

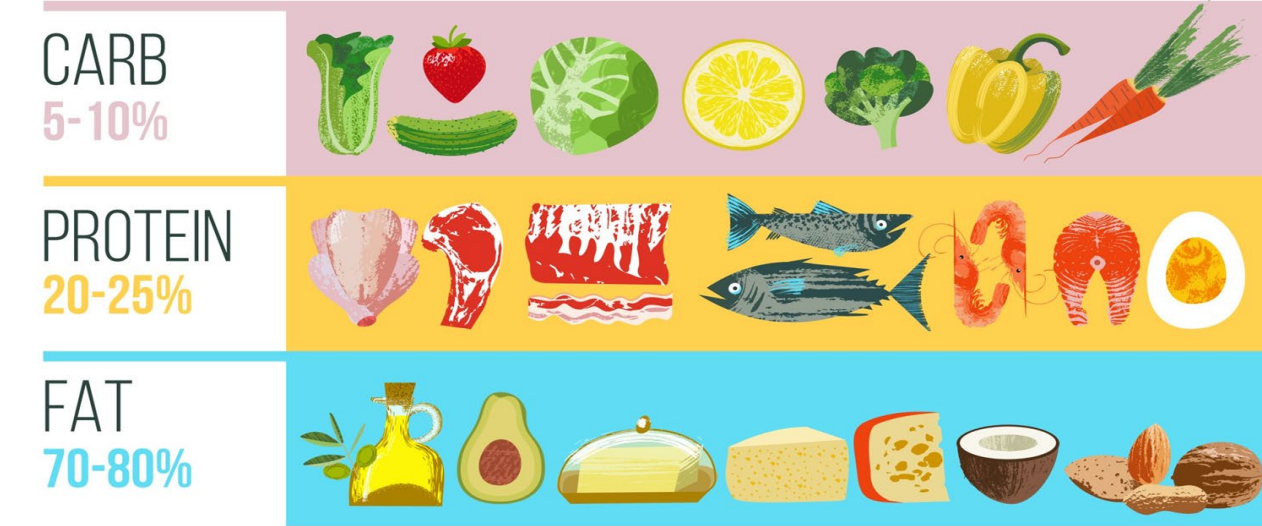
INTRODUCTION

Food that we all consume can be a contributing factor in the development of caries. *Streptococcus mutans* are the bacteria found in the oral cavity that cause dental decay. What we eat on a daily basis, can be the fuel these bacteria need to cause decay.

THE KETO DIET

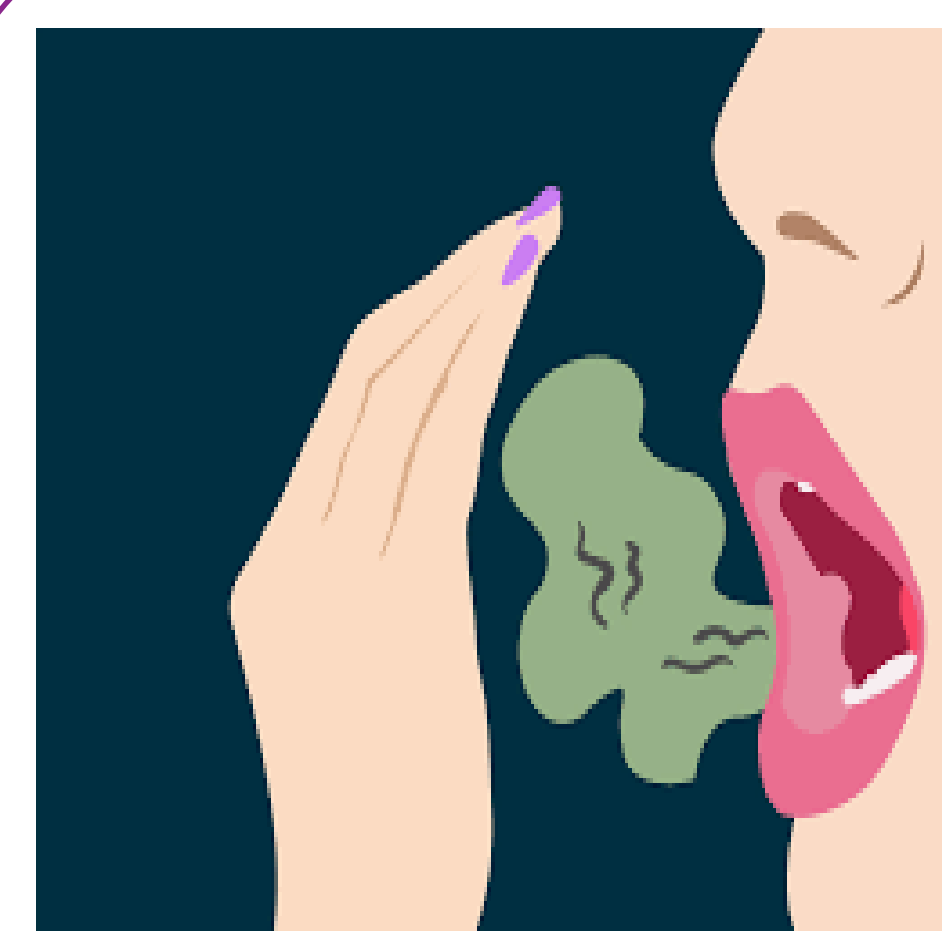
The keto diet has been one of the most popular diets in recent years. The keto diet helps your body burn fat for energy. This diet emphasizes high fat, low carbohydrate consumption and avoidance of simple carbohydrates and sugars (Edwards & Waters, 2018). The keto diet has its benefits when it comes to the oral cavity, this is why it is important to talk to your patients about their diet. The benefits include the reduction of plaque, cavities, gingival inflammation, and bleeding (Edwards & Waters, 2018). When being on this diet Erythritol is often recommended as a sugar replacement due to its ability to reduce plaque levels in the mouth(Edwards & Waters, 2018). Erythritol is a sugar alcohol that people use as a sugar substitute. By including Erythritol in your diet plaque isn't able to eat away at your enamel. This diet is a great option for patients who are at high risk for caries. The keto diet reduces caries when carbs and sugar are eliminated from your diet. When sugary nutrients are not included in your daily diet, bacteria can't feed on them (Edwards & Waters, 2018). Lastly, this diet will benefit patients that have gingivitis because it reduces gingival inflammation and bleeding. Even though the keto diet is a great diet to improve your oral health it does have two side effects. It can cause bad breath and dry mouth over time. Those two side effects are due to the body being in the state of ketosis: a process in which the body burns fat for energy because glucose isn't available. You can surely eliminate this by chewing gum to help develop salivation and drinking plenty of water when necessary(Edwards & Waters, 2018).

KETOGENIC DIET HIGH FAT LOW PROTEIN LOW CARB

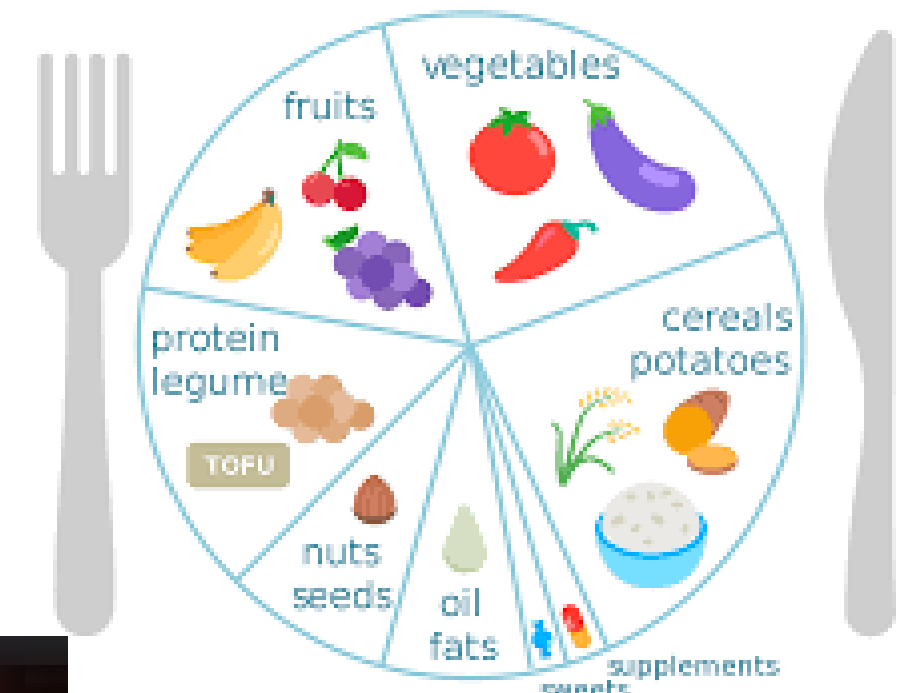


GLUTEN FREE DIET

Gluten free diet is a plan to eat food that does not contain gluten. Gluten is a protein that is found in wheat, barley, rye and triticale. Many people think gluten free is a healthier lifestyle, with 20% to 30% of the US population being gluten free (Shmerling, 2022). There are about 6% to 7% of the US population that are gluten intolerant, which is a disease called celiac disease (Cervino et al., 2018). Celiac disease is a long-term autoimmune disorder that affects the small intestine; this is caused by intolerance to gluten protein in genetically susceptible individuals (Cervino et al., 2018). Even though many people think gluten free is a healthier diet there are many studies that have proven that a gluten free diet is harmful to our oral health. Research has shown that gluten helps your body to absorb essential nutrients such as vitamins and minerals. Vitamin D is important to our tooth enamel and protects our teeth from erosion and decay (Shmerling, 2022). A gluten free diet can prevent the body from producing vitamin K, which is important to maintain healthy bone structure such as the alveolar bone that protects and holds our teeth. People that have a gluten free diet tend to have other oral health problems such as excessive cavities, canker sores, painful red swollen gingiva, tooth discoloration, pitted teeth and hypersensitivity (Cervino et al., 2018).



THE VEGAN PLATE



VEGAN DIET

Although adopting a plant-based diet is a healthy lifestyle, if you're not careful, your teeth may suffer as a result. With grains, bread, starchy vegetables, and fruits, vegan diets can be high in carbohydrates. In order to meet their nutritional demands during the day, vegans tend to snack more. According to Dr. Yashchuk, DDS., because they eat more fruits, which are high in natural sugar vegans are more likely to experience tooth erosion due to their diet's high intake of acidic foods (Yashchuk, 2019). Pasta is a high-carb food that can be substituted for meat, but because starch breaks down into sugars, it may result in cavities. According to Dr. Hana Kahleova of the Physicians Committee for Responsible Medicine, drinking enough water is essential to supporting the preservation of a healthy pH balance in the oral cavity. In order to meet their needs for macro- and micronutrients, vegans are encouraged to eat additional fiber and carbs in addition to their high sugar intake (Kahleova, 2018). Thus, the dental biofilm, also known as plaque, is the bacteria *Streptococcus mutans*' natural habitat in the oral cavity. Dr. Lemons, Professor at the University of Florida College of Dentistry, discusses that this organism's capacity to digest a wide range of carbohydrates is one of its defining traits. These *S. mutans* feed on the carbohydrates we eat, and as a result, they release enzymes that alter the pH balance in the mouth, raising your risk of erosion and dental caries.

CONCLUSION

Furthermore, there are distinct effects of the Keto diet, gluten-free diet, and vegan diet on oral health. The gluten-free diet may cause excessive cavities, canker sores, and gum inflammation, while the Keto diet may cause dry mouth and bad breath. The vegan diet may cause enamel erosion and dental caries. When applying these dietary choices, it's critical to be aware of their possible effects on oral health and to practice a balanced oral hygiene routine to reduce any negative effects. To improve general oral health while keeping to these nutritional options, routine dental exams and professional advice are important.

ROLE OF THE DENTAL HYGIENIST

The dental hygienist's job is to respect the patient's choice of diet while also making them aware of the potential negative effects that each diet may have on their overall oral health. Preventing tooth decay and gingival disease requires making wise food choices and eating routines. Calcium and phosphorus are minerals that protect and rebuild tooth enamel, which helps to maintain dental health.

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