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LONDON - Sickness among office workers in industrialized countries could be reduced by using ultraviolet lamps to kill germs in ventilation systems, new research indicates.

About 70 percent of the work force work indoors and frequently have unexplained health problems such as irritation of the eyes, throat and nose, as well as respiratory illnesses.

Ultraviolet germicidal irradiation, or UVGI, is used in hospital ventilation systems to disinfect the air but is rarely incorporated into office or other buildings.

In a study published this week in The Lancet medical journal, Canadian scientists found that

the technique reduced overall worker sickness by about 20 percent, including a 40 percent drop in breathing problems.

"Installation of UVGI in most North American offices could resolve work-related symptoms in about 4 million employees, caused by (germ) contamination of heating, ventilation, and air conditioning systems," said Dr. Dick Menzies from McGill University in Montreal, Canada.

"The cost of UVGI installation could in the long run prove cost-effective compared with the yearly losses from absence because of building-related illness." he added.

The ultraviolet lamps were aimed at the cooling coils and drip pans in the ventilation systems of the buildings. The lights were turned on for four weeks, then turned off for 12 weeks. The cycle was repeated three times for almost a year.

The use of the lights resulted in a 99 percent reduction of the concentration of germs on

irradiated surfaces within the ventilation systems.

771 employees from three different office buildings were involved with the study. With the lights switched on, the frequency of muscle complaints and the incidence of **work-related breathing problems** among them **dropped by 60 percent.**

Dr. W. J. Kowalski of Penn State University's Indoor Environment Center, said the study may be a landmark in **proving that the technique could be cost-effective** in commercial office buildings. The approach could be useful in the broader effort to **combat contagious diseases such as flu, SARS, tuberculosis and cold viruses.**

“If a large number of schools, office buildings and residences were modified, a number of **airborne respiratory diseases could be eradicated** by interrupting the transmission cycle,” Kowalski said.

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