

Oral Health Education for High School



Presented by Dental Hygiene Students of NYC College of Technology:

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DENTAL HYGIENE

What is a Dental Hygienist?

- Dental hygienists are **licensed** oral health professionals who focus on preventing and treating oral diseases-both to protect teeth and gums, and also to protect patients' total health.
- They are graduates of accredited dental hygiene education programs in colleges, such as NYCCT, and must take a written national board examination and a clinical examination before they become licensed to practice.

Source: https://www.adha.org/sites/default/files/72211_Important_Facts_About_Dental_Hygienists_1.pdf



What do Dental Hygienists do?

- Each state has its own specific regulations and the range of services performed by dental hygienists varies from one state to another.
- As part of dental hygiene services, dental hygienists may perform oral health care assessments that include:
 - Oral cancer screenings
 - Expose, process, and interpret dental radiographs (x-rays)
 - Oral Hygiene Instruction and Education
 - Dental Cleanings by removing biofilm (plaque) and calculus (tartar)
 - Apply cavity-preventive agents such as fluoride and sealant to the teeth
 - Administer local anesthetic and / or nitrous oxide analgesia



Before and after a dental cleaning completed by Anita Dema.

Notice the plaque biofilm and calculus build up behind the lower front teeth.

Services offered to the college community as well as to the public include:

- Oral Cancer Examination
- Blood Pressure Screening
- Dietary Counseling for Prevention of Dental Decay
- Screening for Periodontal Disease
- Screening for Dental Caries
- Oral Hygiene Instruction
- Fluoride Treatment
- Radiographs
- Pit and Fissure Sealants
- Scaling and Root Planing
- Community Dental Referral
- Polishing
- Selective Follow-up Periodontal Maintenance Therapy
- Tooth Whitening



New York City College of Technology Dental Clinic

Dental hygiene appointments are approximately 3-3.5 hours in length and the number of appointments needed to complete dental hygiene care will be determined by the type of treatment the patient requires. All treatment is thorough and provided by Dental Hygiene students and supervised by Registered Dental Hygienists and licensed Dentists.

Clinic Fees:

\$20 Adults (Age 18 and older)

\$10 Children (Ages 4-17)

\$10 Seniors (Ages 65 and older)

If x-rays are needed, an additional \$15-20 fee applies.

Address: 285 Jay Street Brooklyn, NY 11201.
New Academic Complex Building(All glass building) 7th floor

Please call **718-260-5070** to make an appointment. (Ask for Paulina, Anita, Stephanie, and Winsome!)



BRUSHING & FLOSSING

What is Plaque? What is Calculus?

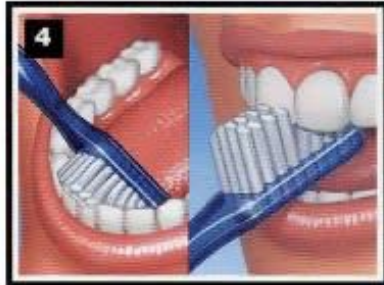
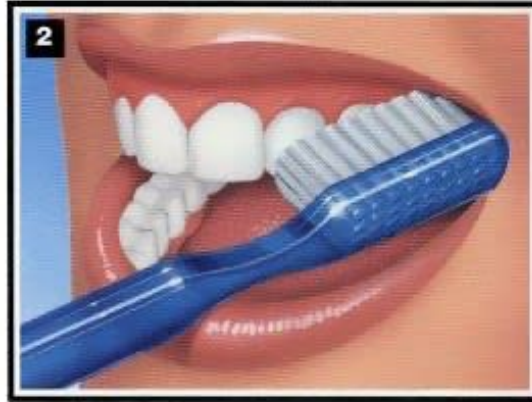
- **Plaque-** Plaque is the soft, sticky, colorless film that constantly forms on your teeth. Bacteria live in plaque, secrete acids that cause tooth decay (cavities), and irritate gum tissue. This irritation causes an inflammatory reaction by your body that can lead to gingivitis and eventually periodontal disease.
- **Calculus-** If plaque is not removed regularly by brushing and flossing, it hardens to create calculus (also known as tartar). Calculus is more yellow compared to plaque and can also be brown/black from smoking or coffee and tea drinking. Calculus cannot be removed with a toothbrush; only a dental professional can remove it during an oral cleaning.
- To keep plaque and calculus under control, it is essential to brush your teeth twice every day, floss at least once every day, and see your dental professional for regular cleanings 2-4 times a year.



Plaque

Calculus

How to Remove Plaque-Brush and Floss Properly:



Brush your teeth for 2 minutes, **twice daily**.

Tilt the the toothbrush at a 45 degree angle towards the gum line.

Brush all surfaces of the teeth, front, back and chewing surfaces.

Use a soft bristle toothbrush and be gentle.

Don't forget to also brush your tongue.

How many Americans Floss?

According to the survey of the public:

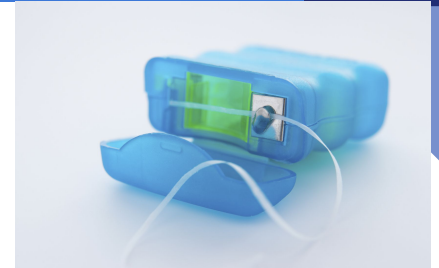
- **Sixteen percent** said they always floss at least once a day.
- **Twenty percent** said they only floss when they need to or when something is stuck in their teeth; and 8 percent said they simply never floss.
- The biggest reason reported for not flossing among those who do not floss daily is because it's time consuming (55 percent). Another 16 percent said it was too uncomfortable and 9 percent said they find it gross.
- **Forty-four percent** of those surveyed admit they have exaggerated to their dentist about how much they floss when asked.

Source: <https://www.ada.org/en/publications/ada-news/2017-archive/october/new-survey-highlights-unusual-flossing-habits>

Why is Flossing so Important?

Flossing is a crucial step for a complete oral hygiene routine. It is recommended to floss once daily.

- A toothbrush cannot reach in between your teeth
- When plaque builds up in between your teeth, it can lead to cavities, gingivitis and periodontal disease.
- Periodontal disease is a progressive disease destroying the surrounding bone, leading to tooth mobility and eventually tooth loss.
- Untreated cavities spread into the tooth infecting the pulp, which can also lead to tooth loss.



Source: <https://www.dentalcare.com/en-us/patient-education/patient-materials/manual-brushing-and-flossing>

How to Floss Properly:





NUTRITION

Nutrition- What is it?

We get our nutrition from nutrients in our food.

Nutrients promote our growth, maintains our bodies, and repairs them as well.

When our bodies don't receive the nutrients it needs it is called malnutrition. You can have overnutrition (too much) or undernutrition (not enough). This creates an imbalance.

We get our nutrition from the following substances:

- Carbohydrates
- Lipids
- Proteins
- Vitamins
- Minerals

Most importantly we need **water**. It is the **main** component of the body and does the following:

- Removes waste products and reduces risk for kidney stor
- Maintains body temperature.
- Acts as solvent for nutrients such as minerals and vitamins.
- Lubricates organs and joints.



Dental Cavities and Nutrition

Dental Caries (Cavities) Process: How do cavities form?

Plaque is made up of bacteria that sticks to your teeth.

When you eat foods that are **cariogenic** (cause cavities) that sugar feeds the bacteria and as a result acid is released.

As a result:

- pH of the mouth decreases from 6.7-7.0 dropping drastically.
- pH stays below 5.5 for 20-50 min after **1 single exposure** to foods that cause cavities.

Even though saliva washes away some of the food and bacteria; **plaque** and **lactic acid** remain on your teeth. Those are the two things that cause damage.

How To Prevent Cavities:

- Eat cariogenic foods with meals NOT in between.(For example juice)
- Rinse with water after every meal to neutralize the pH of your mouth.
- Choose your carbs wisely:
 - Eat **complex** carbs such as grains, fruits, vegetable, potatoes, corn, etc. instead of **simple** carbs like sugar, syrup, sugary drinks including fruit juices, etc.
- Eat foods with firm textures such as raw vegetables to remove debris, stimulate saliva, and promote healthy gum tissue.
- Use alternative sugars (sugar-alcohols), such as Xylitol (a naturally occurring sweetener). Xylitol:
 - Lowers plaque levels, improves bad breath, remineralizes your teeth, decreases the number of bad bacteria, and raises the pH of your mouth.



Remember the three things that affect rate of cavities: (FFT)

1. Frequency: more frequent exposures=more cariogenic
2. Form: the stickier the foods=more cariogenic
3. Time: consuming foods in between meals vs with meals = more cariogenic



Eating Disorders and Your Teeth

ANOREXIA NERVOSA

Extreme loss of weight from self-starvation, excessive exercise, self-induced vomiting, and use of laxatives. A condition caused by **distorted** body image and low self-esteem.

CAN BE FATAL

Oral signs:

- Cavities (from vomiting) and oral lesions.
- Perimolysis: Dental erosion from vomiting
- Xerostomia (Dry mouth)

Oral care in combination with other treatment:

- Fluoride therapy, if xerostomia or vomiting is a problem, to treat and prevent caries.
- Saliva substitute/water to relieve xerostomia.
- **Do not** brush or floss immediately after vomiting. Brushing may spread the acid in the mouth and damage your teeth.
- Daily vitamin and mineral supplementation can compensate for the lack of nutrition.



BULIMIA NERVOSA

Compulsive disorder that involves periods of starvation, bingeing and purging. More common in **college students** who are under **stress** or individuals with **low** self-esteem.

Not easily detectable until clinician looks in the mouth.

Oral signs:

- Reduced salivary flow and development of angular cheilitis (a fungal infection of the mouth)
- Xerostomia from prescribed antidepressants, laxative and/or diuretic abuse.
- Perimolysis: dental erosion from vomiting
- Dental caries (from vomiting) and oral lesions.
- Palatal trauma from forced vomiting and enlarged parotid salivary gland from gouging and eating too fast.

Oral care:

- Fluoride therapy (daily fluoride rinses, fluoride varnish, etc.).
- Saliva substitute and water to relieve xerostomia.
- **Do not** brush or floss immediately after vomiting. Brushing may spread the acid in the mouth and damage your teeth.
- Daily vitamin and mineral supplementation can ~~compensate~~ compensate for the lack of nutrition.

Diabulimia: insulin-dependent diabetics who purge to keep sugar levels under control.



Other Medical Conditions Related to Nutrition

- Protein Deficiency
- Calcium and Phosphorus Deficiency
- Pica (eating soil, glass, etc)
- Diabetes Mellitus (High blood glucose levels and needs strict diet)
- Lactose Intolerance (no lactase can be congenital or secondary to Chron's)
- Chron's Disease(Chronic inflammatory disease of the digestive tract)
- Alcoholism (B-1 and B-9 deficiency)
- Cardiovascular Disease (High-cholesterol and Blood Pressure)
- Cancer Therapy (more nutrients needed to replace destroyed cells)

VAPING

How Does Vaping Affect Oral Health?

- What is **Vaping**?

Vaping has become a common way to attempt to quit smoking traditional tobacco cigarettes. However, vaping has grown in popularity among individuals who are not using it for its intended purpose.

- How does vaping affect oral health?

E-cigarettes, Juuls, and similar vaping products contain nicotine and varying amounts of heavy metals and toxic chemicals, which have been linked to cancer, as well as respiratory and heart disease.

Smoking also drastically increases your risk for oral cancer, causes more dental plaque, chronic bad breath, and an increased chance of gum disease.



Source:

<https://www.centeronaddiction.org/e-cigarettes/recreational-vaping/what-vaping>

How Does Vaping Affect Your teeth?

This photo is of a patient who experienced many oral and dental side effects due to vaping.

1. **Dry mouth and fractured(cracked) teeth.** When the chemicals in vaping products break down, they cause toxins to be absorbed by enamel and soft tissues. This is also caused by dry mouth, another side effect of vaping that leads to an increase in cavities, gum disease, and other oral health issues.
2. **Cavities.** The flavors in vaping products cause enamel to weaken. The flavoring chemicals also cause the bacteria, which causes dental plaque and cavities, to form and to stick to the grooves of the teeth faster. This leads to severe decay.
3. **Gum Disease and Tooth loss.** Nicotine decreases blood flow to connective tissues in the gums. This leads to a higher chance of gum disease that will quickly cause teeth to become loose and fall out or rot away.



Source:

<https://www.perioimplantadvisory.com/clinical-tips/article/16412201/vaping-and-oral-health-its-worse-than-you-think>

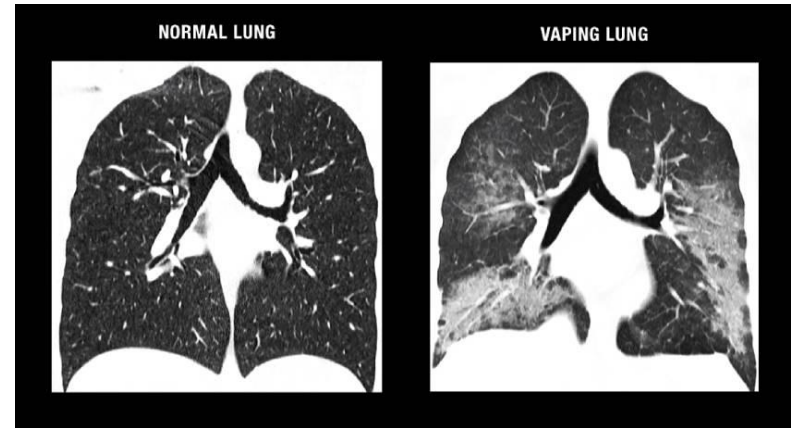
Serious dangers of Vaping

Vaping and e-cigarettes heat a pod of flavored liquid that contains nicotine, THC or CBD oil to a high temperature that turns the liquid into an aerosol, which is inhaled directly into the lungs. The aerosol can contain harmful chemicals and is often concentrated — one nicotine pod can contain twice as much nicotine as a pack of cigarettes, making them highly addictive.

Vaping-related injuries, illnesses, infections, cancers, and death have risen dramatically in the last 5 years.

Source:

<https://www.uwhealth.org/news/uw-health-doctors-urge-teens-young-adults-quit-vaping/52911>



These CT scans show normal lungs (left) vs. lungs of an individual who suffered from vaping-induced lung injury. The dense white areas indicate significant injury.

Q&A

For any additional questions or information, contact us by calling the New York City College of Technology Dental Care Clinic.

718-260-5070

The background is a solid dark blue color. In the top right corner, there is a decorative graphic consisting of several overlapping triangles in different shades of blue, including a medium blue and a very dark blue. The text "THANK YOU!" is centered on the left side of the image in a white, bold, sans-serif font.

THANK YOU!