temperature approaching 98.6 F. for longer than 14 days strongly suggests pregnancy. This method is simple, inexpensive and accurate.

A recent attempt to predict the onset of labor by B.B.T. has been unsuccessful because of the marked irregularity of the B.B.T. in the last two trimesters of pregnancy.

Further studies on a much larger series should be done to prove and popularize the fact that very early pregnancy can be diagnosed with basal body temperatures.

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Fig. 1. Oral basal temperature graph indicating ovulatory cycle.

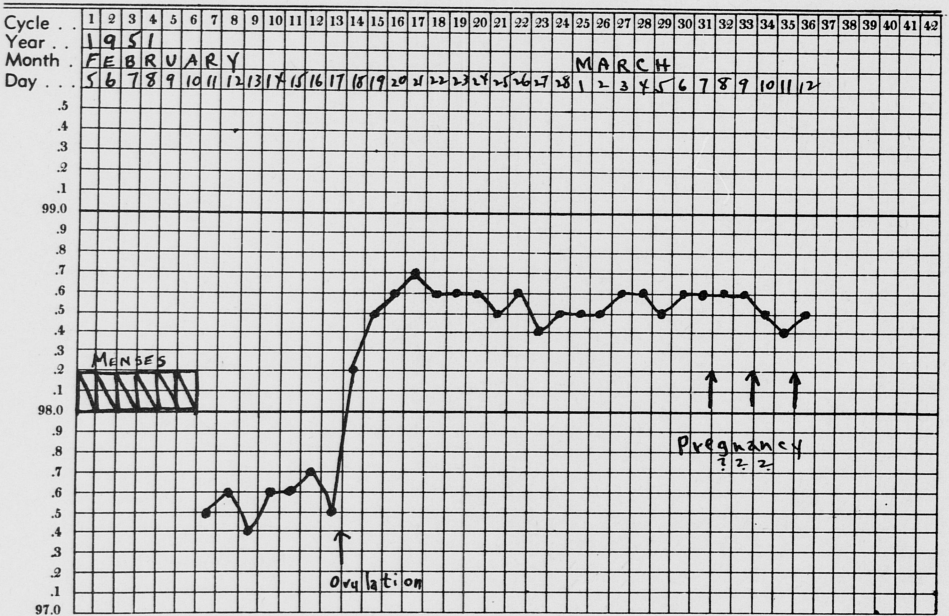


Fig. 2. Oral basal temperature graph indicating ovulation followed by pregnancy with persistence of high temperature.

SUMMARY AND CONCLUSIONS

1. Oral basal body temperatures are a relatively accurate, simple, inexpensive method for the diagnosis of early pregnancy.

2. A B.B.T. close to 98.6 F. which persists for over 14 days suggests pregnancy.

3. Conversely, a B.B.T. much below 98 F., except in rare instances, negates the existence of pregnancy.