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# **Combination Birth Control Pills**

# **Product Type**

Synthetic progestin plus synthetic estrogen

### Manufacturer

List of commercially available combination birth control pills

### **Product information**

Combination birth control pills are available in different hormone and dose formulations with administration regimes ranging from 21 days with 7 days of placebo, to 90 days before the placebo week. Treatment can begin in any phase of the cycle, but may not be effective in the first month if treatment begins near the time of ovulation. Data from treatment of women indicate that the placebo week is not necessary for uterine health, so continual treatment to prevent sexual swellings, for example, is an option. The limited data in the RMC database regarding the use of these contraceptives is primarily for great apes and a few African-Eurasian monkey species.

## Safety to humans

There is no health risk to humans when administered as directed.

## Latency to effectiveness

Although individuals vary, threshold levels of the hormone should be reached in the blood within 1 to 3 days of starting this product. However, pre-ovulatory follicles are difficult to suppress, so, if cycle stage is not known, extra time must be allowed. Therefore, separation or alternative contraception should be used for 1-2 weeks after initiation of treatment.

#### Signs of estrus during treatment

Signs of estrus can occur during the placebo week. The synthetic progestin component may achieve contraception by blocking ovulation, causing thickening of cervical mucus, slowing ovum transport, and/or interfering with fertilization or implantation. However, follicle growth that occurs with progestin-only contraception is suppressed by the estrogen component in combination pills.

### **Duration of efficacy and reversibility**

Combination pills should be given daily, except during the placebo week. Missing one pill isn't likely to allow conception, but the chance of pregnancy increases if more than one pill is missed, especially if that occurs soon after the placebo week; if this occurs, the female should be separated from males for at least 1 week. Following cessation of treatment, the hormones are cleared within about a week, and conception may occur within the first month for some individuals but not for up to a year for others.

# Use during pregnancy

Degree of risk to the fetus is uncertain, and manufacturers recommend discontinuation of combination birth control pills during pregnancy.

# **Use during lactation**

The estrogen component of combination birth control pills may interfere with milk production or affect the developing infant, so combination birth control pills are not recommended.

# Use in pre-pubertal animals

Lack of data on pre-pubertal treatment and potential long-term effects on fertility contraindicates recommending contraception before puberty.

#### **Precautions**

Weight gain is less likely than with progestin-only treatment, but the estrogen component may cause fluid retention. Possible deleterious effects on uterine and mammary tissues vary greatly by species; see cautions for each taxon.

The only antibiotic that decreases birth control pill efficacy is Rifampin. Potentially, some anti-fungal medications (e.g. Griseofulvin and Ketoconazole) or anti-seizure drugs may affect birth control pill efficacy.

#### Consideration for seasonal breeders

Treatment should begin at least 1 month before the anticipated onset of the breeding season.

#### **Reporting Requirements**

All institutions using this product are asked to contribute contraception information for their animals to the AZA Reproductive Management Center's Contraception Database (<a href="https://www.zoocontraceptiondata.org">https://www.zoocontraceptiondata.org</a>). It is essential that accurate records of doses and treatment intervals be maintained, and results reported, to contribute to dosage development.

### For questions about the RMC Contraception Database, contact:

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