

# A short look to its therapeutic effects and pharmaceutical active ingredients of *Anethum graveolens*

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## Core tip

*Anethum graveolens* with English name of Dill is one of the herbal plants that used in ethnopharmacology in various parts. This plant has several remedies effects such as anti-diabetic, muscle spasms remover, pain relievers, anti-inflammatory, anti-convulsive, analgesic, diuretic, strengthen of stomach, appetite enhancer, anti-insomnia, breast milk increase, sedative, anti-vomiting and blood lipid lowering.

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*Anethum graveolens* (Dill) is one of the medicinal plants that traditionally administered in various parts. Dill is an annual herb in the celery family Apiaceae and grows up to 30–60 cm either in a homeowner's garden or growing wild. The seeds are oval or flat with 3–4 mm length and 3 mm width progressed from a bright green color at first develop to dark brown later. They have light yellowish colored lines or striation like the stems (1). This plant is native to the Mediterranean region, Asia, the Orient and cultivate in the United States, Germany, India, China and the Netherlands for export (1). Many therapeutic properties are considered in Iranian traditional medicine to this herb such as anti-diabetic, muscle spasms remover, pain relievers, anti-inflammatory, anti-convulsive, analgesic, diuretic, strengthen of stomach, appetite enhancer, anti-insomnia, breast milk increase, sedative, anti-vomiting and blood lipid lowering (2–4). Nowadays, obtained natural antioxidants of herbs and spices are evaluated widely to their antioxidant properties (5). Flavonoids presence and other phenolic compounds is reported in *Anethum graveolens* extracts. In primary studies, antioxidant potential of *Anethum graveolens* extract had shown on rats with high-fat diets (6). Active ingredients including two major components of D-Karun and limonene, may have an antioxidant effect, stabilizing effect on liver cells membranes and reducer of enzymes releasing into the blood (7). Apiol presence as a phenolic

compound in *Anethum graveolens* extract or essential oil increased its antioxidant activity (8). D-Karun, D-limonene and alpha-phellandrene are major compounds of *Anethum graveolens* fruit's essence. Presence of kaempferol, coumarin, vicenine, myristicin and other flavonoids was proven in *Anethum graveolens* herb (7,8). Many of therapeutic effects of *Anethum graveolens* are likely to be due to presence of flavonoids and their antioxidant properties (7,8). Dill plant because of active ingredients is capable potential pharmaceutical in developing effective drugs for many diseases.

## Authors' contribution

All authors contributed equally to the manuscript.

## Conflicts of interest

The authors declared no competing interests.

## Ethical considerations

Ethical issues (including plagiarism, data fabrication, double publication) have been completely observed by the authors.

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