

E-CIGARETTES – ARE THEY SAFE?

E-cigarettes were first produced in China, and were marketed as smoke-free cigarettes to quit smoking. E-cigarette manufacturers are making unsubstantiated claims that they are free of health hazards. Children and first time users are especially targeted; these are available in various flavors like chocolate and strawberry. Now e-cigarettes are becoming ubiquitous and the last 3 years have seen a mushrooming of online sites which market these products. The 3-billion dollar industry now has 400 brands in its umbrella in just the past 9 years. The e-cigarette is also sometimes called a PV (personal vaporizer) or ENDS (electronic nicotine delivery system) and its use is colloquially called “vaping.” It often looks like the traditional cigarette or a cigar but may also resemble a pen or a USB memory stick. It consists of a cartridge which contains nicotine, an atomizer where the liquid nicotine is vaporized, a battery which powers the device and an LED which mimics the glow of a cigarette.

According to the CDC, more than a quarter million youth in US who had never smoked a traditional tobacco cigarette used an e-cigarette last year. The recent US National Youth Tobacco Survey showed a dramatic increase in young people using e-cigarettes – from 79 000 in 2011, to 263 000 in 2013. Moreover, accidental or deliberate ingestion of e-cigarette liquids can lead to acute nicotine toxicity, and deaths of children have been reported. Besides nicotine, the users are exposed to solvent and metal residues, and particulate and organic compounds, albeit apparently less hazardous and at concentrations lower than those produced by tobacco smoke.

On 26th August 2014, the WHO has recommended that “indoor use be banned” till we have more data of safety of e-cigarettes. E-cigarettes “represent an evolving frontier filled with threat and potential for tobacco control.” The WHO has also suggested that countries may consider other regulatory options including blocking manufacturers from making health claims about these devices until scientifically proved, restricting advertising for the products, subjecting the devices to the same surveillance typical for tobacco products, restricting sales to minors, and health warnings on the packaging. However a group of experts on tobacco control have published a rebuttal in the journal *Addiction*. They strongly feel that e-cigarettes have played a great role in the decline in smoking of traditional cigarettes in the past few years. They consider the WHO recommendations to be “puritanical” and actually detrimental to public health. In their opinion, e-cigarettes could have a revolutionary effect

on public health if smokers switch from cigarettes to e-cigarettes. While the debate rages, we await the truth! (*The Lancet* 6 September 2014, *The Telegraph* 10 September 2014, *Scientific American* 26 August 2014).

NEW HOPE FOR AMPUTEES

Artificial limbs for amputees have been in use since 700 BC, but with current prosthesis problems abound. The fitting is imperfect and the skin is often abraded and infected. The ideal prosthesis would be implanted into the bone which would allow better sensory perception via the bone called osseoperception. But the critical problem in this was the poor skin-implant interface which leads to severe local infections.

To solve this problem, doctors at the University College of London have developed a new technology called ITAP (Intraosseous transcutaneous amputation prostheses). They discovered – using scanning electron microscopy in deer antlers – that large pores at the base of the antler allowed the skin to grow into it and maintain a perfect seal. The ITAP is based on this technology and the base of the implant is made of a porous structure into which the skin can grow. The prosthesis was first implanted into the bones of animals with amputated limbs. Following success in animals, it is now being used in humans with excellent results. Currently it is available as part of a clinical study in the UK and not freely available for commercial use. (*The Gaurdian* 26 August 2014)

TEENAGE DRINKING IN INDIA

A study from Northern Goa reveals that the proportion of men who started drinking in their teens rose threefold – from 19.5% for those born between 1956 and 1960 to 74.3% for those born between 1981-85. It also found that alcohol intake beginning in the teenage years was associated with a greater likelihood of developing lifetime dependence on alcohol, hazardous/harmful drinking, alcohol-related injuries, and psychological distress in adulthood. Teen drinkers were more than twice as likely to be distressed and alcohol-dependent as those who did not start drinking early in life. Also, they were three times as likely to have sustained injuries as a result of their drinking. This was a population-based study which questioned 1899 men about age of onset of drinking, drinking patterns and consequences. The trend is disturbing and merits some thought from pediatricians, parents and public health activists. (*J Epidemiol Community Health*. 2014;68: 922-7)

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