HEALTH EFFECTS OF CARBONATED BEVERAGES

Unfairly maligned

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Harmful effects of carbonated beverages:
Physiology of the stomach:

- Normal pH (measure of acidity: the lower the pH, the more acid) is 1.8 (The standard carbonated beverages in the market are 2.2: less acidic than stomach itself)
- Stomach lining is protected by mucosa (inner layer) that can secrete bicarbonate and other protectants, plus rich blood flow sweeps away acids
- Mucus (water, electrolytes, glycoprotein) is a thick gel that traps food particles and contains bicarbonate to protect stomach lining
Effects of carbonated beverages:

Basic physiology of the stomach:

- So, “sodas cause no lasting damage to the GI tract (includes stomach: does not cause ulcers)”*

- What causes ulcers?
  - *H. pylori*, a bacteria *(Marshall and Warren, 2005 won the Nobel prize for this discovery)*
  - NSAID pain medications
Effects of carbonated beverages:

Evidence-based treatment of ulcers:

- Treat (1) *h. pylori* infection, (2) give acid blocker, (3) stop taking NSAIDS

- **There is NO recommendation to eliminate anything from the diet (including sparkling soda), since diet is NOT related to ulcers.**
Effects of carbonated beverages:

Carbonated water effects:

- *LESS* dyspepsia (heartburn, a symptom of ulcer) and *LESS* constipation*

- If you are truly concerned about ulcers and stomach health, you should *ENCOURAGE* use of carbonated water, if not other beverages
Some concern over osteoporosis

- However, Mayo Clinic states, “no good evidence that carbonated water causes harm to your bones.”*  
- If there is an effect, it is from not drinking enough milk. Drinking juice and general nondairy drinks instead of milk. It is **NOT** from the carbonation.

Comparing beverages:

- Red wine and whisky cause more ulcer symptoms than the carbonated beverages: “**NOT** related to carbonation”. *
- Any beverage with sugar may be related to obesity but that is **NOT** related to carbonation.
Effects of carbonated beverages:

Summary:

• Carbonated beverages do not cause ulcers

• Some carbonated beverages may be helpful in digestion and general health

• There is **NO** evidence of harm from the carbonation, although sugary beverages generally may have some problems, such as obesity.

• Any law directed specifically at carbonated beverages is not based on science at all and it is a scientific untruth to state that it is.
Thank you.

May I now drink to your health with a nice, tasty carbonated beverage?
Effects of carbonated beverages:

- References:
  
  
  
  - *A Humble Bacterium Sweeps this Year’s Nobel Prize*, Megraud, F., *CELL* 123,975-976, 2005
  