GUTKHA, an extremely popular herbal concoction (combination of various ingredients) sold throughout India and even exported, could have serious side effects. Unfortunately, since it is easily affordable, thousands of young and old alike use it as a mild psychoactive drug and are addicted to it.

Gutkha is a combination of lime, tobacco, betel nut, flavourings and catechu. Some Ayurveda practitioners advocate the use of gutkha as a treatment for fatigue and depression and the product is also sold as a breath freshener. Unfortunately, the addiction is becoming more prominent among the younger individuals.

Cheaply priced and easily available in bright pouches, its attraction is further reinforced by misleading advertisements. Within moments of ingestion, the gutkha mixes with the saliva and begins to dissolve and turn deep red in colour. It is very addictive and injurious to health. Nearly 80 per cent Indians consume smokeless forms of tobacco that includes pan, gutkha, pan masala, khaini, and mawa. Gradually, the use of chewing tobacco is reaching dangerously endemic levels in the country with eight per cent of adults in the country chewing gutkha. Gutkha has been proved to be carcinogenic. Its repeated use can lead to heart attack and infertility.

Toxic Effects of Gutkha

Studies on various gutkas and Pan Masalas available in the Indian market have shown very high levels of heavy metals viz. Lead, Cadmium, Chromium, Arsenic, Copper and Nickel. They are said to contain 3095 chemicals and 28 well proven carcinogens. As they are toxic even at ultra small levels, these heavy metals are capable of causing serious human diseases.

Traces of toxic metals (such as lead and cadmium) carry serious health risks when they accumulate in the body and in the food chain. High amounts of magnesium carbonate in the human body can cause respiratory and cardiac depression, while calcium carbonate or lime damages the mucosa, causing chronic mucosal injuries and ulcers in the mouth. Gutkha, mawa masala and pan masala are important causes of high prevalence of oral pre-cancer and cancer.

Some serious ill effects of consuming gutkha are underlined below:

Oral sub-mucous fibrosis: It is a carcinogenic effect of gutkha and a chronic disease of the oral cavity that could weaken a person to a great extent. The main characteristics of this disease are inflammation and progressive fibrosis (hardening and scarring) of sub-mucosal (the mucosa of the mouth) tissues. The patient feels burning sensations in his mouth while eating hot and spicy foods. This can cause excessive or decreased salivation and defective gustatory sensations.

DETERMINE TO QUIT

This decision has to be taken only by you. Unless you realize how smokeless tobacco is destroying your health, no one will be able to help you.

Motivate Yourself: Experts suggest that recording the reasons why you want to quit can be effective in motivating you and help you to stick to your decision. For instance, you can note down the discomfort that you may be suffering due to oral health problems.

Set a Quit Date: Most important is your personal commitment. Set a date and believe that you have what it takes to get through the first week without touching tobacco (gutkha or pan masala). If you fail in your first attempt, do not lose hope. Keep on trying until you succeed.

Combat Withdrawal: When you stop smoking, your nicotine levels drop quickly. This drop can cause withdrawal symptoms such as craving tobacco, nervousness, irritability, headache, weight gain, and difficulty concentrating. Stopping smoking is hard and your chance of success is best when you are ready and have made a commitment to quit. To counteract these withdrawal symptoms, you may chew finely ground mint leaves, sunflower seeds, sugarless gum, hard candy, or cinnamon sticks.
During the initial period, if you touch the mucosa you feel that it is wet and leathery, in the advanced stages the resilience of the oral mucosa is lost and it becomes very stiff and rigid making it extremely difficult to open the mouth.

Progressively, it leads to the mouth becoming dry, thinning and stiffening of the lips and pigmentation of the oral mucosa. A blood test shows decreased levels of iron and haeme protein in haemoglobin and increased ESR (erythrocyte sedimentation rate). Normally the disease starts from the posterior part of the oral cavity and slowly spreads to the anterior locations. Arecoline and tannin are the main causative agents of oral sub-mucous fibrosis.

**Psychological effects:** In small doses, betel nut is only slightly more psychoactive than coffee or chewing tobacco. However, in large doses, it can cause a cocaine-like state of intoxication. Symptoms of gutkha intoxication include dilated pupils, amnesia, psychosis, confusion, impaired judgment and euphoria. While some gutkha users seek the product because of its euphoric, stimulant effects, it can cause serious long-term psychological problems.

After long-term use, many users become addicted to the gutkha’s effects on normal brain functions. Withdrawal symptoms include insomnia, dry mouth, amnesia, insomnia, cognitive problems and fatigue.

What causes this addiction? Arecoline, the principal alkaloid in areca nut, acts as a stimulant of the central and autonomic nervous system (involuntary nervous system), and causes increase in the levels of neurotransmitters such as nor-adrenaline, epinephrine (adrenaline), dopamine, histamine, serotonin as well as acetylcholine at higher amounts. This leads to subjective effects of increased well-being, alertness and stamina. It also improves concentration and relaxation.

The presence of lime in areca nut hydrolyzes arecoline and guvacoline into arecaidine and guvacine, respectively. These are strong inhibitors of another neurotransmitter gamma-amino butyric acid (GABA). Arecaidine have anxiolytic properties i.e. reduce anxiety through inhibition of gamma-amino butyric acid (GABA) reuptake.

Piper betle flower or leaf contains aromatic phenolic compounds (e.g. tannin) which stimulate the release of neurotransmitters catecholamines, such as epinephrine (adrenaline), nor epinephrine (noradrenaline) and dopamine. This leads to an increase in heart rate, blood pressure, body temperature and sweating. They also bind to GABA receptors in the brain, affecting the mental activity.

**Other Effects:** Other side effects of gutkha are cardiovascular effects, gastrointestinal effects, abnormal thyroid function and kidney abnormalities, as well as metabolic syndrome, liver toxicity and immunosuppression. It can also alter blood sugar levels and raise risk of developing noninsulin-dependent diabetes (type 2-diabetes), which is a chronic condition that affects the way the body metabolizes glucose.

Toxic metals can also directly or indirectly damage the DNA, which increases the risk of cancer. Heavy metals disrupt metabolic functions in two ways: firstly, they accumulate and disrupt function in the vital organs and glands and, secondly, they displace the nutritional minerals vital for biological function.

**Effects on unborn child (Teratogenic effects):** Carcinogenic substance (such as alcohol, tobacco) that cause developmental defects in the foetus are called teratogenic agents and their effects are known as teratogenic effects. The gradual accumulation of toxic and trace metals in the body results in slow poisoning. Traces of lead, cadmium and chromium can also be passed on to newborns through the placenta. Betel quid use can also have adverse effects on reproductive health in women. Pregnant women have a three-fold increased risk of having a low birth weight infant with regular betel quid use.

It is estimated that tobacco results in the death of over 10 lakh Indians every year. The consumption of gutkha is making more than 15 million Indians impoverished every year due to high treatment costs. Currently, India has the highest number of oral cancer cases in the world.

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