Smoking linked to early menopause in women

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(Medical Xpress) -- A new study published in the journal *Menopause* adds one more reason for women to avoid or give up the smoking habit. The study results show that women who light up are more likely to start menopause a year earlier than non-smokers and are also at a higher risk of bone and heart diseases.

The study, led by Volodymyr Dvornyk from the University of Hong Kong, looked at data from previous studies. The data included information from around 6,000 women residing in Iran, Poland, Turkey and the United States.

Results showed that non-smoking women hit menopause on average between the ages of 46 and 51 while those women that smoked were

more likely to begin menopause between the ages of 43 and 50.

The researchers also looked at other studies that had a cut-off age of 50 or 51 to determine early or late menopause. These results included over 43,000 women and showed that smoking women were 43 percent more likely to start menopause early.

While starting menopause early or late both have potential risks associated with them, the risks of early menopause outweigh late menopause. Late menopause seems to be associated with a higher risk of breast cancer while early menopause has been linked to an increased risk of various different health problems. These include cardiovascular disease, diabetes mellitus, obesity and osteoporosis.

While the researchers have seen a possible connection between smoking and early menopause, they are unsure as to just what role smoking may play. The general belief is that smoking and the components found in cigarettes may affect estrogen levels or kill eggs directly.

The information evaluated in this study did not provide information on how long the women had smoked, what age they began smoking or how many cigarettes they smoked each day. Because of this lack of information, it is difficult to determine exactly what role the smoking played. Other factors, such as alcohol, weight and if the women have children could also play a role in when menopause starts.

More information: Meta-analysis suggests that smoking is associated with an increased risk of early natural menopause, *Menopause*, doi: 10.1097/gme.0b013e318224f9ac

Abstract
Objective: Age at natural menopause (ANM) is usually defined as the age at the last menstrual bleeding followed by the absence of menses for

12 consecutive months. Although many studies have suggested an association between smoking and early age at natural menopause, evidence remains conflicting because some studies reported inconsistent or contrasting results. To resolve this ambiguity and to quantitatively evaluate the effect of smoking on ANM, we conducted a meta-analysis of the available data about smoking and ANM.
Methods: After extensive searching of public literature databases, a total of 11 studies were selected for this meta-analysis. Among them, the phenotype of the participants in five studies (dichotomous studies) was classified as early or late ANM, and odds ratio (OR) was used to evaluate the effect of smoking on early ANM. For the other six studies (continuous studies), mean and SD were provided for smoking and nonsmoking samples, and weighted mean difference (WMD) was used as the effect size.
Results: We found that smoking was significantly associated with early ANM in both dichotomous and continuous studies. The pooled effect was OR = 0.74 (95% CI, 0.60-0.91, P Conclusions: The results of our study suggest that smoking is a significant independent factor for early ANM.