



# Pucker Up!

*The Effects of Sour Candy  
on Oral Health*



**MINNESOTA  
DENTAL  
ASSOCIATION**





# Popular Treats

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Sour candies are popular treats among young people. They are colorful, they are fun and they are flavorful.

However, sour candies contain a high level of acid.

Acid wears away the enamel on teeth and therefore, can be very damaging.



# What is enamel?

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# What is erosion?

- Enamel: Outer covering or protective “shell” of tooth.
- Erosion: Irreversible loss of tooth structure due to a chemical process involving acid. Tooth erosion occurs when acids dissolve enamel on teeth.

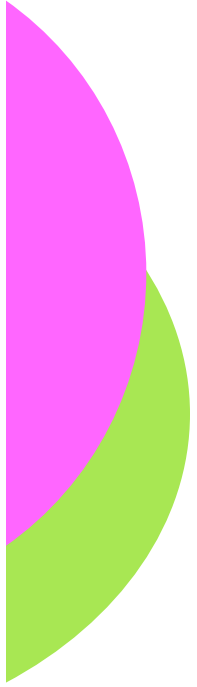
A measure of acidity in foods is called the pH level.



# pH Level

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- Water has a pH of 7.0.
- Battery acid has a pH level of 1.0.  
**(YIKES!)**
- Loss of tooth enamel occurs at a pH level of 4.0.
- Many sour candies have a pH level well below 5.5.



How do your  
candies stack up?



# Acid Levels in Popular Candies

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|                               |     |
|-------------------------------|-----|
| Water (neutral)               | 7.0 |
| <i>(Loss of tooth enamel)</i> | 4.0 |
| Spree                         | 3.0 |
| Sweetarts                     | 3.0 |
| Big Stuff Pacifier Sucker     | 3.0 |
| Sour Gummi Bears              | 3.0 |
| X-treme Airheads              | 3.0 |

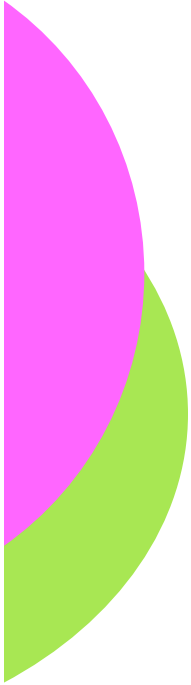


# Acid Levels in Popular Candies

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|                        |     |
|------------------------|-----|
| Sour Punch Straws      | 2.5 |
| Shockers               | 2.5 |
| Skittles               | 2.5 |
| Baby Bottle Pop Powder | 2.5 |
| Brach's Gummi Bears    | 2.5 |
| Sqwigglies Gummi Worms | 2.5 |
| Wonka Laffy Taffy      | 2.5 |
| Starburst              | 2.4 |
| Sweet Tarts Shock      | 2.4 |





# Acid Levels in Popular Candies

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|                         |     |
|-------------------------|-----|
| Lemon Heads             | 2.4 |
| Mentos Fruit Chew       | 2.4 |
| WarHeads Sour Rips Roll | 2.3 |
| Lollipop Paint Shop     | 2.2 |
| Zours                   | 2.2 |
| Sour Skittles           | 2.2 |
| Airheads Cherry Chew    | 2.0 |



# Acid Levels in Popular Candies

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|                           |     |
|---------------------------|-----|
| Wonka Nerds Grape         | 2.0 |
| Now and Later Cherry Chew | 1.9 |
| Too Tart Extra Sour Goo   | 1.9 |
| Wonka Pixy Stix Powder    | 1.9 |
| Altoids Mango Sours       | 1.9 |
| Wonka Fun Dip Powder      | 1.8 |
| WarHeads Sour Spray       | 1.6 |
| Battery acid              | 1.0 |



## The Hard Facts

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- In the past, candies marketed to children have increasingly been of a “fruity” or “sour” variety.
- Sour candies are very acidic - some with a pH level close to the level of battery acid.
- Some candy is so acidic it can actually burn gums and cheeks.



## The Hard Facts

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- Each acid attack lasts about 20 minutes.
- Holding the acid in your mouth by prolonged candy sucking or chewing continues the attack.
- Acid weakens and wears away tooth enamel.



# The Hard Facts

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- Dental erosion can cause permanent damage.
- Teeth without enamel are prone to decay.



# Signs of Dental Erosion

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- *Sensitive teeth.* You may feel a twinge of pain when consuming hot, cold or sweet food and drinks. Your tooth enamel is wearing away.
- *Discoloration.* Teeth will be slightly yellow in appearance.
- *Transparency.* Your teeth will appear transparent along the edges you bite with.
- *Dents.* Fillings may actually rise up.
- *Tooth decay.* Your teeth have lost the outermost protective layer of enamel.

# Erosion

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# Certain candies stick to teeth, causing longer acid attacks.

- “Gummi” candies
- Powdered candies
- Thick sticky gels



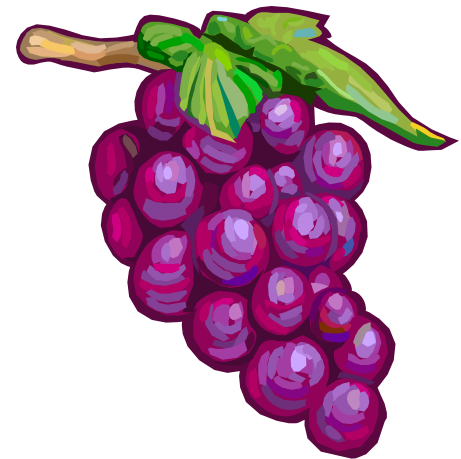
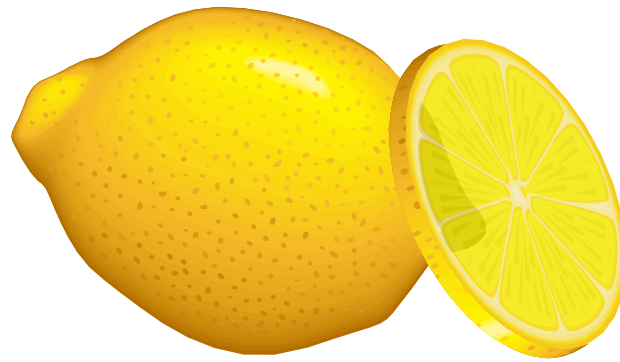


# Candy flavorings

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“Fruity” flavors of lemon, cherry and grape are more destructive than cinnamon or mint because

**citric acid = tartness.**



# Candy with “real fruit juice...”



**100% NATURAL FLAVORS**  
• Colors from Natural Sources  
• High in Antioxidant Vitamin C  
• Made with Real Fruit Juices & Purees



may sound healthy, but

these candies still have high acid levels.

# Gummy Vitamins...



“Healthy”?

Nope!

Some bacteria that live on the teeth like to feast on the sugars that come from gummy vitamins. After the bacteria process those sugars, they send out acids onto the teeth, which leads to the wearing away of enamel, which then leads to cavities.

# Are THESE things you want in your mouth?

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Tapeworm?



Rats?





# What can you do to prevent dental erosion?

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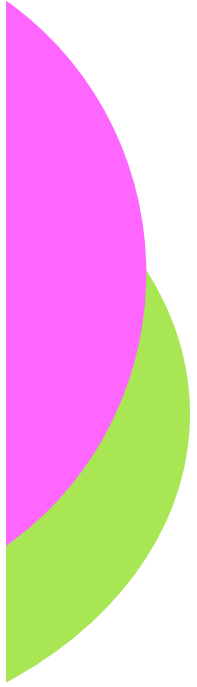
- Reduce or eliminate consumption of acidic foods and candies.
- Do not suck or chew candies for long periods of time – ongoing sucking prolongs acid attacks on teeth.
- If you do eat sour candy, rinse mouth out with water, drink milk or eat cheese right after to neutralize acids.



# What can you do to prevent dental erosion?

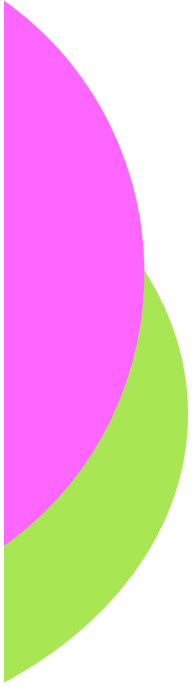
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- Chew sugar-free gum.
- If you consume acidic products, wait for an hour to brush your teeth. Brushing right away increases the harmful effects of acid on teeth.
- Use a fluoride toothpaste and a soft bristle toothbrush to protect your teeth.
- Ask your dentist about ways to reduce sensitivity or minimize enamel loss if erosion has begun.



# What have you learned?

Take this quiz to find out!



1. The outer covering or protective “shell” of a tooth is called \_\_\_\_\_.
  - a. Erosion
  - b. Acid
  - c. Enamel





And the answer is...

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c. Enamel



2. \_\_\_\_\_ wears away enamel on teeth and therefore, can be very damaging to teeth.

- a. Acid
- b. Sour candy
- c. Erosion

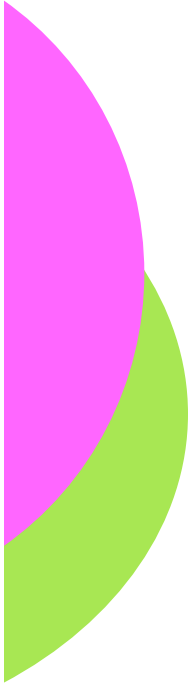


And the answer is...

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a. Acid  
*and*

b. Sour Candy



3. Loss of tooth enamel is at a pH level of:

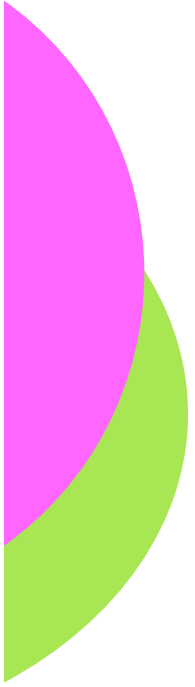
- a. 5.5
- b. 4.0
- c. 3.5



And the answer is...

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b. 4.0



4. This is the measurement of acidity:

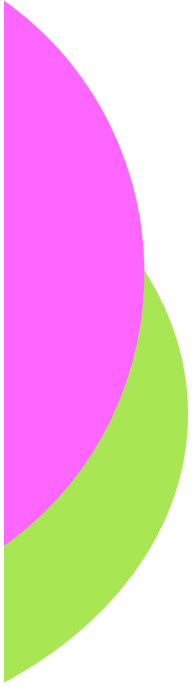
- a. Centimeter
- b. Fluid ounces
- c. pH level



And the answer is...

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c. pH level



5. To prevent dental erosion, one could \_\_\_\_\_ right after eating sour candy to neutralize acids.
- a. eat soda crackers
  - b. eat peanuts
  - c. eat cheese





And the answer is...

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c. Eat cheese



6. If you consume an acidic product, it's best to brush your teeth right away. This decreases your chances of erosion.

- a. True
- b. False

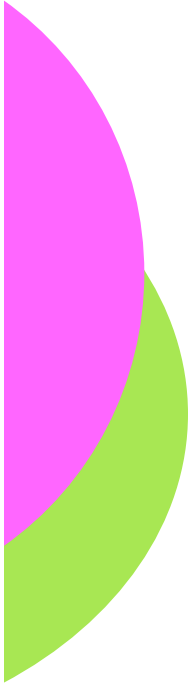


And the answer is...

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b. False!

*Wait for an **hour** after eating an acidic product.  
Brushing right away can increase the harmful  
effects of acid on your teeth.*



7. One sign of dental erosion is teeth that appear grayish in color.

- a. True
- b. False

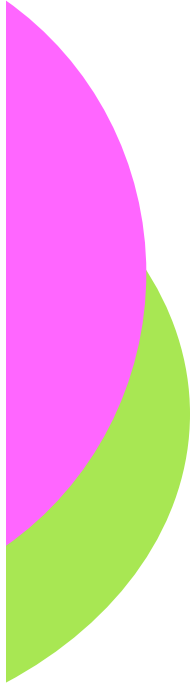


And the answer is...

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b. False!

*Teeth will be slightly **yellow** in appearance.  
This is called discoloration.*



# Thank you!

You're now on the road to  
better oral health!

*Take care of your teeth today so you'll  
have them for a lifetime!*





## Want more information?

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Contact the Minnesota Dental Association to learn more about “The Power of Sour on Your Teeth” educational materials.

Call 612-767-8400 or e-mail [info@mndental.org](mailto:info@mndental.org).

Also, visit: [www.mndental.org](http://www.mndental.org)