# Non-smoking male adolescents' reactions to cigarette warnings.

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# Non-smoking male adolescents' reactions to cigarette warnings.

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## **Abstract**

#### **BACKGROUND:**

The U.S. Food and Drug Administration (FDA) is working to introduce new graphic warning labels for cigarette packages, the first change in cigarette warnings in more than 25 years. We sought to examine whether warnings discouraged participants from wanting to smoke and altered perceived likelihood of harms among adolescent males and whether these warning effects varied by age.

#### **METHODS:**

A national sample of 386 non-smoking American males ages 11-17 participated in an online experiment during fall 2010. We randomly assigned participants to view warnings using a 2×2 between-subjects design. The warnings described a harm of smoking (addiction or lung cancer) using text only or text plus an image used on European cigarette package warnings. Analyses tested whether age moderated the warnings' impact on risk perceptions and smoking motivations.

### **RESULTS:**

The warnings discouraged most adolescents from wanting to smoke, but lung cancer warnings discouraged them more than addiction warnings did (60% vs. 34% were "very much" discouraged, p<.001). Including an image had no effect on discouragement. The warnings affected several beliefs about the harms from smoking, and age moderated these effects. Adolescents said addiction was easier to imagine and more likely to happen to them than lung cancer. They also believed that their true likelihood of experiencing any harm was lower than what an expert would say.

## **CONCLUSIONS:**

Our findings suggest that warnings focusing on lung cancer, rather than addiction, are more likely to discourage wanting to smoke among adolescent males and enhance their ability to imagine the harmful consequences of smoking. Including images on warnings had little

effect on non-smoking male adolescents' discouragement or beliefs, though additional research on the effects of pictorial warnings for this atrisk population is needed as the FDA moves forward with developing new graphic labels.

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