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## Dangers Of Smoking And Smoking Cessation Treatments

There is a new line of therapy that has been introduced at my trust as part of the smoking cessation program. Smoking cessation is the treatment used to assist patients to quit smoking and is one of the most cost-effective options in chronic disease management [Royal College of Nursing, 2020]. Smoking is one of the biggest causes of death and illness in the UK [NHS, 2018]. There are many health risks associated with smoking, so it is important to reduce these risks by stopping smoking. Some of the dangers of smoking include:

- teeth and skin yellowing
- chronic obstructive pulmonary disease (COPD)
- lung cancer
- coronary heart disease (CHD)
- stroke
- heart attack

Tobacco smoke contains tar, poisonous chemicals, nicotine, and other compounds. These compounds and chemicals, when inhaled, damage the lungs but also enters the bloodstream and affect the rest of the body. Tar is a carcinogen which is known to cause cancer and is the biggest cause of lung cancer in smokers. Smoking causes damage to the bronchioles and blood vessels which leads to COPD and CHD. In severe cases, this can lead to cancer, stroke and a heart attack.

Harmful chemicals cause damage to the cells in the lungs and arteries. When the bronchioles and the alveoli in the lungs become damaged, the efficiency of gas exchange is reduced, and it can lead to COPD. Patients with COPD have great difficulty breathing which gets worse over time. Tobacco smoke contains carbon monoxide which is actually a poisonous gas. High levels of carbon monoxide in the blood increase the risk of CHD. Carbon monoxide combines with haemoglobin in red blood cells so oxygen can no longer bind to it effectively. This means the blood cannot carry oxygen around the body efficiently. Patients with CHD often suffer from angina. Chemicals from smoking causes the build-up of plaque in the arteries which leads to atherosclerosis. The fatty deposits narrow the arteries and puts more strain on the circulatory system increasing the risk of CHD.

Nicotine is a highly addictive compound found in tobacco smoke. It is very difficult for an individual to quit smoking due to its addictive nature. Smoking cessation treatments help to overcome the addiction and quit smoking. The benefits of stopping smoking is that the individual can lead a healthier and better lifestyle with reduced health risks.

The most common and popular smoking cessation is nicotine replacement therapy (NRT). NRT is widely available in a variety of forms such as; patch, lozenges, gum and inhaler. NRT's work by continuing to deliver nicotine to the body by reducing the dose of nicotine over time. This gradually reduces the brains dependency on nicotine and the individual no longer feels addicted to it. The course of NRT usually lasts up to a maximum of 12 weeks.

Another smoking cessation treatment is Varenicline, brand name Champix. This is the treatment

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that is being rolled out as part of a new initiative at my trust. Varenicline is a selective nicotine-receptor partial agonist [BNF, 2020]. This drug works by binding to the same receptors in the brain that nicotine would bind to. The brain releases dopamine which in turn relieves cravings and addiction. It also works by preventing the feeling of pleasure that is experienced during smoking. Hence, the craving for nicotine is reduced and it blocks out the associated effects of smoking. Evidence suggests it's the most effective medicine for helping people stop smoking [NHS, 2019]. The tablet is taken daily and the course of treatment usually lasts 12 weeks but can be continued if necessary. Additional nicotine is required in the first 1-2 weeks of Varenicline [The CURE Project, 2019] in the form of NRT mentioned above.