

## The possible prophylactic effect of *Nigella sativa* seed aqueous extract on respiratory symptoms and pulmonary function tests on chemical war victims: A randomized, double-blind, placebo-controlled trial

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### Abstract

**Background:** In previous studies, the relaxant, anticholinergic (functional antagonism), and antihistaminic effects of various extracts and oils of *Nigella sativa* seed have been demonstrated. In the present study, the prophylactic effect of a boiled aqueous extract of nigella seed on chemical war victims was examined. **Methods:** Forty (40) chemical war victims were randomly divided into control group (20 patients) and study group (20 patients), and they were studied for 2 months. In the study group 0.370 mL/kg of 0.9% boiled extract and in the control group a placebo solution were administered daily throughout the study. Respiratory symptom score and wheezing were recorded in the beginning (first visit), 20 days after treatment (second visit), and at the end of the study (third visit). Pulmonary function tests (PFTs) were also measured, and the drug regimen of the patients was evaluated at 2 different visits. **Results:** All respiratory symptoms, chest wheezing, and PFT values in the study group significantly improved in the second and third visits compared to the first visit ( $p < 0.05$  to  $p < 0.001$ ). In addition, further improvement of chest wheezing and some PFT values on the third visit were observed compared to the second visit in this group ( $p < 0.05$  to  $p < 0.001$ ). In the third visits, all PFT values and most symptoms in the study group were significantly different from those of the control group ( $p < 0.01$  to  $p < 0.001$ ). However, in the control group, there were only small improvements in some parameters in the second and third visits. The use of inhaler and oral  $\beta$ -agonists and oral corticosteroid in the study group decreased at the end of the study, while there were no obvious changes in use of the drugs in control subjects. **Conclusions:** The results of this study suggest a prophylactic effect of *N. sativa* on chemical war victims and warrant further research regarding this effect. © 2008 Mary Ann Liebert, Inc.

### Reaxys Database Information

### Indexed Keywords

**EMTREE drug terms:** beta adrenergic receptor stimulating agent; corticosteroid; *Nigella sativa* extract; placebo

**EMTREE medical terms:** adult; article; chemical warfare; clinical article; clinical trial; controlled clinical trial; controlled study; double blind procedure; drug isolation; human; lung function test; priority journal; prophylaxis; randomized controlled trial; respiratory tract disease; wheezing

**MeSH:** Adult; Anti-Asthmatic Agents; Chemical Warfare Agents; Double-Blind Method; Drug Therapy, Combination; Humans; Iran; Lung Diseases; Male; Middle Aged; Mustard Gas; Nebulizers and Vaporizers; *Nigella sativa*; Phytotherapy; Plant Extracts; Respiratory Function Tests; Seeds; Treatment Outcome

*Medline is the source for the MeSH terms of this document.*

**Chemicals and CAS Registry Numbers:** Anti-Asthmatic Agents; Chemical Warfare Agents; Mustard Gas, 500-100-2; Plant Extracts

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