

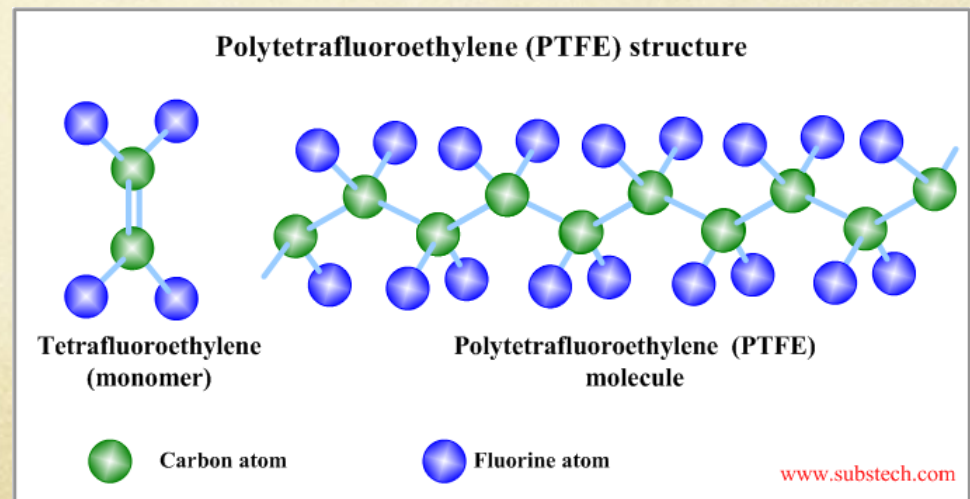


Teflon!

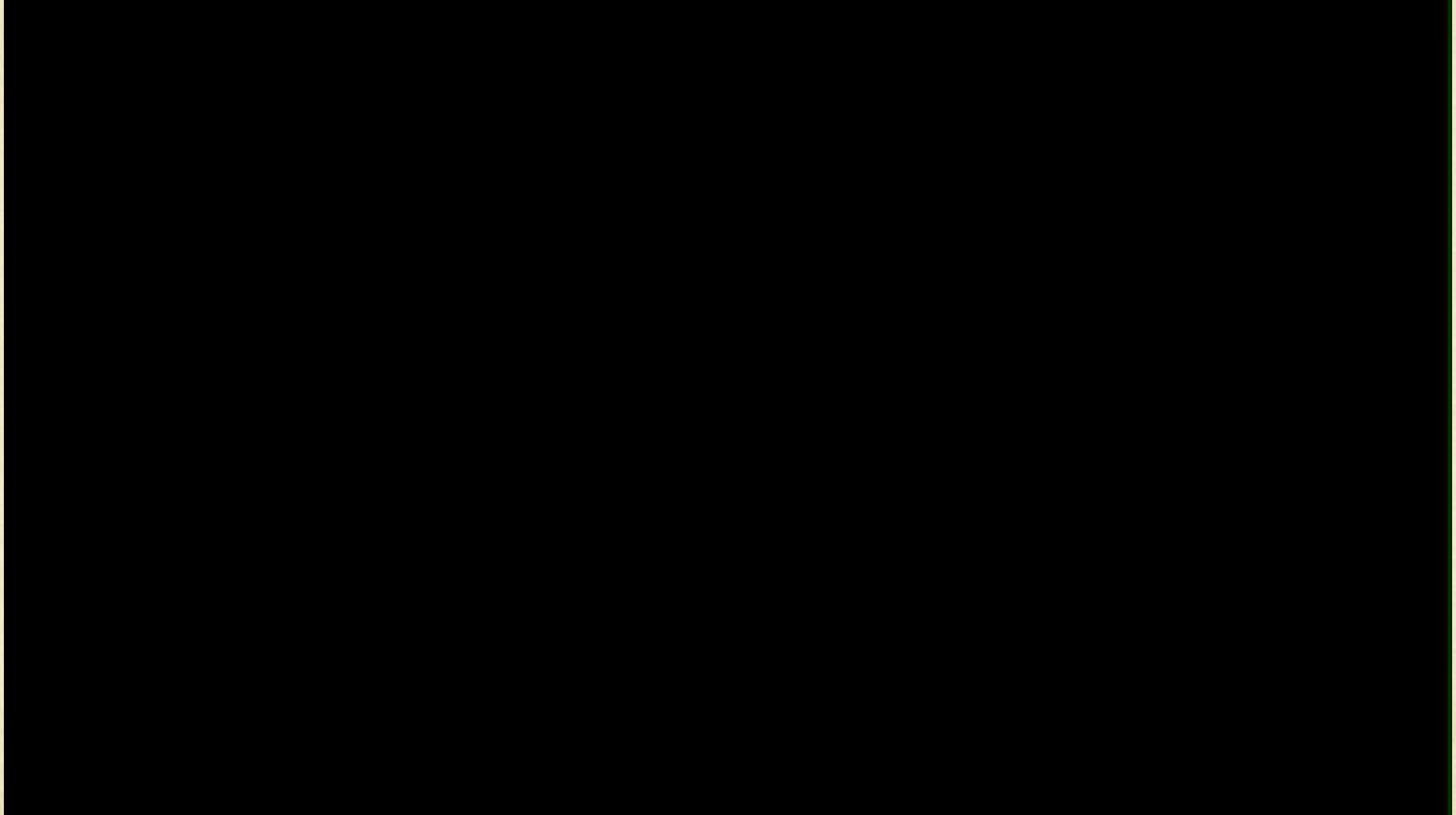
Should You Destroy Your Whole
Kitchen Collection Or Not?

What is Teflon?

- Trademarked by DuPont.
- Actually called Polytetrafluoroethylene (PTFE)
- Commercial use since 1940's.
- Extremely stable thus very non reactive!



Let Dr. Kiki Tell You More

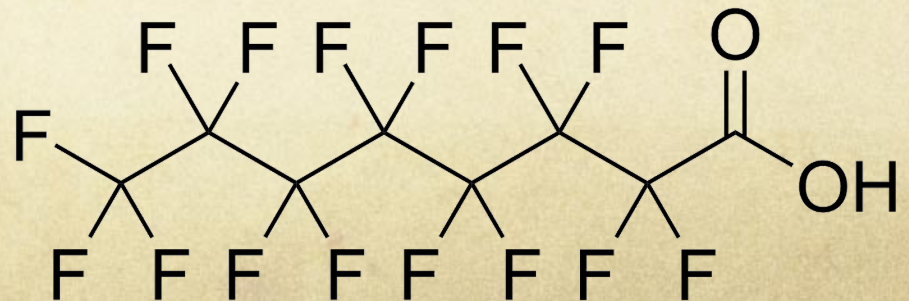


Conclusions

- So can we say that Teflon is the cause of cancer?
- No we can't. The cancer society has stated, "Teflon itself is not suspected to cause cancer".
- Few if any studies have actually involved Teflon and its links to cancer.
- The main culprit here is PFOA.

Perfluorooctanoic Acid (PFOA)

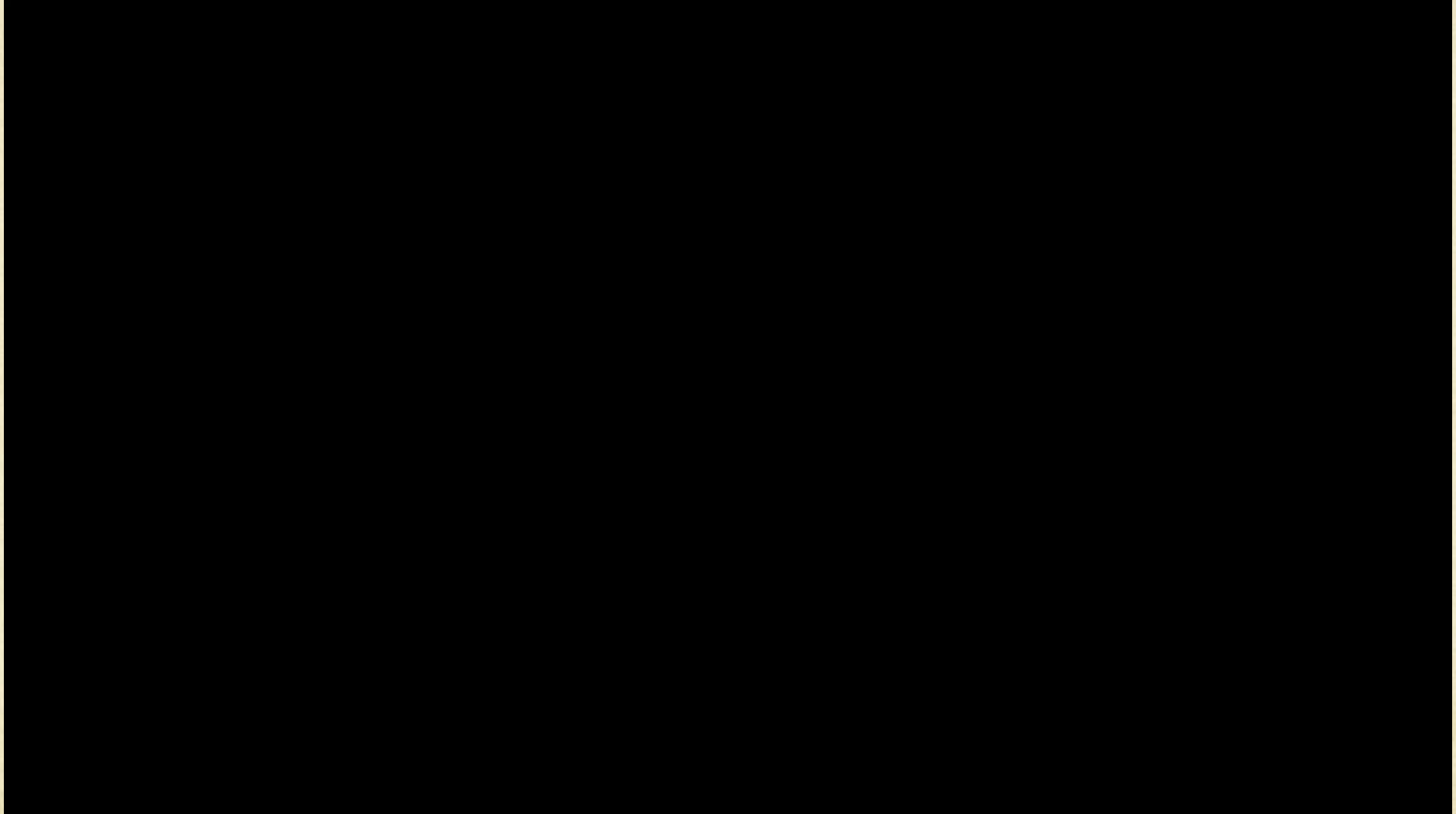
- Synthetic man made chemical, does not occur in nature. Also known as C8.
- Used in the process of making Teflon. Among other fluorotelomers.
- Very resilient and very persistent in the environment.
- Low levels of PFOA have been found in everyone's blood and in the environment.



Why Use PFOA?

- Utilized for it's properties of being fire resistant and it's ability to repel oil, grease, and water.
- The important factor that causes this are the fluorine chains.
- Industries that use PFOA and other Fluoropolymers:
 - Personal Care
 - Cleaning Products
 - Carpeting
 - Fire Fighting Foam
 - Coatings used in semiconductor manufacture
 - Grease repellent coatings on food packaging

Quick Advertisement



How Are We Exposed?

- Honestly no one is quite sure.
- It can range from being exposed to fumes if a pan is left on and overheats to actual digestion of non stick coating of a pan.
- DuPont claims there is zero PFOA left in the pans after they are manufactured.
- While pans are a key component few have looked at exposure through the other mediums, i.e. carpets and cleaning products.
- PFOA particulates at 446° F (DuPont) or 325° F (ind. study)

EPA Recommendation

- Has drafted a risk assessment to use blood levels as a measure for estimated dose.
- A group of scientists and doctors reviewed the EPA draft.
- Their conclusions:
 - Not willing to give PFOA a label of carcinogenicity.
 - But believes risk assessments for PFOA induced tumors are appropriate at this time. (2006)
 - Reason:
 - Too many uncertainties and ambiguity in animal studies.

Possible Effects

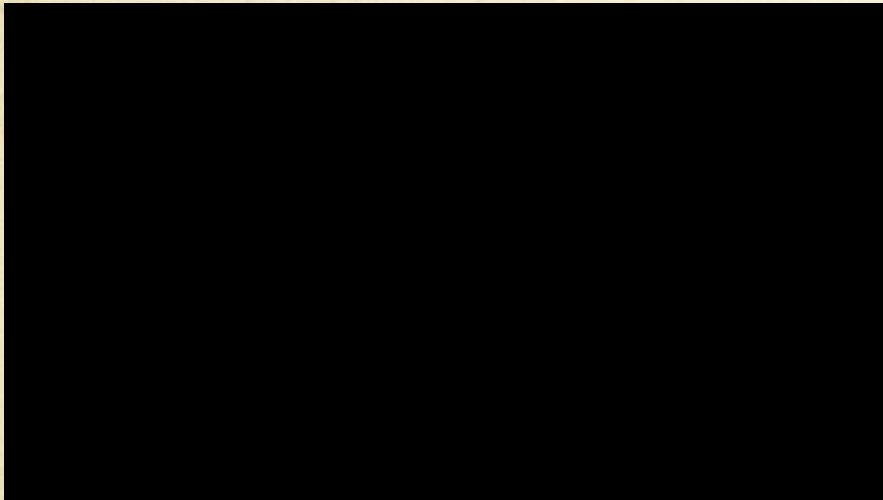
- Evidence of lower birth weights and smaller head circumference. (Betts 2007)
 - Reduction of -104 g for PFOA
 - Measured umbilical cord serum
- Fumes have been shown to kill birds!
- Maybe cancer, cholesterol levels, and sperm count. Maybe.

Media Reaction

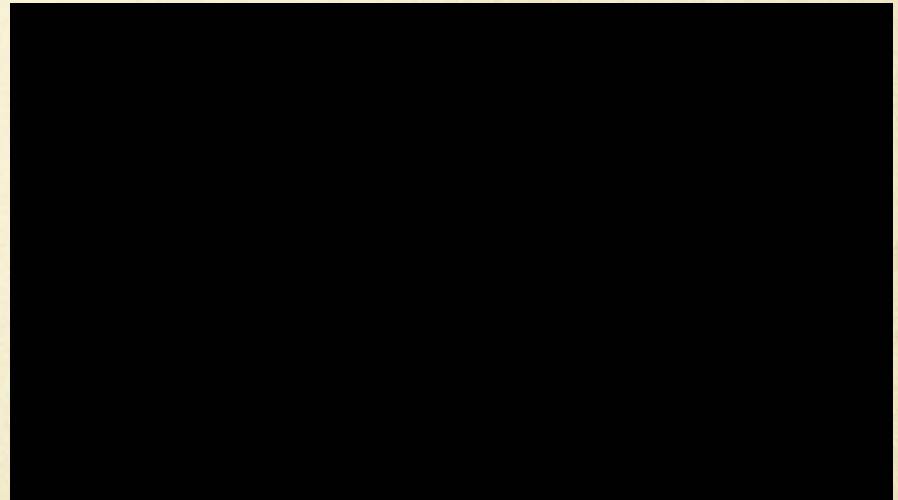
- EPA sues DuPont over not releasing research data.
- “Is There an Extra Ingredient in Nonstick Pans?” (NYT 2005)
 - Fumes can cause flu-like symptoms for a couple days.
 - “90 percent of Americans, according to a study by the 3M Company. Of the 600 children tested, 96 percent had PFOA in their blood; its source is unknown”
- “E.P.A. Says It Will Fine DuPont For Holding Back Test Results” (NYT 2004)
 - “Congress cannot mandate such testing by a chemical company, but if testing is conducted, the results must be made public, according to the Toxic Substance Control Act.”
- “Safety Concerns May Stick to Teflon” (LAT 2006)

DuPont Reaction

- Published a few youtube videos on the issue to debunk much of the media. Created a Teflon Channel on youtube.



<http://www.youtube.com/watch?v=8gPCbgX44mA>



<http://www.youtube.com/watch?v=FGvYhz-pQ3M>

3M Webpage

- A bit less on the attack and more informative.
- Actually phased out all PFOA use in 2000, per recommendation of EPA.

How can we avoid it?

- Use pans at low to medium heat. Below the particulate temperature.
- Avoid plastic lined food packaging. Frozen pizza boxes.
- Avoid microwavable popcorn bags.

Questions?