

Catnip: Its uses and effects, past and present

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Catnip is a plant that has been used extensively for human illness and, more recently, in toys for pets. It is a plant with which some veterinarians have little familiarity. This article may be of assistance to the practitioner who is asked about catnip.

Catnip (*Nepeta cataria*) is a perennial herb belonging to the mint family, Labiatae (1,2). It is also known as catnep, catmint, catrup, catwort, nip, nep, and field balm (3-7). The term "catnep" is thought to originate from the fondness that cats show for the plant (3).

The plant is indigenous to Europe (3,5), and was supposedly introduced to North America with European settlement (6,8). It is cultivated easily and is now a common garden plant on this continent (3). It is found in hedges, fencerows, roadsides, stream banks, and waste places (4,9,10).

Catnip grows to a height of 25 to 40 cm (4,9). The stem is opaque, hairy, and grey (7,9). The leaves are opposite, stalked, heart-shaped, incise-serrate, pointed, hairy underneath, and 5 to 7.5 cm long (4,7,9). The flowers are calyx tubular, white with purple markings, approximately 0.5 to 1 cm long, and arranged in compact spikes (4,7). The entire plant is harvested when in flower, which occurs from June to September (4,8). It has a mintlike taste and odor and is strongly scented (7,10).

Compounds in catnip alter the behavior of wild and domestic cats, other mammals, and insects (11,12). The main constituent that attracts cats is the trans, cis-isomer of the unsaturated lactone, nepetalactone (1,6). Nepetalactone constitutes 70-99% of the essential oil of the catnip plant (13). It is metabolized and excreted in the urine (13). After oral administration of 20 to 80 milligrams of nepetalactone to cats, histological examination of tissue at postmortem indicated the absence of permanent alteration or damage (13). Although the main constituent of catnip is nepetalactone, the most active constituent is a metabolic product of this, nepetalic acid (12,13). Cats can respond behaviorally to air concentrations of 1:10⁹ to 1:10¹¹ (1,14).

The response to catnip is characterized by sniffing, then licking and chewing with head shaking, followed by chin and cheek rubbing and then a headover roll and body rubbing (14). Spontaneous vocalization occurs occasionally and has been interpreted as a response to hallucinations (1). This reaction is similar to estrous rolling patterns and this probably made people think that catnip is an aphrodisiac (6,8). Hatch suggests that the response is not the same as estrous behavior but some sexual stimulation is apparent (1). The reaction is independent of sex and gonadal state, and neutering has no effect on the response to catnip

(6,14). The plant appears to be pleasurable as cats seek the source of the scent and return daily to eat and roll in the foliage (1).

Catnip can be used either as the leaf or in a liquid aerosol extract (2). An older reference notes that the plant will make cats "frolicsome, amorous and full of battle" (7). Another said that cats eat the leaves for their medicinal properties (10).

Not all cats will respond to catnip. The heredity of the response has been shown to be an autosomal dominant trait (1,6,14). There is no correlation with breed or color (14). Most nondomesticated felids also react, but there is a suggestion that tigers may not respond (15). If a kitten is less than six to eight weeks old, it will not react and the full behavioral pattern may not be evident until they are three months old (14).

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Catnip has been prepared and used by people for many years. It was originally used as a tea, juice, tincture, infusion, and poultice and has been smoked and chewed. It fell out of favor with the development of more effective drugs. More recently, it has been used by people for its hallucinogenic effects.

The tea and infusion were used for nervous problems and a colorful quotation comes from Sydenham (1624-1689). He attributed catnip's effects to its "strong and noisome smell, to recall the exorbitant and deserting Spirits to their proper Stations" (16). It has a soothing effect and has been used to treat nervous headaches, hysteria, and insanity (5,8,10).

The root portion of the plant has the opposite effect. One reference stated, "if the root be chewed it will make the most quiet person fierce and quarrelsome" (7,8). It seems that catnip was used both as a mild stimulant and for its quieting effect on the nervous system (8,17).

The method of tea preparation is to put one ounce (approximately 28 grams) in one pint (473 mL) of boiling water (3,8,11). Adults are given two to three tablespoons (30-45 mL) and children two to three teaspoons (10-15 mL) (8). Emesis occurs if too much of the tea is ingested (8).

Catnip was a remedy for infantile colic (anti-spasmodic) and flatulence (carminative) (4,5,7). It was also stated to cure hiccups (10). In one anecdotal story, an infant may have had a convulsion due to an overdose (3).

Claims have been made that reproduction in women is assisted. The tea was used as an emmenagogue to induce menstruation (5,7,8). Another way to consume it was as a freshly expressed juice of the green herb;

one tablespoon (15 mL) was taken three times daily to encourage menstruation (8). Parturition could be assisted by drinking catnip tea, and it could also promote evacuations of the placenta (5).

Poultices could be applied to any part of the body, and catnip poultices were commonly used for toothache (5,18). In general, they were used to reduce swellings (4,5). Catnip poultices were applied to the sore breasts of a nursing mother and to the neck for tonsillitis (5). According to Wren, "the green herb, bruised and applied to the part for two or three hours easeth the pain arising from piles" (7).

Other uses for catnip have been as a cold remedy, for hives, as a diaphoretic (induces sweating), a refrigerant (cools the body), and an anodyne (relieves pain) (5,9,18). It has also been used as a tonic for pains and rheumatism, as an infusion for whooping cough and measles, a tea for asthma, yellow fever, scarlet fever, smallpox, and jaundice, and has also been smoked to relieve respiratory ailments (4,5).

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In the 1960's, catnip was used in place of marijuana or as a filler in marijuana (4,11,17). Even toys for pets were bought to get the catnip for use (4). Because catnip burned too fast by itself, it was usually mixed with tobacco (2). A more intense effect could be obtained by spraying the alcohol extract on tobacco and then smoking it (2,3). Catnip produces visual and auditory hallucinations (1,18). It makes people feel happy, contented, and intoxicated, like marijuana (2). It has not been used recently because marijuana seems to be more readily available and is more dependable in its effects.

In conclusion, catnip is presently used in cats to bring about a euphoric state. It does not appear to be

harmful and is very appealing to some cats, though some fail to respond at all. Catnip has had brief, recent popularity as a hallucinogenic drug in people, and was popular formerly as a home remedy. CVJ

References

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