

WOMEN'S REPRODUCTIVE MEDICINES IN CLASSICAL ANTIQUITY

AS DEFINED BY THE HIPPOCRATIC CORPUS AND RELATED DOCUMENTS

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Women in classical antiquity employed a number of reproductive medicines, particularly for antifertility purposes. Ancient use of medicines helps to inform contemporary practice and provides a source of information for potential drug development. Details regarding use of women's medicines in antiquity can be derived from texts of the classical era, including the *Hippocratic Corpus*, Soranus' *Gynecology*, the *Galenic Corpus* and Dioscorides' *De Materia Medica*. These texts were examined to clarify the reproductive medicines employed by women in Ancient Greece and to compare formulations utilised by ancient versus modern people. The four documents were compiled by eminent Greek physicians of antiquity and the work of these prominent scholars progressed to influence health practice in other ancient societies, including Rome and Arabia. The documentation supports the existence and use of ancient pharmaceuticals to manage reproductive health in women, with a number of agents having demonstrated efficacy as contraceptives or abortifacients. The public accessibility of such texts generates a need for determining the safety and efficacy of such ancient medicines.

DE MATERIA MEDICA

Dioscorides has been referred to as the 'father of pharmacy'. He developed the *De Materia Medica*, a five-book work dedicated to ancient medicine, consisting mostly of plants and herbs. Dioscorides developed a chapter to each plant, animal and mineral drug which included detailed drawings and medical notes. *De Materia Medica* informed medical practice for centuries. Many reproductive agents identified by Dioscorides, such as pepper, have demonstrated efficacy as contraceptives in modern animal studies. Other agents identified include myrtle, white willow tree and chaste tree. Dioscorides declared chaste tree "destroys generations as well as provokes menstruation". Pennyroyal was recommended by Dioscorides as an emmenagogue, an agent to induce menstruation and possible abortion. Contemporary lay use of pennyroyal as an abortifacient contributed to a case of severe haemorrhage and death. It is vital that these agents be assessed for safety and better understanding of their mechanism of action.



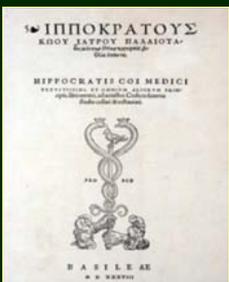
SORANUS' GYNECOLOGY

is the work of a renowned Greek physician. *Gynecology* details gynaecological and obstetric practices in antiquity. The document was apparently written to inform the physician and/or midwife. Soranus described the difference between a contraceptive (atokion) and abortifacient (phthorion) and noted the risks associated with abortion. Soranus identified a number of agents for birth control, including *silphium*, from the giant fennel species *Ferula*. *Silphium* was so highly prized for its contraceptive properties, that it became 'worth its weight in denarii' according to Pliny, the roman author of *Natural History*. Various Cyrenian coins depicted *silphium*, both the plant and the seed. It has been proposed that the distinctive *silphium* seed, being heart shaped, was the origin of the modern heart shape and its emotional association with love, romance and sexuality.



HIPPOCRATIC CORPUS

consists of fifty eight books with only four based exclusively on women. These include: *On Diseases of Women*, *On Diseases of Young Women*, *On Sterile Women* and *On the Nature of Women*. The Hippocratic Corpus holds the earliest statement in Greek literature about oral contraceptives and the documents



contain a number of notable formulae to induce abortion, such as chaste tree, copper and *Ferula* species. These ingredients are seen in other recipes observed in ancient documents including *De Materia Medica*.



De Materia Medica: Myrtle

THE GALENIC CORPUS

Galen, a prominent physician of antiquity, wrote a vast number of works, many based on anatomy. In the *Galenic Corpus* Galen described a number of abortifacient recipes, the majority being administered as vaginal suppositories. Two of the oral recipes in Galen's body of work have been identified as barrenwort and juniper. Modern studies have demonstrated the abortifacient effects of a species of juniper bark in animal models, suggesting that these women's medicines used in antiquity were efficacious for their intended purpose. Galen was also aware of adverse effects of these agents, discussing "harm to the mother that is done by taking abortifacient or emmenagogic preparations, after the second trimester of pregnancy".