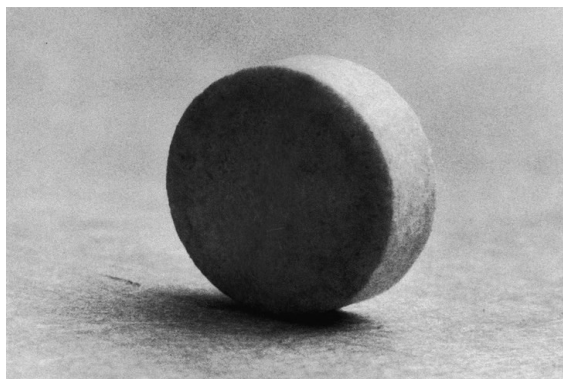


# MAGIC BULLET – THE PILL

Awais Shuja

**Abstract:** The one drug which has transformed the social and economic fabric of our society is the magic drug called THE PILL. The pill term is used for oral contraceptive drugs. Birth control has been practiced since human race started reproducing by various methods mostly based on myth, majority were barbaric and associated with many ill effects. Humans evolved to be slow breeding race. In ancient times the societies were nomadic and when societies transformed from nomadic to urban, the fertility went up and resources went scarce and work was started on measures to restraint on family size. When the pill eventually became a reality, it meant women possess control of their reproductive choices. This choice has come after years of struggle and sacrifices of Sanger and Stopes.

**Key words:** Pill, Oral Contraceptive, Birth Control.



THE FIRST PILL

The one drug which has transformed the social and economic fabric of our society

is the magic drug called THE PILL. The pill term is used for oral contraceptive drugs. Birth control has been practiced since human race started reproducing by various methods mostly based on myth, majority were barbaric and associated with many ill effects. By the turn of twentieth century the female wanted more control on their reproduction, this goal aided by development in knowledge about fertilization and female reproductive physiology led to discovery of the magic bullet – THE PILL.

Humans evolved to be slow breeding race. In ancient times the societies were nomadic and when societies transformed from nomadic to urban, the fertility went up and resources went scarce and work was started on measures to restraint on family size.

In prehistoric times the methods to control fertility were broadly classified in three forms. One that seemed reasonable in the past but now are ineffective such as wiping out vagina after intercourse

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described by the Greek writings of Soranus (Gynaecology, c 100 AD). The second type included methods which were reasonable and perhaps effective such as using honey , pepper , alum or lactic acid as pessaries and barriers as described in egyptians Ebers Papyrus (1150 BC), the latin works of Pliny the Elder (23 to 79 AD) and Dioscorides (De materia medica, c 58 to 64 AD). The third type were unreasonable , manifestly ineffective based on myths and heresy.

In older times many methods used were barbaric and cruel and led to fatal consequences in young women. Illicit and illegal measure by unqualified people and adventurers were common. Many Tales of sorrow were created by these adventurers. Victorian England was the time when industrialization led to changes of birth control from myth to reality.

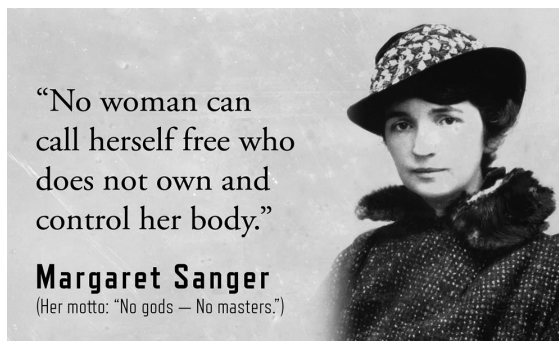
In the industrial city of Sheffield many pregnant women aborted during an outbreak of poisoning due to the use of lead pipes in the city's water supply. These findings stimulated the use of DIACHYLON , a plaster containing lead, as an abortifacient. Another drug named as BEECHAM PILLS in the Victorian united kingdom was advertised and sold.

Male and female barriers were in used during these days. Condoms were described as protection against venereal disease by Fallopius as early as 1504. On the continental Europe cervical caps were used by females. Diaphragm with

spermicidal were also in use

At the dawn of 20th century when understanding of human reproduction increased the contraception towards scientific fertility control. The extraction of ovarian hormones and steroids laid the foundation for development of pill. The idea of creating the hormonal levels of pregnancy to prevent pregnancy led to the creation of magic bullet.

By the 20th century feminism and female rights movements were emerging. Women wanted more control of their life.



### The term **BIRTH CONTROL** and first Birth control Clinic

Margaret Sanger (1879-1965) was born into a free-thinking family of Irish-Catholic stock. She was born in Corning, New York and trained as a nurse after seeing misery of young females in the process of abortions becomes an advocate of women's reproductive rights. In 1914 she used the term BIRTH CONTROL first time in history. She also started a feminist publication called Women Rebel. She promoted women's right for contraceptive devices – a radical

idea at that time. She wanted females to have control on their fertility. She had to leave United States because advocacy of birth control was illegal due to Comstock law. Sanger fled to England to avoid incarceration. After 2 years in 1916 she opened the first birth control clinic in Brooklyn New York but it was shut down and she was arrested and detained for 30 days. In 1917 Katherine Dexter McCormick the second woman ever to graduate from MIT and a rich heiress with a great fortune supporter of Sanger's views. She gave moral and financial support to Sanger's clinics which despite of legal obstacles managed to take off and work. Marie Stopes another female activist and enthusiastic advocate of self-control of reproducibility of females.



MARIE STOPES

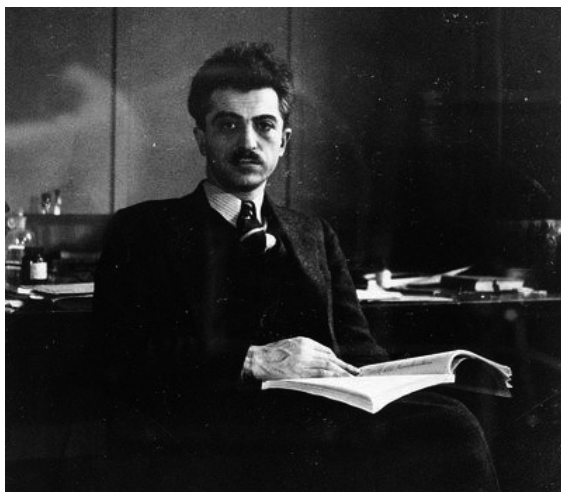
Sanger and Stopes struggled for their ideas and McCormick helped by smuggling the illegal contraceptive from Europe.

### Discovery of Pill ingredients

At the fateful dinner party Sanger met a Harvard Physiologist Gregory

Pincus whose field of interest was on reproductive science. She persuaded him to help develop a contraceptive chemical. The funding was provided by McCormick.

Around this time in Mexico City a chemist Carl Djerassi discovered progesterin from Mexican Yams. This hormone will help preventing sperm from fertilizing egg. This would become the key ingredient of the pill.



GREGORY PINCUS



JOHN ROCK

The fourth crusader is a gynecologist named John Rock, who joined Pincus to test the effects of the synthetic hormone

progesterone on women. In most ways, Rock had the easiest struggle. A silver-haired man with a formal, gallant manner (and, like Pincus, a wife that he adored), Rock was a Catholic who disagreed with the Church on a few matters: he believed, for example, that a woman's health took precedence over that of her fetus, and that abortion was acceptable when the mother's life was in peril; he thought that sex and love went together, and that good sex, free of undue anxiety about pregnancy, kept couples committed. He would recruit and work with the women the pill was tested on—including some in a Massachusetts mental asylum and some in Puerto Rico—leading studies that would certainly not pass human-subject standards today. And, with his soothing bedside manner, he became the public face of a movement to convince ordinary Catholics and the Catholic Church to embrace birth control. He—or, rather, life—convinced most ordinary Catholics. Today, ninety-eight per cent of sexually active Catholic women say that they've used contraception, just a shade below non-Catholics.



In 1953 after developing the magic tablet Pincus and his friend, gynecologist Dr.

John Rock tests the pill on 50 women in Massachusetts while larger scale clinical trials are done in Puerto Rico. Both trials were a success and created a storm.

### Approval of THE PILL

This drug was approved by Food and Drug Administration on May 9, 1960 as the first oral contraceptive. By this the women now had the ability to influence their own reproductive choices. The Searle company marketed the first contraceptive pill. The pill was not only a biologic triumph, but it was a manufacturing miracle. Oral contraceptives became a possibility only because ovarian hormones became cheap and chemical modification were made to render them active when taken by mouth.

Despite of the side effects of the pill it became an instant success and was adopted widely as it is known that every four out of five women use a pill at some point in their life. The Pill has changed in its chemistry and become more safe over years.

The first marketed pill, Enovid 10, contained 9.85 mg of the progestin norethynodrel and 150  $\mu$ g of the estrogen mestranol.<sup>7</sup> Today's pills contain dramatically lower hormone doses—0.1 to 3.0 mg of modern progestins and 20 to 50  $\mu$ g of estrogens. The progestins used today are much more pharmacologically specific and more focused in their drug effect. While current progestin doses are not directly comparable, the doses

for both the original pill ingredients have fallen many-fold from those of the original recipe.

It started with wishful thinking that females may be able to control their reproduction. This concept which we mostly take for granted today, was a radical notion for women at the dawn of twentieth century. But like most people who end up changing the course of history, the team of advocates and scientists who dreamed up, funded and developed birth control pills possessed grit and resilience in face of adversity.

When the pill eventually became a reality, it meant women possess control of their reproductive choices. This choice has come after years of struggle and sacrifices of Sanger and Stopes.

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