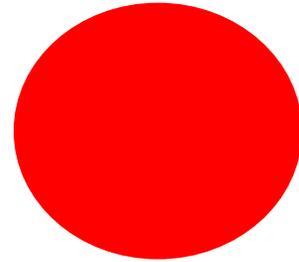


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MAY 1961



How Safe Is The Pill ?

The introduction of steroidal oral contraceptive in 1960's for family planning has marked 'the beginning of one of the biggest experiments in human history where the experimental target is the woman rather than a laboratory animal. Today more than 20 million women all over the world, use the oral pill. It is often said that the risk of smoking is greater than that of using the oral contraceptives (OC). While a lot of scare generated by professional and lay press may be unnecessary, such complaisance is also not justified. A person who smokes does so out of choice for physical pleasure, whereas unsuspecting women having confidence in the judgement of the medical profession use OC.

Combination versus "Progestogens only" pill.

Hormonal contraceptives currently being used are of three types. A) The combination type oral pills which contain combinations of synthetic oestrogens and Progestogens. B) The low dose progestogens pills (mini pills) and C) the injectable long-acting progestogens. The combination pill was the earliest to be introduced and continues to be the most popular method in the developed countries and in China. In developing countries like India, daily pill taking may be problematic and hence many physicians prefer long-lasting injectables, which can be administered once a month or once in three months. The advantages of the oral pills are, they can be dispensed by paramedical workers and if found to be unsuitable can be immediately discontinued. The paper pill developed in China, is an interesting technological innovation aimed at improving the ease of packing and reducing the cost.

The association of some of the issue effects of the pill with oestrogen has prompted a search for "progestogens only" formulations.

The major problem with these is the irregular menstrual cycles. The progestogens—only formulations have not been studied as extensively as the oral combination pills, but they do appear to be free of some of the metabolic and clinical side effects of combined pills. Thus the alterations in metabolism of carbohydrate, protein, lipid, minerals and vitamins often seen in women using OC are not observed in those using the mini pills or the injectables—Depo Provera however has been banned in many countries because of its tumorigenic effects, found in dogs. According to a recent evaluation by WHO such a ban may be of its unjustified since only very high doses of hormones which are never used for contraception lead to the development of such tumour. Besides, the Beagle dog is highly prone to develop tumours and hence is not a good animal model.

In the combination pills the oestrogen-Progestogen combinations are given for 21 days the cycle with a gap of 7 days. The sequential pills in which the estrogens were given for 15 days followed by the combination of oestrogens and progestogens for 7 days have been withdrawn due to a suspicion of endometrial hyperplasia. (A suspicion of change). The earliest OC contained 100 ug or more of synthetic has since been reduced without sacrificing the contraceptive efficacy. Now, most formulations contain 50 ug or less of these oestrogens. Numerous synthetic progestogens are used in OC. The nature and the severity of side-effects due to the oestrogen are believed to be modified by the type and the dose of progestogens in the pill.

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The hazards – what are the facts?

The alleged clinical side effects of OC that have provoked maximum reaction in medical and lay press are: a) changes in glucose tolerance (so called diabetogenic effect – a misnomer), b) cardiovascular effects (hypertension, thromboembolism, myocardial infarction) c) teratogen ESIs (chromosomal abnormalities and congenital malformations), d) neoplasias particularly liver tumours), e) impaired liver function, f) hypovitaminosis. A dispassionate examination of the literature shows that, except for the cardiovascular changes and perhaps benign liver tumours (hepatomas), the risk associated with the others is negligible.

Diabetic- There is only a mild deterioration in the glucose tolerance of some women; which at the most -May be undesirable in diabetics or potential diabetics. Many experts are of the view that OC can be used even by diabetics provided their blood sugar can be controlled by giving insulin or other drugs. However, at present, use of OC can by diabetics is contraindicated, unless there is close medical supervision.

Teratogen ESIs: In 1961, Carr observed chromosomal abnormalities in six of the eight abortuses collected from women who became pregnant after taking OC and in 1974, Janerich and Piper reported a slightly raised incidence of congenital defects in infants born to OC users who had conceived soon after discontinuation of OC or who continued to use OC for some time during pregnancy. Though there are reports to the contrary too" more studies may be desirable particularly in India, where pregnancies in irregular pill users can be expected to be common occurrence.

Cardiovascular diseases 'Estimates of women who develop hypertension while using OC have ranged from 0-25 %. The condition' is reversible on discontinuation of OC. Though only, some women may develop frank hypertension, many 'more may show a slight increase in blood pressure. There is an increased risk of thromboembolism and myocardial infarction which is particularly marked in women who smoke and in elderly women, in India, the incidence of smoking among women is negligible. Also the incidence of cardiovascular diseases among young women is lower in Asia.

If care is taken not to prescribe OC for elderly women, the cardiovascular diseases risk factor can be avoided to a large extent: The increase in serum lipids often observed in Western women using OC is not seen in malnourished Indian women, particularly with low dose oestrogen formulations. Recent studies in U.K. and Sweden suggest that the incidence of venous thromboembolism and heart disease has been reduced significantly after the introduction of low dose oestrogen OC.

Liver function: Though obstructive jaundice was reported earlier, subsequent studies have failed to find impairment in liver function.

Liver tumour: A cause and effect type of relationship between long term OC use and hepatocellular adenoma has been observed. The risk increases with age, duration of use (more than 2 years), potency, family history, and in women who may have been operated for liver/tumours earlier. For the developing countries it is essential to find out if malnutrition and infections increase the risk.

As of today there is no evidence to suggest an association between combination type oral contraceptives and malignancy of any form.

Interaction with malnutrition, drugs and disease:

The question of interaction of OC with malnutrition, infections and drugs used in the treatment of infections and diseases peculiar to developing countries is currently being studied. Two types of effects can be expected. a) Hormones may aggravate the existing state of deficiencies and diseases, and modify the drug effect, b) diseases and drug use may diminish the effectiveness of OC.

Use of OC raises the requirement for several vitamins such as B-complex vitamins, vitamin C and perhaps even vitamin A. However, recent studies show that where dietary deficiencies are marked, OC does not worsen the situation. Even if it does, administration of vitamins either daily, or for the non-hormone days in the cycle can prevent the deterioration and help to improve the existing nutrition status. Considering the cost of OC the additional cost for vitamins may not be very much. The only vitamin which has to be supplemented in unusually high amounts, 5-10 times the recommended allowance, is vitamin B6. Malnourished women' excrete the steroid hormones faster than well-nourished women; whether this is one of the reasons for the higher incidence of method failure in India needs to be investigated.

That the use of OC does have a small element of additional health risk has to be accepted. But is this risk greater than the risk of repeated pregnancies? All the side effects of OC are also seen in pregnancy. Among the methods of contraception currently available, use of OC does seem to be the most effective (if properly used), easily reversible and easily dispensable method. It can be the method of choice for spacing pregnancies, but not a permanent method for contraception over long' periods of time. A large segment of the population can benefit from this method of contraception.

Future research should be aimed at developing formulations with lesser side effects, and at reducing the cost. The low dose formulations have achieved this goal to a considerable extent. In India more educational inputs to improve the acceptability of OC will also pay good dividends. The present emphasis on permanent methods such as tubectomy and vasectomy should continue for couples having more than 2-3 children.

REDIRECTING CONTRACEPTIVE RESEARCH

By Judy Norsigian

Research Priorities

First, as you may know, contraceptive research at present focuses heavily on hormones, drugs and invasive devices, such as hormone-releasing IUDs, prostaglandins, injectable progestogens, silastic hormonal skin implants and anti-pregnancy vaccines. At the same time, there is relatively little research on safer and cheaper mechanical and barrier methods, on contraceptives which act locally rather than systemically, or on methods which require no mechanical intervention whatsoever. Examples of such safer methods include the cervical cap, diaphragm, contraceptive sponge, ovulation method and thermal sperm control.

The safer contraceptive-methods also tend not to require physician's intervention, thus providing low cost; easily accessible birth control for more people; Particularly good examples are the contraceptive sponge,

FROM THE Editors DESK —

There is no question that world population is growing at a rate not commensurate with availability of material resources. The population growth rate, in developing countries is generally higher than in the developed world. There is therefore a need to evolve methods to control this growth. The policies for and the methods of population control, however, need to be critically and continuously evaluated. In two of the early issues of the bulletin (Nos. 9 and 10) the population control policy vis a vis the socio-economic conditions were discussed.

In this issue, we present more technical aspect, namely, contraceptive research and the hazards of the "pill" Mahtab Bamji, in her article, discusses the associated risks of steroidal contraceptives and concludes that the benefits outweigh the risks. The other viewpoint is from the Boston women's Group. Much contraceptive research is directed towards women. The woman ultimately has to bear the burden of either pregnancy or contraception. The Group feels that since all contraceptive-research is dominated by men, the drug companies are controlled by men and the policy makers are men, there is no proper understanding of women's problems. MFC is not directly involved with feminist movements. The question which I, however, wish to raise is—when scientific research is also dominated by men, to what extent are women scientists and doctors influenced and perhaps "brain-washed" by male thinking?

Kamala Jayarao

which requires no fitting and the ovulation method, which requires no mechanical intervention?

Those of us active in the women's health movement are concerned that present funding is too heavily weighted, toward drug and device research. Too often such research has exposed human subjects, mostly women, to serious adverse consequences. In cases where insufficient research has resulted in premature approval of contraceptive methods much larger female populations have been exposed unnecessarily to dangers. The sequential Pill and Dalkon Shield are two well published examples of this, although all Pills and IUDs might well be classified as unjustifiably hazardous in light of the extensive and increasing documentation of Pill and IUD risks. In addition, adverse consequences of contraceptive drugs and devices account for a surprisingly large number of hospital admissions, which are both expensive and traumatic for the women expensive and traumatic for the women involved.

It is alarming to note that in 1976 out of \$70 million spent world wide on contraceptive research outside of the drug industry only 50,000 dollars was spent, on barrier method research. Safe birth control methods do not receive priority by those who control these search dollars, while potentially dangerous methods do attract the majority of funds. We urge a major reordering of priorities, so that research on the safer-birth control methods mentioned above receives the greatest emphasis. New priorities would also include research on better ways. New priorities would also include research on, better ways to communicate information about birth control methods.

Male Researchers and policy makers:

It is interesting to note that most contraceptive investigators are male and hence have little direct understanding of the practical impact of their research on women. According to the inventory of population research projects in the U. S. over 80% of federally funded investigators in the areas of contraceptive development and contraceptive evaluation during 1976 were males. It is of no small significance that these male investigators will never have to use the methods that they develop. Moreover, we believe that their focus on the biological model and their fascination and involvement in the research process sometimes overshadows their concern for the well-being of research subjects.

In our opinion; there needs to be more research conducted by Community based women's health centers which have worked directly with those who are intended to benefit from this research. Furthermore, subjects should play a major role in designing and/or approving the research design. We believe that such an approach would result in stricter adherence to research protocol.

Our third area of concern is policy-making: Private organizations like the Population Council, Ford Foundation, the Rockefeller Foundation Planned Parenthood, and drug companies, as well as the federal government, sponsor practically all current contraceptive research, setting priorities for this research as well. Policy-makers for these organizations are also primarily males, who make decisions with little or no input by the many users of contraceptives, who supposedly benefit from the research.

An example of policy recommendations that almost totally ignore the areas of safer research we are advocating may be found on page 40 of the *Inventory and Analysis of Federal Population Research*.

1. Development of male contraceptive methods and techniques, including studies of combinations of known drugs and new delivery systems
2. Synthesis of new chemical agents for the regulation of female and male fertility.
3. Expanded screening capabilities as well as accelerated assessment of new and old Chemical entities.
4. Critical biological assessment of biodegradable drug delivery systems.
5. Investigation of new methods for reversible and permanent sterilization, of both males and females,
6. Development of a long acting female contraceptive method.
9. Increased research on intrauterine devices.
10. Support of clinical studies required by FDA to expedite the availability of new methods.
- 9., Assessment of the mode of action of postovulatory, contraceptives.
10. Development of technology for the detection of ovulation and utilization of such technology for family planning purposes.

These recommendations were submitted by the ICPR Committee., composed of 17 men and one woman. We doubt if a committee composed primarily of women -consumers as well as researchers and government administrators-would have presented a similar list of recommendations.

It is our position that women should be creating policy on behalf of women, at the very least, and that all users of contraceptives should have a significant voice in determining what kind of research is funded. To the extent that birth control is still primarily the responsibility of women, and that women are the ones who bear the major consequences of childbirth, as well as, the risks and serious complications of birth control, women should have a major voice in determining which contraceptive research priorities will best meet their needs.

Currently, the National Women's Health Network (NWHN) is conducting a nation-wide survey of over 100 women's health centers and women's health education groups to establish what women's health organizations see as their contraceptive research priorities. When complete, this study will be a first-of-its-kind, revealing what kind-of research women want and expect the government to fund.

The Network is particularly concerned that the whole issue of contraceptive research be viewed in the context of the rising incidence of sterilization abuse. The widespread absence of safe and effective birth-control methods and the promotion of newer, more hazardous contraceptives, coupled with the withdrawal of abortion services, especially for poorer women, has forced more and more people, both men and women, to submit to sterilization as the solution to fertility control. At this time, we urge a moratorium on all funding for new experiments with new sterilization methods and recommend further investigation into the consequences of current methods of sterilization.

The medical establishment, including government and private organizations, universities, and industrial supply corporations, presently promote research which emphasizes patents, profits and the development of new technologies. The NWHN recommends a shifting of priorities so that safer contraceptives, for both men and women, can be developed and marketed in a timely manner.

Extracted from Science FOT The People. •

TOWARDS- A NEW IMMUNIZATION STRATEGY

[In the seventh Annual Meet of the MFC at RUHSA, we spent 11 days in discussing critical issues in the care of under-fives- nutrition, immunization, diarrhea - as faced at the level of community work. We had planned to publish the proceedings of this discussion on all these three topics in the Bulletin. But we have now decided to publish only the report on immunization strategy - a discussion in which Dr. Jacob John of the Christian Medical College, Vellore, presented his path-breaking idea of a really scientific strategy for mass-immunization of the underfive Editor.]

THE PROBLEM

Should immunization be performed on a mass scale at a community level? What strategy should be adopted to get 100 % coverage? What vaccines should be used? How to improve compliance of people with an immunisation programme? How to simplify the procedure? Should immunisation be voluntary or compulsory? These questions were raised in the minds of many.

To immunize or not to immunize on a mass scale was the basic question. Various views were expressed. The extremists on one side adopted a nihilistic view: the-entire immunisation programme is futile. Their reasons:

1. Within the present social structure and with the available Government health structure, no significant immunisation coverage is possible. Immunisation is therefore no longer an epidemiological tool to reduce disease, but a means of personal prophylaxis for those with access to the health system.
2. The necessity for and efficacy under field conditions of available vaccines, have never been tested on the basis of hard epidemiological data in India.
3. Especially with vaccines which cause some reaction e. g. OPT-people's compliance in completing the course of vaccination is poor.
4. Lack of a proper " cold chain" i. e. a system to keep vaccines which are sensitive to heat in a cold environment from the point of production to the point of delivery.

The result is that existing immunisation programmes have little impact on the morbidity and mortality rate in a community. They are a colossal waste of human and material resources which can be diverted to basic purposes.

The moderates wanted to stick to the present strategy but improve coverage through a massive health education programme and motivation of the people for immunisation - a typical moderate remedy for all ills relating to the social, political or health care systems.

DECIDING PRIORITIES SCIENTIFICALLY

Dr. Jacob John, a virologist at the Christian Medical College, Vellore, provided what was perhaps - a happy mean, according to him, one of the main problems with the present Immunisation schedule and system was that it was, unscientific. Western schedules had been taken over and tacked on to the Indian health care delivery system. If properly followed according to the present schedule, an Indian child by the age of five years was expected to have 28 'separate injections all to be provided by the ANM at the doorstep.

According to Dr. John, in order to overcome these difficulties, it is necessary to -

1. Select vaccines according to need, efficacy and safety.
2. Simplify immunisation schedules.
3. Concentrate on mothers for improving compliance.

A vaccine can be assigned approximate "notional" scores according to its need, efficacy and safety. Need is determined by the prevalence of the disease; morbidity and mortality due to that disease in the community. Efficacy is decided by the degree of protection obtained- after immunisation. Safety depends on the incidence and severity of adverse reactions due to the vaccines.

Even though accurate, data regarding prevalence, morbidity etc, are unavailable, rough scores can be assigned on the basis of available data and common experience. We went through this exercise at our session. The scores assigned, through consensus, were as follows, (The scores were assigned on a scale of 0-4)

Vaccine Against	Need	Efficacy	Safety	Product of the 3
Diphtheria	1	4	4	16
Whooping cough	3	2	2	12
Tetanus	3	4	4	48
Polio	4	2 or 4	4	64 or 32
	(depending on 'cold chain')			
T.B.	4	1 or 2	3	24 or 12
Small Pox	0	4	2	0
Measles	4	4	4	64
Typhoid	2	2	3	12
Cholera	1	1	3	3

Dr. John's experience was that the ranking of the vaccines, on the basis of the product scores, tended to agree, no matter who went through the scoring exercise. According to this ranking system, the priority 'vaccines were against –

- 1) Measles, 2) Polio; 3) Tetanus, 4) TB 5) Diphtheria, 6) Whooping Cough.

THE “CLUSTER – APPROACH”

The most important innovation described by Dr. Jacob John was his concept of “cluster” immunisation. We hope soon to carry an article by Dr. John describing the epidemiological basis and practical details. So this is only a short account.

The idea is to reorder the immunisation schedule and programme completely instead of ANMs immunising individual children in their homes right through the year, health teams immunize all the children in a community together, according to a simplified schedule based on the ranked priorities at a time and place fixed beforehand. The visit of the health team is preceded by one week “propaganda blitz” Which aims at providing information about immunization, as well as, about the specific time and place as planned. The propaganda, is directed mainly at the mothers, of the target children.

The epidemiology basis of the "cluster" schedule is that if a large proportion of the vulnerable population (children under five) are protected together, the **transmission** of infection becomes much more difficult so that even **unprotected** children have less chance of getting the disease. (Similar strategy was used to eradicate small-pox).

The programmatic basis is that the Cluster schedule uses available manpower efficiently, in order to achieve wider coverage as well as greater epidemiological impact. By this means logistic problems (e.g. “cold-chain” for oral polio vaccine) are also minimised.

Dr. Jacob John and his colleagues have tried this new strategy in a village near Vellore.

To avoid adverse reaction of the vaccines and high dropout rate at present, the strategy was modified to give two safe vaccines like measles and polio. Following rules were followed to achieve 100 % coverage:

1. Keep immunisation centre separate from primary health centre because sick children are brought to primary health centre and their mothers equate coming to P.H.C. to sickness.
2. 3-4 days before the immunisation day, ANM should go from house to house distributing immunisation cards and hand bills giving information about disease and benefit of its prevention by immunisation. Idea being, though mothers may not be able to read the information it can be transmitted to them by some literate person in the surroundings, ANM should talk to mother and motivate her, for immunisation. In this strategy ANM has to go from house to house only once.
3. Give exact time at which mother, should bring her child to the immunisation centre.
4. Give all children below-one year three doses of oral polio vaccine at an interval of 4 weeks and give single dose of measles vaccine to the children above one year.
5. Collect immunisation cards that were given to the mothers by ANM so that it becomes easier to keep a record of the number of people who attended the centre.

Advantages of this strategy are:

1. Schedule is simpler
2. It is necessary to go to particular village on three days at an interval of one month in a year. Because of this storage and transport problems are minimised. Vaccine can be stored at district place throughout the year and be brought to the village only thrice.

3. Since the mother is told in advance the exact time and place at-which the -, immunisation will take place. She knows: exactly what she is expected to do.
4. Number of children immunised is counted from the numbering of immunisation .cards that are collected after immunisation.
5. Since D. P. T. is not added in the system adverse reactions are minimal and compliance is better.

Once community is immunised for polio and measles people will realise the benefits of immunisation and slowly D.P.T. can be added to this strategy.

The following are other important deviations from conventional thinking, embodied in Dr. John's recommendations:

1. Mild viral infection or diarrhoea should not be a contraindication to oral polio vaccine at a community level. Sero conversion is. still possible even in the presence of minor alignment,
2. Breast feeding can be allowed to follow OPV after one hour.
3. All three doses of DPT should be given. One do se does not give any immunity. Two doses give 30% immunity in India as against 60 %in the West.
4. Measles vaccine should be made available all over India.

Dr. Jacob John reported that the' "cluster" strategy had been used in some villages in the North Arcot District for measles vaccination yielding 100% coverage.

Many sceptic expressed doubts about Dr. John's recommendations. Some of these were-

1. Scores given to the vaccines do not take into account practicality and availability; e.g. measles vaccine is not available thought most of India. The cost of the vaccine is prohibitive.
2. Logistic problems in reaching villages at prefixed times, and" cold chain" problems, may prove to be very difficult to overcome.
3. The" cluster" approach has only worked under very special circumstances whether it would succeed elsewhere is difficult to predict.
4. The addition of D.P.T. to the immunization schedule may reduce the compliance of village communities.

Dt. Jacob John argued that the cost-of-the measles vaccine can be reduced considerably if we produce i in India.

Whatever; the doubts raised, the moral 'of the entire exercise was seen to be relevant by all-Do not stick to the immunisation strategy desisted by Westerners, try to evolve your own strategy on scientific grounds for your own area with different social and cultural background. The rules of their game are not sacred but can be broken and.mpulde4to suit our needs. This was the point Dr, John wanted to stress upon finally the question that remained unanswered was would a revolutionised immunisation strategy bring about a better health standard in the absence of social change?

[Nitin *Nadkarni*] O

UPJOHN, DEPO-PROVERA AND THE THIRD WORLD

The National Women's Health Network, representing both women health groups and individual consumers and providers from across the country, has been protesting efforts of the UP John Company to seek FDA approval of Depo-Provera as a contraceptive. Use of this injectable contraceptive, a known carcinogen associated with serious risks and harmful side effects, represents a major threat to the health and well-being of women and possibly to their offspring as well.

Many serious side effects of the drug Depo-Provera are well-known including the fact that Depo-Provera has in the past:

- 1) Been shown to cause malignant breast tumors in beagle dog studies.
- 2) Shown evidence of increasing the risk of cervical cancer in women who use it.
- 3) Been shown to increase the incidence of irregular bleeding disturbances, necessitating the administration of estrogen to control the bleeding.
- 4) Been associated with a risk of congenital malformations in humans exposed to the drug during pregnancy.
- 5) Been shown to cause long-term infertility and possible permanent sterility in many women after they have ceased taking the drug and
- 6) Been linked to numerous other undesirable effects such as weight gain, acne, hair loss severe mental depression etc. as shown in over 125 affidavits from women who have received the drug for contraception in the Los Angeles area.

To date, the long term safety of Depo-Provera has not been established, and yet, it is estimated that "3 to 5 million women presently use this drug as a contraceptive worldwide." This represents another massive experiment like those of the Pill and DES which have caused severe and unnecessary damage to thousands of women.

Furthermore, 'in some countries, lactating mothers have been urged to use Depo-Provera despite the fact that infants may suffer from the 'ingestion of Depo-Provera in breast milk. A promotion material for this drug distributed by UP John in parts of Africa is particularly' irresponsible in this respect: One brochure recently sent to the Network depicts a mother breast-feeding her child, along with the caption: "Now, when she most desires dependable contraception"

At the following remarks of the chairperson of the National Council of Women of Kenya indicate, women in Africa are concerned about the widespread and indiscriminate use of Depo-Provera:

We 'are told that few 'women in developed nations are on the injection - (Depo-Provera), yet we have evidence that this method is now being used most indiscriminately in our country. Claims of strict control by the Ministry of health appear very questionable. What control does the Ministry have over Private Doctors who advise large numbers of Women?

We need urgently and sincerely to ask ourselves whether we would jeopardise the health of our nation in our effort to control the population explosion. It is crucial that we establish our own research and even encourage direct and independent research into the whole area of Family Planning, as to long-term effects of modern Family Planning methods. We must never become the dumping ground for any half-baked methodologies and drugs which the originators (for reasons well known to themselves) are unwilling to administer to their own people.

(-Kenya Woman. V. I. No.6. 1978)

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