

the cervical mucus is maintained in its non-ovulatory, relatively impermeable state.

How effective is the pill? The medical and lay literature contains a good many quotations from different scientists to the effect that the pill never fails "if taken according to instructions." Critics of this euphoric assessment point out that failures with the pill tend to be attributed to inability to follow directions even when the women swear that they never forgot a single daily dose. The critics also emphasize that if a technique fails because of human error, it is a failure nevertheless and must be considered part of the risk. It is also disturbing that many women in studied populations drop out of the study; there is no way of evaluating the pill's performance in these possibly disenchanted women.

It is unreasonable to expect perfect performance from the pill. With all drugs, there is variability in response to a given dosage, due to vagaries of absorption, metabolism, excretion, or organ response. What works well for one patient may not work well for another, or even for the same patient at different times. One method of diminishing such variability is to give everyone a dose that is known to be an overdose for some. This is done with penicillin in the treatment of pneumococcal pneumonia. The reason for not adopting this approach routinely with all drugs is that it also generally increases the chance of producing side effects from the drug. This is not a serious problem with penicillin, but it is with oral contraceptives, and has led to a good deal of manipulation of dosage. As the dosage has been reduced, some side effects have apparently diminished—and, incidentally, the cost of this still-expensive form of birth control has been reduced. It seems predictable that some patients will get pregnant while taking the pills even if they are compulsively careful with their dosage, and this number will probably be higher as the dose per day is reduced to diminish unwanted effects. (There is at present no evidence that such pregnancies will produce a greater percentage of malformed babies than will other pregnancies.)

Nevertheless, even those who are at least enthusiastic about the pill grant its excellent performance as a birth-control technique. If the risk of pregnancy is not zero when taking daily oral contraceptives, it is very low indeed. Nor is this the only advantage. It is easy to use—just a pill a day. It does not have to be timed to intercourse. Its use does not delay, interrupt, or mechanically impede the sexual act. It is attractive to many men and women who object esthetically to condoms, diaphragms, jellies, and foams. Finally, some Roman Catholics who reject other devices against which church officials and parish priests have been less equivocal in their denunciation are willing to take the pills.

From the start it was obvious that the pill had drawbacks. Some women gain too much weight. Others develop acne, nausea, vomiting, or breast tenderness. More distressing are such things as sporadic breakthrough bleeding, depression, excruciating headache, tension, decreased libido, loss or excessive growth of body hair, skin pigmentation, and belly or pelvic pains. Some lactating mothers stop producing milk and have to resort to artificial feeding for their babies. Newer oral contraceptives have claimed a decreased incidence of these various side effects, but none of them is free of nuisance potential.

Most frightening of all, thus far, has been the occurrence of clotting within the blood vessels. In 1961, fatal pulmonary embolism occurred in two young Los Angeles women who had been on oral contraceptives. Next, women on the pill were observed to develop thrombophlebitis [blockage of blood vessels in the extremities] as well as clots that traveled to the lungs. Since then, all sorts of clotting troubles have been reported in women taking the pills. Thrombosis of the blood supply to the gut, with gangrene of the intestine, has been seen. Thrombosis of the major arteries in the arm and leg has been reported, requiring amputation. A London physician observed strokes in a twenty-three-year-old airline stewardess and a twenty-six-year-old housewife. His report prompted a Sussex physician to describe two similar cases and to state that he knew of at least three others. A Newcastle physician announced that the autopsy on one of his young women on the pill showed clots in the arteries on both sides of the brain.