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## TWO FILMS ON MENSTRUATION

Title: "FINDING OUT ABOUT PERIODS"

16mm, colour.

Duration: 20 minutes

Production: Scottish Health Education Group, Woodburn House, Canaan Lane, Edinburgh EH10 4SG, United Kingdom

Synopsis: This is a Scottish film, in which all the spoken roles are performed by teenagers or children. In this film seventeen-year-old Margaret explains to her curious ten-year-old siblings, Janet and Robert, what periods are. The topic comes up quite naturally, while the girls are shopping and Margaret buys some tampons. The discussion is straight-forward, but thorough, and the graphics are good. Topics covered include ovulation, fertilisation and pregnancy, the length and variety of menstrual cycles, and sanitary protection.

There is a booklet that accompanies the film.

Title: "PERHAPS YOU'VE NOTICED YOU'RE CHANGING"

16mm, colour.

Duration: 20 minutes

Production: Johnson and Johnson/Ogilvy and Mather, 1983.

Available through Johnson and Johnson in your state, as is the accompanying booklet.

Synopsis: This film is a recent Australian production. It discusses the changes of puberty for both sexes, with clear language and some good animation. Menstruation is described, and emphasis is given to the wide variation in normal cycles. Menstrual protection, menstrual cramps and some menstrual myths are covered. The film includes Sydney high school children talking among themselves about menarche, menstruation etc in a relaxed way. Overall the tone and images are positive and non-sexist.

## WHY MENSTRUATE?



R. V. SHORT

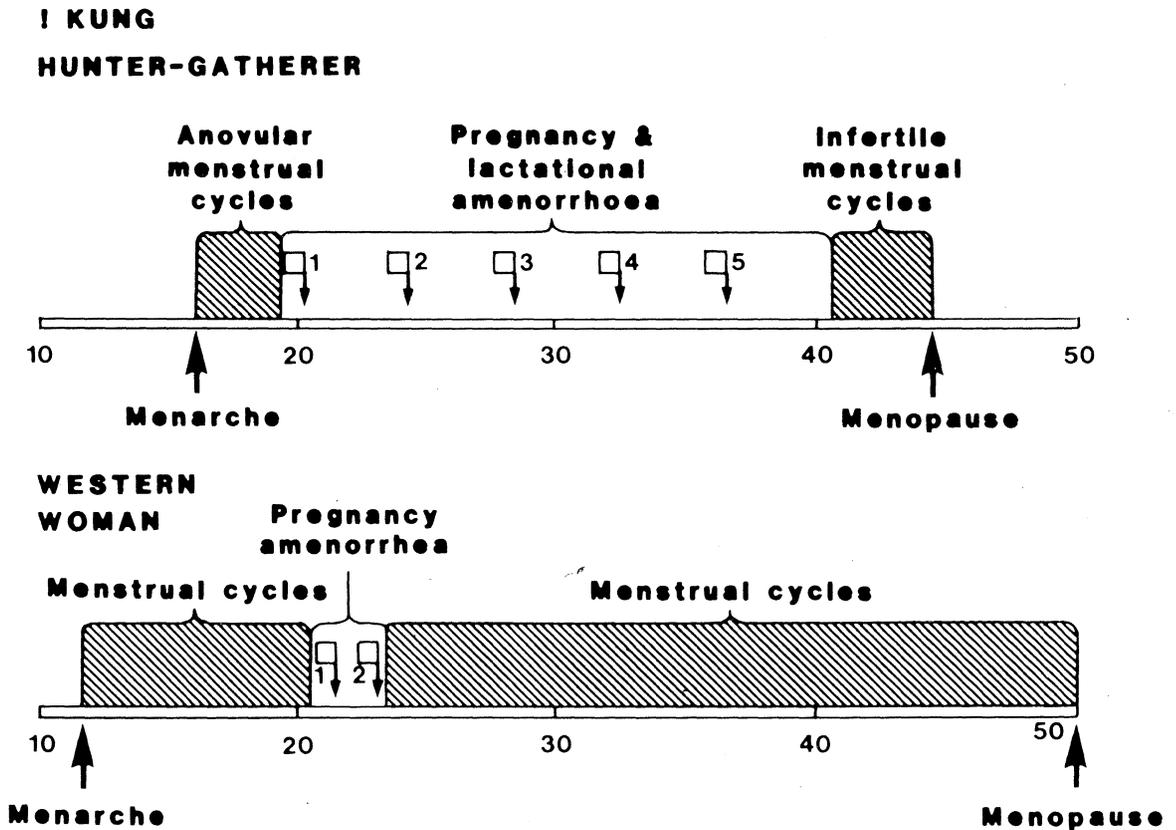
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I was staying with Dr Gregory Pincus a few months before he died, and I remember asking him why he had only used “The Pill” to produce a 28-day menstrual cycle, when it could just as easily be used to produce longer cycles, with a resultant decrease in the frequency of menstruation. He replied that the whole concept of oral contraception was at that time so novel that it seemed better in the first instance to use “The Pill” to reproduce a pattern of menstrual bleeding to which women were already accustomed — suggesting that once this was accepted, the next stage would be to experiment with longer periods of amenorrhoea. That time has now arrived.

Ten years ago, I first began to think about human reproduction in an evolutionary context,<sup>(1)</sup> and it did not require much insight to realise that the pattern of reproductive activity displayed by our early hunter-gatherer ancestors, before the dawn of civilisation, must have been vastly different from what we see today. In the absence of contraception such women would have spent the greater part of their reproductive lives either pregnant, or in lactational amenorrhoea. In developing these ideas further,<sup>(2)</sup> I was able to estimate that a hunter-gatherer woman would have spent about 15 years in lactational amenorrhoea, whereas just under 4 years would have been occupied by her 5 pregnancies, and she would only have had about 4 years of menstrual cycles. These would have occurred mainly during the period of anovulatory adolescent sterility, between menarche and the first conception, and towards the end of her reproductive life, when fertility declines prior to the onset of the menopause. The total number of menstrual cycles she would experience in her entire life would be no more than about 50. This is in marked contrast to the situation today in a typical Western woman using contraceptives and experiencing menarche at 13 and the menopause at 50. Allowing

her two years respite from cycles during her two pregnancies, each followed by only a token period of breastfeeding, this leaves 35 years during which she would experience about 420 menstrual cycles (see Fig. 1). The conclusion is obvious; an excessive number of menstrual cycles is an iatrogenic disorder of communities practising any form of contraception. It is important to note that even the condom or vasectomy therefore have important repercussions on the female's reproductive cycle.

Figure 1



Diagrammatic representation of the incidence of menstrual cycles during the reproductive life of a typical hunter-gatherer woman from the Kalahari Desert in Southern Africa, who begins intercourse at puberty and has long periods of lactational amenorrhoea which keep the births spaced about 4 years apart, compared to a Western woman who has virtually abandoned breastfeeding, and uses modern contraceptives to plan her two pregnancies. The earlier age of menarche in Western women is probably due to improved nutrition in infancy and childhood. From Short.<sup>(1)</sup>

Since we have spent almost 99.9 per cent of our existence as a species living a nomadic hunter-gatherer life, this high frequency of menstrual cycles must be a very new experience for us, and we may be genetically ill-adapted to cope with it. Indeed, we can list a number of "diseases of nulliparity" whose incidence is markedly increased in women with few or no children who are therefore experiencing an increased number of menstrual cycles. These diseases include carcinoma of the breast, endometrium, and ovaries, and endometriosis. The high incidence of hysterectomy in women from Europe, North America and Australia, which may approach 50 per cent,<sup>(3)</sup> could also be in part a reflection of the increased incidence

of menstrual disorders consequent upon our new reproductive lifestyles. To this must be added the symptomatology of menstruation itself. Since 6 per cent of women may lose more than 100 ml of blood at menstruation,<sup>(4)</sup> repeated menstrual cycles could result in the development of anaemia in women in developing countries who may be on a marginal protein and iron intake and having to cope with the additional blood loss from malaria and hookworm infestation. And although it is often said that women welcome menstruation as a sign that they are potentially fertile and an assurance that they are not pregnant, few women regard it as a pleasant, symptomless and trouble-free experience that does not inconvenience them in any way. Finally, we should consider the cost for a Western woman of purchasing a regular supply of sanitary towels and tampons.

Since our first concern must be to develop contraceptives that promote a healthy state of infertility,<sup>(5)</sup> surely we should be asking the question "Is a period **really** necessary?"

In order to see if women would accept a form of contraception that reduced the frequency of menstruation, we carried out a clinical trial of an oral contraceptive (Minilyn, Organon; ethinylloestradiol 50 $\mu$ g + lynoestrenol 2.5 mg) administered in such a way as to produce a withdrawal bleed only once every three months; we called this the Tricycle Pill regimen.<sup>(6)</sup> One hundred and ninety-six women attending a Family Planning Clinic in Edinburgh, Scotland, volunteered to take part in the study, although 89 of them subsequently withdrew from the trial for a variety of reasons before it was completed at the end of a year. On withdrawal from or completion of the trial, every woman was invited to comment about the Tricycle regimen. Overall, 82 per cent of women positively welcomed the reduction in the number of periods; 91 per cent of the women who completed the trial even refused to revert to a standard monthly oral contraceptive regimen thereafter. It was particularly interesting to note that the doctors and nurses in the Family Planning Clinic who took part in running the trial were far less enthusiastic about reducing the frequency of menstruation than were the subjects themselves. Whilst this trial could not be regarded as representative of the Scottish population as a whole, since most of the volunteers came from social classes I, II and III, it does emphasize the fact that many educated women would welcome a reduced menstrual frequency as an adjunct to contraception. This is borne out by a survey of 88 unmarried, white, 18-23 year-old Californian girls, 80 per cent of whom favoured the concept of eliminating menstruation;<sup>(7)</sup> a recent survey of 614 English women ranging in age from 15 to 54 showed that 52.9 per cent would accept amenorrhoea, many of them preferring to opt for total amenorrhoea.<sup>(8)</sup>

These findings are apparently in complete contrast to the results of a World Health Organisation survey of patterns and perceptions of menstruation, which has just been published.<sup>(9)</sup> This represents by far the largest international cross-cultural survey of menstruation ever undertaken. Information was obtained from 5,322 women in 14 different socio-cultural groups in ten countries, and amongst other things the women were asked whether or not they would accept a safe method of contraception which would result in cessation of their menstrual periods; for how long and under what conditions they would use it; and where relevant to explain why induced amenorrhoea was unacceptable to them. The results are summarised in Table 1. The general conclusion was that the majority of women in all cultures investigated were not prepared to accept induced amenorrhoea, one of the main

reasons being a fear that their general health might be impaired. Menstruation was generally regarded as indicative of femininity, fertility and continuing youth; in some Moslem cultures, youth and fertility are thought by women to be necessary to ensure the continued devotion of the husband. Since the menopause was generally feared, induced amenorrhoea was likened to it, and regarded as likely to result in infertility and a premature onset of old age. Those who were prepared to accept amenorrhoea tended to be the younger, better educated urban women in the community.

TABLE 1

	Egypt	India: High Caste Hindu	India: Low Caste Hindu	Indonesia: Javanese	Indonesia: Sundanese	Jamaica	Republic of Korea	Mexico	Pakistan: Sind	Pakistan: Punjab	Philippines	England	Yugoslavia: Non Moslem	Yugoslavia: Moslem
Number in study	500	266	280	199	200	574	499	501	351	349	522	550	335	166
Percentage Rejecting Amenorrhoea	60	81	85	61	65	69	50	74	81	91	72	53	57	67
Percentage Accepting Amenorrhoea	40	18	14	15	32	28	43	24	16	9	26	43	36	19

Do these W.H.O. findings mean that it would be premature to embark on the development of contraceptives that produced a long-lasting, although reversible, state of amenorrhoea? Before dismissing this approach, we need to look more closely at the way in which the W.H.O. survey was conducted. In order to be included, a woman had to be parous, non-pregnant, non-menopausal and non-lactating at the time of the interview. In other words, she would almost certainly be having a succession of menstrual cycles, presumably because she or her partner was using some form of contraception. In developing countries, where on average only 17 per cent of married couples use any form of contraception, women having a succession of menstrual cycles are understandably hard to find. Indeed the investigators stated that "One difficulty in Mexico was that most women resident in the rural areas selected tended to breastfeed for very long periods after a birth. This made a large proportion of them ineligible" . . . "A further difficulty was that in some of the rural areas over half of the women initially approached were either pregnant or lactating at the time of the survey. In India this figure was as high as 65 per cent of the women approached". From this we can conclude that the W.H.O. sample was highly biased in favour of women having regular menstrual cycles, and hence quite unrepresentative of the population as a whole. Most women in developing countries breastfeed their babies, at least for a time, and hence are used to extended periods of lactational amenorrhoea. Presumably they do not regard

this as a threat to their femininity, future fertility, or continuing youth. How much more informative the survey would have been if they had questioned some women in lactational amenorrhoea, and asked them if they would welcome the use of a contraceptive that did not adversely affect milk yield or the health of the baby, but which prolonged the duration of lactational amenorrhoea. It seems highly probable that such a question would have received a much more favourable response.

And we do have just such a contraceptive: Depo Provera. W.H.O. studies have shown that it has no obvious deleterious effects on milk yield or composition, or on infant or maternal health. If administered towards the end of the period of lactational amenorrhoea, it will postpone the resumption of post-partum menstruation until the 3-monthly injections are stopped. Unfortunately, the drug regulatory agencies in U.S.A., U.K. and Australia have refused to licence Depo Provera for contraceptive use thereby making the drug unavailable in many developing countries. But if we are to promote prolonged breastfeeding and an increased interbirth interval in the health interests of the mother and child, gestagen-only contraception has an important role to play, particularly in developing countries. Steroidal contraceptives containing oestrogen should not be used in breastfeeding women because of their significant depressive effect on milk yield.

There are a number of other gestagen-only contraceptives under development that also produce amenorrhoea, and which might be well suited to the needs of the breastfeeding mother. These include two types of subdermal implant of levonorgestrel, Norplant 1 and Norplant 2, developed by the Population Council, and capable of producing amenorrhoea for up to 5 years, and a vaginal ring impregnated with levonorgestrel, developed by the World Health Organisation, and capable of suppressing menstruation for as long as it is worn. The daily intranasal administration of gonadotrophin releasing hormone (GnRH) or its synthetic analogues can also suppress ovulation and menstruation during treatment, although breakthrough bleeding frequently occurs.

In conclusion, even the most pessimistic estimate of the World Health Organisation's menstruation survey shows that a proportion of women in every country investigated were prepared to accept amenorrhoea as a by-product of contraception (see Table 1). We already have a variety of contraceptives that can produce amenorrhoea, and also support prolonged lactation. If the drug regulatory agencies would concentrate on the proven advantages and cease to dwell so much on the hypothetical drawbacks of the long-acting gestagens, it is possible that reversible amenorrhoea might become an increasingly popular form of contraception in the years to come. There is also every reason to believe that it might confer significant health benefits, by reducing the incidence of those man-made diseases of nulliparity, breast cancer, endometrial cancer, ovarian cancer, and endometriosis. Why menstruate indeed!

#### REFERENCES

1. Short, R. V. (1974). Man, the changing animal. In *Physiology and Genetics of Reproduction, Part A*, Ed. E. M. Coutinho & F. Fuchs, Plenum Publishing Corp., New York, 3-15.
2. Short, R. V. (1976). The evolution of human reproduction. *Proc.R.Soc.Lond. B.* 195, 3-24.
3. Ryan, M. M., Dennerstein, L. and Pepperell, R. J. (1983). Preoperative, psychological and sexual adjustment in hysterectomy patients. In *Proceedings of the 10th Annual*

- Congress of the Australian Society for Psychosomatic Obstetrics and Gynaecology, Ed. G. D. Burrows, L. Dennerstein and I. S. Fraser, 65-74.
4. Hallberg, L., Hogdahl, A. M., Nilsson, L. and Rybo, G. (1966). Menstrual blood loss — a population study. *Acta Obstet. Gynec.Scand.* 45, 320-351.
  5. Short, R. V. (1978). Healthy infertility. *Uppsala J.Med.Sci.Suppl.* 22, 23-26.
  6. Loudon, N. B., Foxwell, M., Potts, D. M., Guild, A. L. and Short, R. V. (1977). Acceptability of an oral contraceptive that reduces the frequency of menstruation: the tri-cycle pill regimen. *Brit.Med.J.* 2, 487-490.
  7. Miller, W. B. and Smith, P. J. (1975). Elimination of the menses: psychosocial aspects. *J.Psychiat.Res.* 12, 153-166.
  8. Kennedy, C. and Fotherby, K. (1983). Menstrual cycle attitudes and expectations — a preliminary study. *Eugenics Soc.Bull.* 15, 91-98.
  9. Snowden, R. and Christian, B., Eds. (1983). Patterns and perceptions of menstruation. Croom Helm, London, pp.339.
  10. Short, R. V. (1984). Breastfeeding, *Scientific American*, in press.
  11. Short, R. V. (1984). Oestrous and menstrual cycles. In *Reproduction in Mammals, Book 3, Hormonal Control of Reproduction*, Ed. C. R. Austin and R. V. Short, Cambridge University Press, Fig. 6.7, p.123.