BioSpectrum the business of Bi
24 years of leveraging the business of Bio
www.biospectrumindia.co

New armband sensor technology to quit smoking

01 August 2018 | News

The smart-phone app, initially limited to android-based operating systems, automatically texts 20- to 120-second video messages to smokers when sensors detect specific arm and body motions associated with smoking



Researchers at Case Western Reserve University are using wearable sensor technology to develop an automatic alert system to help people quit smoking.

The smart-phone app, initially limited to android-based operating systems, automatically texts 20- to 120-second video messages to smokers when sensors detect specific arm and body motions associated with smoking.

According to the researchers, the mobile alert system that they are testing may be the first that combines an existing online platform with mindfulness training and a personalized plan for quitting smoking.

two armband sensors to detect smoking motions, a technology that demonstrated more than 98-percent accuracy in differentiating “lighting up” from other similar motions and a personalized text-messaging service that reminds the user of either their own plan to quit, or sends video messages that stress the health and financial benefits of quitting.

The system was conceived, developed and tested over the course of the last year by a team of Electrical Engineering and Computer Science researchers at the Case School of Engineering and a high school intern in collaboration with a clinical psychologist at the Case Western Reserve School of Medicine.

The researchers said most previous studies have relied on smokers self-reporting how often they smoked, while the Case Western Reserve system more accurately tracked smoking activity based on the sensors.

“We’ve been able to differentiate between a single motion, which could be confused with eating or drinking, and a sequence of motions more clearly linked to the act of smoking a cigarette,” said Ming-Chun Huang, an assistant electrical engineering and computer science professor who led the technical aspect of the study.