

# Natural Childbirth

A. Leigh Bennett Dick-Read

Natural Childbirth occurs when a woman has her baby without the need for outside intervention. It therefore follows that any discomfort or pain she experiences will be below the level at which she would find it intolerable. Many women claim to have had no pain at all.

It is often said that Natural Childbirth does not work. This is not true for hundreds of thousands of Western women, notably in North America and West Germany, and millions of Primitive, or Non — Literate women who have had little or no contact with Western Civilisation. Natural Childbirth is the rule rather than the exception. A 98% success rate has been demonstrated with Western women<sup>(1)</sup> and with Non — Literate women the figure is probably higher.<sup>(2)</sup>

Many have tried Natural Childbirth. Some have failed. Consistent failure is due ONLY to an incomplete understanding of Natural Childbirth Techniques.

The theory and practice of Natural Childbirth were developed during the first quarter of this century by Grantly Dick-Read, an Englishman.<sup>(3)</sup> Dick-Read was a highly qualified physiologist, anatomist and Accoucheur who developed his theory both empirically at the bedside and from his researches into the neuro-physiology of parturition.

Before we discuss the theory and practice of Natural Childbirth I refer you to the words of Dick-Read:

“The importance of my theory is that its implementation in obstetric practice shows that “it works” with considerable success”.<sup>(4)</sup>

First we shall outline the structure and function of the uterus. (Here I must acknowledge the patient help of a medical student.) Then we shall discuss Natural Labour. (here I must thank the physician who read and criticised my manuscript.)

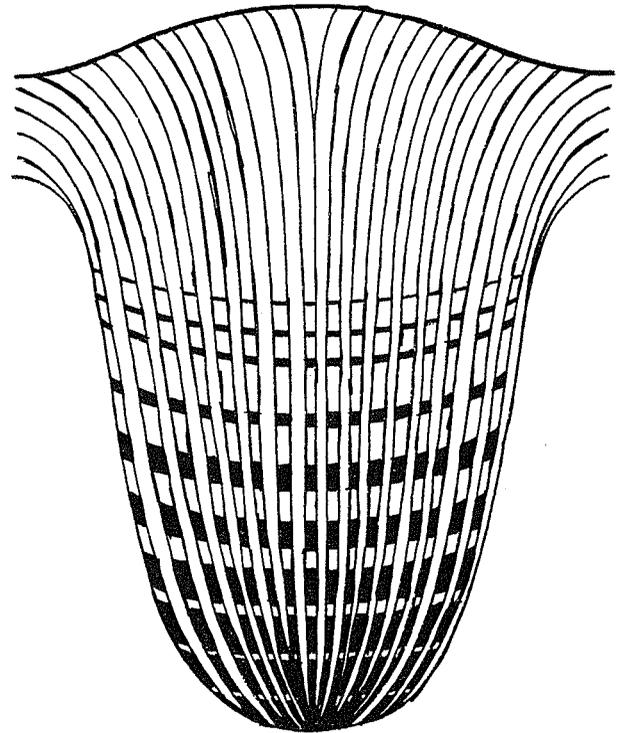
## THE UTERUS

In a non-pregnant woman the uterus is a small pear shaped organ about three inches long and two inches wide at its widest point. During pregnancy it expands upward and outward within the abdomen to accommodate foetus, placenta and amniotic fluid. Its ultimate size may vary considerably from woman to woman.

The uterus consists of three muscle layers. (Diagram A) The inner muscles are circular and their density increases towards the cervical or lower end of the organ. The middle layer consists of muscle fibers which run in all directions and infiltrate the outer and inner layers. The most important of these central muscles are found to encircle the large blood vessels of the uterus. The outer layer consists of longitudinal muscles running upwards and outwards over the fundus and down the posterior wall.

The innervation of the uterus is of vital importance in understanding the mechanics of labour.

Diagram A.



Showing diagrammatically the relative distribution of longitudinal and circular muscle fibres in the uterus at full term.

Reproduced by permission of Mrs. J. Dick-Read. C.W.F. Chapter IV. COPY RIGHT Jessica Dick-Read 1960.

The circular muscles are supplied by the sympathetic nervous system. The central muscle is also innervated by the sympathetic nervous system. The longitudinal muscles are innervated by both parasympathetic nerves and a local innervation from ganglia within the uterine muscle itself. This local innervation is in no way associated with the spinal cord or the sympathetic nervous system.

Thus, the local innervation within the longitudinal muscles maintains the expulsive contractions of birth. The parasympathetic nervous supply stimulates these expulsive contractions. The circular muscles, innervated by the sympathetic nervous system tend to inhibit expulsion during pregnancy. The central muscles, when contracted under the influence of the sympathetic nervous system, tend to constrict the large blood vessels of the uterus. This prevents haemorrhage after birth.

## LABOUR

When the system is functioning naturally, (I would say normally — but “natural” and “normal” are not, I fear, synonymous,) the outer and inner uterine muscles act such that each complements the other. The circular muscles prior to labour are firm and tend to constrict

the cervix, whilst the longitudinal muscles are flaccid and relaxed. However, with the onset of labour, the longitudinal muscles begin to contract at ever decreasing intervals and in ever increasing strength, while the circular muscles relax to allow the gradual dilation of the outlet. This continues until the cervix is sufficiently dilated to allow the foetus to pass into the vagina.

However, for reasons we shall not discuss here, such conditions have not been normal for Western women since the middle ages.(5)

Let us consider the other two systems of the lower abdomen. Sufficient faeces in the rectum or urine in the bladder stimulates the urge to defecate or micturate. When conditions are right, the sphincters in the neck of the bladder and the anus relax in response to pressure and allow the expulsion of the urine or the faeces. Should abnormal conditions such as inflammation of the urethra or fissure of the anus be present, the relevant sphincter muscle may well develop a spasm. This spasm is very painful and could have a certain inhibiting effect. The mechanism of painful labour is similar.

### NORMAL LABOUR AND PAIN

Fortunate is the physically normal woman who understands and does not fear childbirth for she will have little or no pain in labour. Usually Western woman is not lucky. Nanna or Ommi, married friends or the girls at school, have all combined to ensure that she knows the full measure of her coming ordeal. If she ever heard anyone say: "It wasn't that bad, really," she has probably forgotten. Why?

The first stage of labour announces itself in one of three ways. Either the bag of waters leaks, or possibly bursts; or the "show" may appear — that is a slight haemorrhage along with the mucous plug from the inside of the cervix; or thirdly, and this is the most reliable indication, the first contractions will be felt as abdominal tightness recurring at intervals of fifteen or twenty minutes.

Since many women are likely to experience contractions for as much as a fortnight before the onset of labour the medical adviser must, of course, try to ascertain that the contractions are recurring at regular, decreasing intervals before recommending a hasty migration to the hospital or maternity home!

You will notice that I referred to CONTRACTIONS — not PAINS; because contractions do not hurt.

You will remember that the longitudinal muscles are innervated by the parasympathetic nervous system, which stimulates its contractions, and the local innervation, which maintains contractions. Once labour has begun there is no mechanism by which the mother can cause the longitudinal muscles — of their own accord — to reverse the progress of labour, because, as we have seen, the local innervation operates independently of the Central Nervous System.

However, as we have seen, the circular and central muscles are innervated by the sympathetic nervous system. If the woman expects and is afraid of pain, she

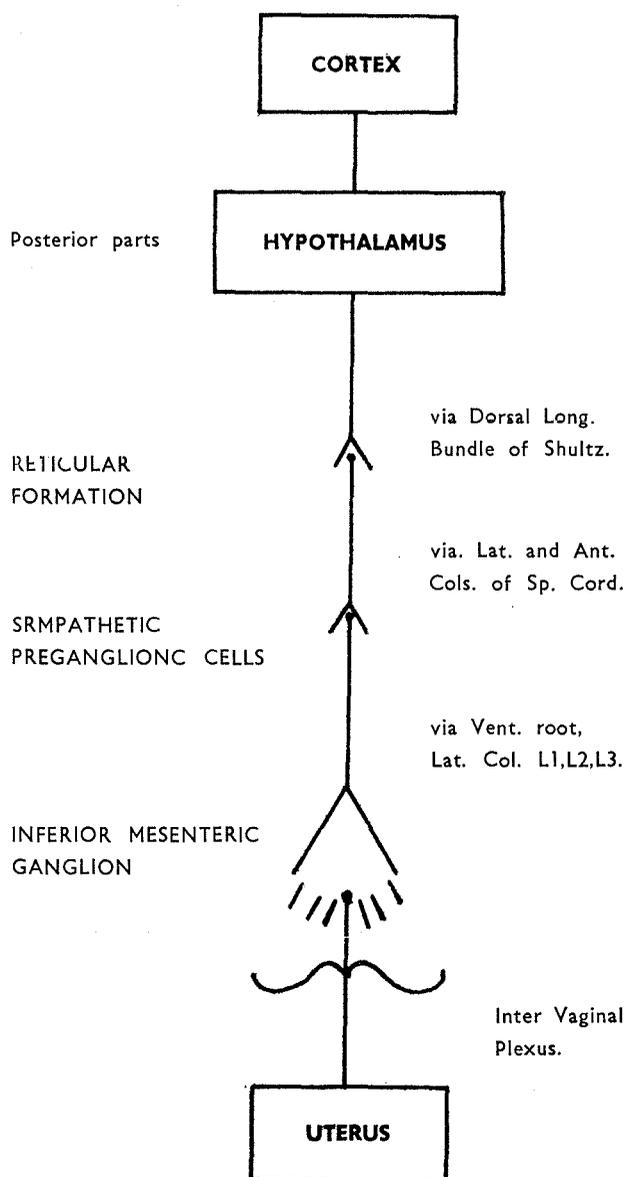
will anticipate pain with each contraction.(6) Now the interpretation of sensations arising within the uterus are profoundly influenced by the mental state of the woman.(7) If a woman thinks a contraction (a new experience associated exclusively with childbirth) ought to be painful she will be frightened.

### THE FEAR-TENSION-PAIN SYNDROME.

Now when we are afraid the Thalamus, in conjunction with the Cortex, sets into operation the best means of reducing the need to fear. If you meet a thug intent on "braining" you, you will rapidly decide whether you should face him bravely — or run like the devil. The stimulus is received by the eyes and passed to the cortex.

Diagram B.

Outlining the course taken by a Sympathetic nervous impulse between the Cortex and the Uterus.



Branches ramified as described in the text.

**FEAR:** Inhibitory action on Hypothalamus broken.  
**TENSION:** Contraction of Central and Circular Muscles.  
 COPY RIGHT A. Leigh Bennett Dick-Read, 1971.

Here the strength of the stimulus is assessed. Here, through the intervention of the Thalamus, the *judged* significance of the incoming stimulus is interpreted — *relative to the current emotional state of the individual*. The cortex then makes the decision of fight or flight. Instruction to the relevant effector organs is transmitted via the sympathetic nervous system which over-rides all the other activities in the areas stimulated.

The path followed by impulses in the sympathetic nerves is shown in Diagram B. Fear, already present in the cortex, tends to encourage a "Pain" interpretation of stimuli received from the contracting longitudinal muscles. Fear, a form of stress, tends to reduce the inhibitory influence of the cortex over the Hypothalamus. This can lead to panic and an increase in the "Pain" interpretation of the stimuli being received from the uterus. In soldiers the tendency for Fear to reduce the inhibitory effect of the cortex on the Hypothalamus may be minimised by training.

A frightened woman cannot cause her longitudinal muscles to stop contracting of their own accord. She can, however, cause her circular and central muscles to contract. When this happens her longitudinal and circular muscles act so as to oppose each other.

The upper arm muscles are another example of a complementary muscle system. To bend the elbow we contract the biceps and relax the triceps. To straighten the arm we relax the biceps and contract the triceps. If we contract both together, each opposes the action of the other. If we contract both strongly, the arm begins to vibrate and shortly both muscles begin to ache. Excessive Tension is painful!

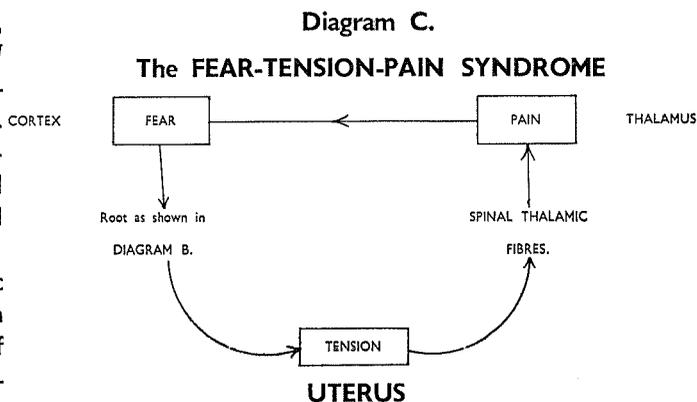
Similarly, the uterus muscles, when in opposition, are in a state of tension — and the greater the tension the greater the pain. The degree of pain felt depends not only on the strength of the stimulus but also on the emotional interpretation of the stimulus.

The mechanism functions in accordance with a law postulated by Dick-Read which states that: "A stimulus of fixed magnitude applied to any specific sensory receptor produces a motor response commensurate with the integrity of its interpretation."

The degree of pain felt during the first stage of labour is directly proportional to the degree of fear experienced by the woman. Fear gives rise to pain. Pain re-enforces Fear (of Pain), and we have a vicious circle! This is known as the Fear-Tension-Pain Syndrome. Diagram C.

### BREAKING THE SYNDROME.

"There is no physiological function which gives rise to pain in the normal course of health," for, Professor Julius Welf bluntly stated: "Structure is adapted to Function," and Pain's purpose is to warn us of an abnormal condition! Nociceptors or pain receivers are specific for the type of stimuli to which they will respond.<sup>(8)</sup> The only type of nociceptors found in uterine and intestinal tissue (tissue which may otherwise be burned, cauterised or physically moved without pain) are those specific for excessive tension or laceration.



COPY RIGHT A. Leigh Bennett Dick-Read, 1971.

If a healthy woman experiences great discomfort or pain during labour its prime is almost certainly tension of the uterine muscle. Excessive tension causes the central and circular muscles to contract. This inhibits the blood supply to the uterus and therefore the foetus. The extreme form of this condition is called white or ischaemic uterus, and can lead to a Caesarian Section.<sup>(9)</sup>

Thus, in order to achieve Natural Labour most women — Western and therefore Maltese women — must receive Antenatal Training. This should consist of an elementary explanation of the Mechanics of childbirth and why it should not hurt. Mothers who need exercises to keep them fit should do them and, as will be seen, all mothers should be taught to relax.<sup>(10)</sup> Obstetricians and Midwives also need to become familiar with the techniques of Natural Childbirth.

A much respected Maltese Medical Officer of Health once told me that it was impossible to teach Maltese Mothers to have their babies naturally because of the "Maltese Mentality". I profoundly disagree. Women are women be they from Lusotho or L'Isla and Natural Childbirth is precisely the same phenomenon in women of all physical types and cultures<sup>(11)</sup> In Hamburg, West Germany, Doctor Rudolph Hellmann is the leader of a growing band of doctors who use these techniques. In the United States Natural Childbirth is known to most people and practised by more obstetricians every year. Indeed, the faculty at Duke University, North Carolina, teaches it under their Dean Professor Bayard Carter. In South Africa, where Dick-Read practised between 1949 and 1952, his principles are practised by his former partner Doctor Costa Halamandres. Natural Childbirth is NOT the privilege of Non-Literate alone.

### NATURAL CHILDBIRTH.

In his lectures Dick-Read used to refer to the three P's and the three C's which can help those who attend women in labour to achieve or approach *Perfect Confinement*.

**PATIENCE:** No woman should ever be left alone in labour unless she asks to be. If possible, and he is likely to prove an asset, her husband should be present. Not only to hold her hand, rub her back (when during the first stage, the cervix is nearing full dilation) and tell

her how marvellous she is, but share with his wife the joy of welcoming their child into the world together. The first stage, especially in the primipara, can seem like an age. If the mother lets the contractions come and go of their own accord, the cervix will dilate in its own good time. Impatience can result in "bearing down" too soon and this may lead to overtiring of the mother and to unnecessary laceration in a later stage. Furthermore, a fully dilated cervix will suffer minimum discomfort when it stretches as the baby passes through.

**PEACEFULNESS:** Women in labour are acutely sensitive to sound in general and talk in particular. Anything less than an atmosphere of peaceful purposefulness in the labour room is likely to disturb a woman who is anxious — who, in spite of her instruction, is too influenced by her former fears or too little instructed to be completely confident and relaxed.

Conscious relaxation assists in the relaxation of the Levator ani muscle — which is influenced by the spinal nerves and may contract around the vagina in such conditions of stress (Fear). Such practised relaxation — necessary if a woman is afraid — originating in the cortex, results in the efficient support of the inhibitory effect of the cortex on the hypothalamus.

**PERSONAL INTEREST:** A great Medical Technician is of inestimable value to a woman who requires his intervention, but those who attend women in Natural Labour must consider every aspect of the labour from the point of view of the mother. Without deep personal concern it is not possible to maintain the stamina required of a woman who needs constant encouragement and guidance. No man can deceive a woman in labour with false confidence or hollow enthusiasm.

A Gynaecologist usually expects demands on his skill. An Obstetrician is more likely to experience great demands on his emotions.

**CONFIDENCE:**..... requires competence. A confident woman must be well instructed and have faith in her obstetrician.

**CONCENTRATED OBSERVATION:** Without Personal Interest it is not possible to maintain the Concentrated Observation necessary to keep one step ahead of a woman in labour!

**CHEERFULNESS:** Natural Childbirth IS a Happy Event. However, Dick-Read wrote: "...I once heard a Medical man greet his patient: "Ha, ha! Cheer up, old girl. You've got to go through Hell, but I'll go anywhere with you — so keep smiling. Ha! ha!". I said that we would hate to detain him if he would like to go on ahead."(4)

See the film "Childbirth Without Fear". See the expressions on the faces of the ladies at crowning. They answer the question: "Does Natural Childbirth work?"

Before I am shouted down for being unqualified and out of step, I ask you to bear with me. Although the ideas I have expressed may be contrary to your experience and your schooling, I am not naïve enough to think that you are naïve enough to accept anything I have said without questions closely. I merely suggest that you verify this information for yourselves. I am sure not one of your

professors would think much of you if you soaked up his words like a sponge and squeezed out the same water unconsidered and unenriched. I ask you to give what I have said at least a little consideration.

I hope that in the not too distant future you will be able to visit Obstetricians in Germany, the United States and elsewhere to see for yourselves how they achieve the results they do. Then, one day, I hope you too will join the growing army of Obstetricians whose patients have proved that Childbirth is Glorious.

On the 8th January 1956, His Holiness Pope Pius XII, addressing a group of Doctors of the International Secretariat of Catholic Doctors and the A.M.C.I., on Painless Childbirth, referred specifically to Doctor Grantly Dick-Read and his work. Discussing "Painless Childbirth Techniques" in general he said: "Scripture does not forbid it.... If the new technique spares her the sufferings of childbirth, the mother can accept it without any scruples of conscience...." (12)

On the 25th October 1956 Doctor and Mrs. Dick-Read visited Castel Gandolfo for a private audience at which His Holiness personally presented Doctor Dick-Read with the Silver Papal Medal. He also presented Mrs. Dick-Read with a Rosary.

#### REFERENCES

1. Vide Grantly Dick-Read.
2. See "No Time For Fear" — Grantly Dick-Read, 1955.
3. See "Doctor Courageous" — A. Noyes Thomas, a Biography, 1957.
4. See "Childbirth Without Fear" — Grantly Dick-Read. (The second Revised American Edition, 1959 is in the R.U.M. Medical School Library.) Royal University of Malta.
5. See "Childbirth Without Fear" Chapter IX.; "Childbirth and the Christian Family" (1962) — Helen Wersel.
6. Definitions of Pain are questionable! If a pain stimulus does not tend to distract a woman from the job of having a baby, does she FEEL pain? If a runner were to be stopped suddenly about three quarters of the way through a long distance race and asked, "does it hurt?", he would probably reply "of course!" But if, at the end of the race, (having not been stopped) he is asked the same question the answer is "of course not — I was too busy!" Unless of course, he was unfit when he started; What is Pain?  
See "Pain" — Richard Behan, 1915.  
And "Pain" — Sir Thomas Lewis, 1946 Edition in R.U.M. Medical School Library.
7. Vide Sir Henry Head (eg. reference to B.M.J.)
8. Vide Pavlov, Sherrington and Dick-Read.
9. See Sir Thomas Lewis — Archives of Internal Medicine, Vol. XLIV, page 713, May 1932.
10. See "Antenatal Illustrated" — Grantly Dick-Read, 1955.  
And "Introduction to Motherhood" — Grantly Dick-Read 1950.  
And "What Every Woman Should Know About Childbirth" — Jessica Dick-Read and Prunella Briance, 1965.  
And "Antenatal and Postnatal Care" — F.J. Browne 1935, Dick-Read contributed a chapter.
11. The concept that "Racial Differences" are significantly responsible for the actual — variable — incidence of intervention of any form is, I suggest, erroneous;  
a) because intra ethnic group (racial differences of morphology are demonstrably more pronounced than inter ethnic group differences,  
b) because what differences there are that may be due to genetic or environmental (Physical) conditions do not of themselves cause the number of individuals who require intervention to be in any way great enough to relate to the actual incidents of intervention in most Western countries. Since the incidents of intervention can vary dramatically from area and from practise to practise within one ethnic group, I am persuaded that, for the most part, the incidents of intervention are related to environmental (Social) factors.  
In addition to "Childbirth Without Fear" see also "No Time For Fear", on researches in Africa;  
The writings of Ashley Montagu, (an Anthropologist) Dunn and Dobshansky (Geneticists) on the incidence of Morphological differences;  
The writings of Stuart Chase and Alfred Korzybski on how fact and fiction are confused when the ability to think critically and impartially is limited and on the problems of being accurate and clear to others when using Indo-European languages (eg. English and Italian).
12. Address "Nous Avons Recu...." — 8th January 1956.

Copyright 1971 A. Leigh Bennett Dick-Read.