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The REAL Cancer in Your Gear

Posted on March 28, 2017 by [Mutual Aid](#) // [30 Comments](#)

My husband was diagnosed with prostate cancer 27 months ago. The shock and awe of hearing, “yes, it is cancer” is the most powerful, helpless feeling we’ve ever had. Paul’s cancer was a Gleason 7 score on a scale of 1-10. For forty-five minutes the doctor talked about options, and what he would do if it were him, what comes next, etc.,. We didn’t hear a word. We were in shock. Paul’s too strong, too healthy, too big for cancer. This can’t happen to us.



Paul had robotic radical prostatectomy surgery by the best. Dr. Tuerk at Saint Elizabeth’s Hospital in Boston. We knew there most likely would be side effects of the surgery, but all we wanted to hear was that he got it all. The surgery was successful, but he requires blood work every 3 months and is unable to perform the duties of a firefighter due to the effects of the surgery. When the realization of his not being able to return to the job he loved so much began to set in, it was a heart-wrenching chapter in our lives. This was not the way Paul was supposed to leave the job. He lived for this job. His crew from Worcester (MA) Fire Department, Rescue 1 gave him the best retirement party possible. Full of skits, awards, and his ax. But it was ten years too early.

I couldn’t understand how a guy like my husband, who was so fit at 55 that he boasted about being “only one of two guys on the job that can climb ‘UP’ the 3 story fire pole”. With two brothers and multiple male first cousins, with no prostate cancer history, how could someone so healthy get cancer? I started researching firefighter cancer. This was around the same time the Boston Fire Department came out ([here \(https://www.youtube.com/watch?v=bXd5sb6fWNM\)](https://www.youtube.com/watch?v=bXd5sb6fWNM)) with their video about guys they had lost to cancer. It was shocking how prevalent it was. We’ve been in this for twenty-eight years. We knew a lot of guys with cancer. That video led me to start researching the gear itself. I guess that’s where the rabbit hole opened.

I came across hundreds of articles about firefighters with cancer. Many studies on firefighters with cancer, dermal absorption studies, biochemical studies of firefighters with cancer, University studies of



dirt deposits of turnout gear, IAFF supported studies, many personal stories, articles on the recommended actions all firefighters should take; washing gear, etc. I read as many NFPA 1971 Structural Firefighting PPE reports as I could find. What I found in those reports was concerning to me. Of 16 voting members of the committee, 9 are manufacturers themselves. That



didn't sound right to me

but what do I know. In the Report of Proposals from the NFPA meetings, I read how the Special Experts would question the manufacturers and protest certain aspects like their testing methods or particular standard tests all firefighters should perform on the gear, then everyone votes and the manufacturers seem to win more challenges than losing in my opinion.

There should be a better balance in the committee. We've gotten too close and trusting of the manufacturers. Remember, their first obligation is to their shareholders.

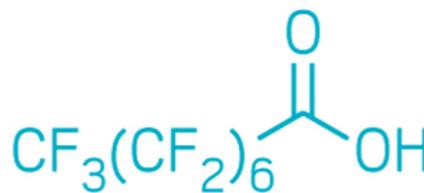
A couple of months back, I was contacted by someone very well known in the environmental field, (as I had reached out to her some eight months earlier). She had clusters of firefighters with cancer. My reply was "I'm sure you do, every station has a cluster." She asked one question about the gear, "does the gear have PFOA or PFOS?" I never heard the word before. I said I would check and let her know. After countless hours of research, I was able to find that PFOA *is a component of the fire gear itself*. The fabric is made with Terephthaloyl Chloride and p-Phenylenediamine. It has the chemistry formula C₈, H₄, Cl₂, O₂. The C₈ is the problem, PFOA. Perfluorooctanoic Acid.



So why the heck is C₈ a component of fire gear? If firefighters sweat and stew in these suits, surely it must be absorbed through their skin? What I found was an even deeper rabbit hole. The C₈ is needed to meet the minimum Thermal Protective Values (TPP) that protect firefighters from the thermal dangers of the job. It also makes the gear very strong. It is the same material used in bulletproof vests for the military as well as an additive to aqueous film forming foam.

But, just a quick Google search will show the many toxicity issues, human and environmental, surrounding PFOA. The EPA has given it the designation of 'Contaminant of Emerging Concern.' Sounds wishy-washy when you read the studies showing the actual scientific evidence from around the world. The problem here in the US is the Toxic Substance Control Act hasn't changed in years. There is lobbying against any changes in the current structure in favor of the chemical giants.

More searching led to this article from 2006 entitled 'EU Chemical Law Passed Amid Controversy':



Perfluorooctanoic acid

EU chemical law passed amid controversy (http://www.in-pharmatechnologist.com/Regulatory-Safety/EU-chemical-law-passed-amid-controversy?utm_source=copyright&utm_medium=OnSite&utm_campaign=copyright)

By Emilie Reymond and Louise Prance, 18-Dec-2006

EU lawmakers have approved a new chemical law aimed at making producers and importers of chemicals, used in goods such as personal care products, prove that the substances they put on the market are safe for consumers.

[http://www.in-pharmatechnologist.com/Regulatory-Safety/EU-chemical-law-passed-amid-controversy\(htpharmatechnologist.com/Regulatory-Safety/EU-chemical-law-passed-amid-controversy?utm_source=copyright&utm_medium=OnSite&utm_campaign=copyright\)](http://www.in-pharmatechnologist.com/Regulatory-Safety/EU-chemical-law-passed-amid-controversy(htpharmatechnologist.com/Regulatory-Safety/EU-chemical-law-passed-amid-controversy?utm_source=copyright&utm_medium=OnSite&utm_campaign=copyright))

It also states that the lobbying group American Chemistry Council is working hard to ensure that restrictions do not happen there in Europe or here in the US.



After a search of the European Chemical Registry's site, I saw that firefighter PPE was on the list of textiles for restriction by the European Chemistry Agency or ECHA, as it had determined it was an SVHC or Substance of Very High Concern. The gear is made with the chemical C-8. The chemical companies stated in the ECHA 'comments in response to proposed regulations' that the alternative C-6 costs them exponentially more to make.

That led to the search of what firefighters in Europe are doing about it. I came across the 2015 announcement of a PPE & Duty of Care Forum 2016. It covered *Managing a potential transition to non-PFOA PPE. Europe is aware and already on the path to transition to something safer for their firefighters.

Link <https://www.firerescueforum.com/content>
(<https://www.firerescueforum.com/content>)

They didn't want to use the alternative C-6 in Europe as it costs more to make. Affecting their bottom line. Keeping us in the dark for as long as possible, while lobbying against changes to the Toxic Substance Control Act here in the US, will save them money. The chemical companies are beholden to their shareholders to show them growth and profit. The manufacturers are using the American Chemistry Council to lobby against change in our chemical standards in America.

The chemical/textile giants were asking for a 'derogation' for the items of Firefighter PPE, military style vests, and some medical equipment. The ECHA declined to derogate the FF PPE, but it did give the manufacturers until 2020 to come up with a product not more than 25 ppb of PFOA. That would require the manufacturers to rework the chemical component of the gear. That is up from the original request of

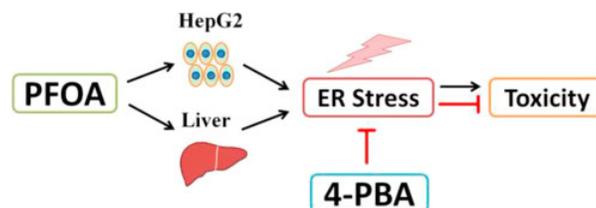
the ECHA's of 2ppb. This paragraph, page 37, shows the ECHA ruling:

"A goal is replacement of C8 chemistry by less hazardous chemicals (fluorine-free alternatives are said to be available by one stakeholder), or reformulation of C6 chemicals to resist heavy duty washing. Available information suggests that C6 alternatives that can resist washing and outdoor exposure are increasingly available. Overall, given the critical human health/life protecting functions of the C8 chemicals, and the above consideration on cost and effectiveness of substitution by C6 chemicals, SEAC proposes an extended transitional period of 6 years after entry into force for textiles for the protection of workers from risks to their health and safety."



Link: https://www.echa.europa.eu/documents/10162/13641/rest_pfoa_compiled_opinions_en.pdf
(https://www.echa.europa.eu/documents/10162/13641/rest_pfoa_compiled_opinions_en.pdf)

Keep in mind, part of the process in Europe was to notify the manufacturers and give them an opportunity to comment or protest these changes. That was in 2014. The actual comments were published in 2015. It is almost April of 2017 and we still have not been told that PFOA is such a concern in Europe it is changing the way the textile giants make the gear.



This past January I began asking whether or not we were making those changes here. I couldn't get an answer from anyone official or otherwise. No one had heard of it. It wasn't in a discussion on any of the countless popular firefighter websites, not on any government websites, or the IAFF site. Zero information or discussion about Non-PFOA Firefighter PPE anywhere.

What really bothered me was that it wasn't discussed at any of the NFPA 1971 Structural Firefighter PPE meetings that I read the Report of Proposals from, back to 2006.

The manufacturers sit at the table with our people and don't say a word about the restrictions they are facing in Europe. The PPE manufacturers all still printing slick, glossy ads about their gear and the dangers of cancer in the job. They are reinforcing to firefighters the standard safety protocols of washing and inspecting your gear and your body, of not contaminating your families, of wearing all your gear during overhauls, keeping your gear out of UV light, but the discussion of the toxin PFOA and what they are being required to do in Europe does not come up.

There is no justifiable reason to not discuss it. It is as important as knowing about the soot on the gear, or washing your hoods, or washing your bodies and all the other cancer precautions relative to your job.

With the money that firefighters pour into these manufacturers and the faith that we entrust them with, it is outrageous that this discussion is omitted.

Weeks ago I began posting about this on my personal Facebook page and sending this to over 200 Facebook firefighter pages. Thankfully, one lone Local Union President, Jason Burns L1314, of Fall River, MA asked if I would send him the information I gathered. He had recently lost two young members to cancer.



Of every 20 children tested,



19 had blood contaminated with PFOA.

(https://www.epa.gov/sites/production/files/2016-05/documents/pfoa_health_advisory_final-plain.pdf)

Click here to read EPA PFOA report on drinking water...

During the IAFF Legislative Meeting in Washington, D.C., March 3-8 2017, IAFF L1314 President Burns brought the matter to the attention of IAFF's Patrick Morrison, the Health, Safety and Medicine Assistant for General President Schaitberger. At this time he is awaiting word from this officer.

This past Friday my husband advised me that Senator Ken Donnelley was a firefighter and a cancer survivor. Paul had met him in 99 as a family liaison during the Cold Storage Warehouse fire. He said I should call him. I did, and spoke at great length with his Chief of Council, David Swanson who advised he will be speaking to the Senator and Chief of Staff. By Monday the reply came from David Swanson, both Senator Donnelley and Mr. Swanson are looking into this issue. IAFF L1314 President Burns advised me that he will also be in communication with the Senator.



It's very concerning, the cumulative effect of putting on the gear day after day, year after year. In addition to added absorption rate, a firefighter faces as their body temperature rises. In Europe the response of one manufacturer regarding dermal absorption of the PFOA to a group of firefighters

Was, 'it's not really that much.' Wonder how many days, months, and years he'd like to wear that suit.

We need legislation to force the chemical giants to act immediately. To produce the same standards here as are now being used in Europe. These manufacturers should be under a requirement to advise when their

materials sold here in the US are restricted in another country. This has gone on for too many years. The arms of the American Chemistry Council are long and reaching. That alone is a problem.

To share the knowledge of what is happening in Europe as well as studies and reports, I created a Facebook page titled, 'Your Turnout Gear and PFOA.' It will be updated with any information I can pass along. Link: <https://www.facebook.com/Your-Turnout-Gear-and-PFOA-1808869939437081> (<https://www.facebook.com/Your-Turnout-Gear-and-PFOA-1808869939437081/>)

Diane C.

Massachusetts



- C8
- Cancer
- Fire gear
- Firefighter
- Firefighter Cancer
- Firefighting
- PFOA

About Mutual Aid ([41 Articles](#))

Station-Pride is committed to providing high-quality content for our viewers. In order to do so, sometimes our contributors just aren't enough. This profile has been created to request mutual aid from other writers and authors in the fire service who are willing to share their knowledge with our followers. Please keep an eye out for guest contributions, and some with anonymous authors. Please keep in mind, Station-Pride contributors hold themselves to a very high level of professionalism. With that being said, these articles are un-edited and viewer discretion is advised.

28 Comments on The REAL Cancer in Your Gear

1. *Doug Terrell // [April 6, 2017 at 11:40 am](#) // [Reply](#)*

Interesting! To a point. But the article gets lost in chemistry, some of which doesn't make sense, without indicating where PFOA is coming into the gear. Now it does not take a rocket science to know we are using space-age . high-tech materials in all of our gear. From Nomex to Gore-tex none of the materials are natural, so it isn't far-fetched to envision some type of problem.

○ *paul Cotter // [April 6, 2017 at 12:59 pm](#) // [Reply](#)*

PFOA is a component of the fabric that makes up your turnout gear. It's manufactured into the fabric

○ *Lyle Bush // April 6, 2017 at 7:39 pm //*

Paul, Doug's point about the chemistry is that what the author listed as the chemical formula, and PFOA, do not match up. There isn't a single fluorine atom in the formula she listed, as well as indicating that an 8-atom carbon molecule is an issue. There's more carbon in fatty acids than this molecule, so there is clearly a disconnect in the understanding somewhere with this author. However, I do believe and agree with the merits of this article and the potential dangers of the materials being used in our bunker gear.

○ *Ron Givens // April 6, 2017 at 8:13 pm //*

<https://www.cancer.org/cancer/cancer-causes/teflon-and-perfluorooctanoic-acid-pfoa.html>

I believe there is slight confusion with the 8-atom carbon and the C8 we are referring to. I actually think the chemical makeup of PFOA just coincidentally contains 8 carbon atoms. Either way, the PFOA name is Perfluorooctanoic Acid and it is also known as C8. I'm not sure the comparison is between the name C8 and PFOA actually containing 8 carbon molecules.

2. *Paul King (District Chief 34 years service) // April 6, 2017 at 1:02 pm // Reply*

We have been preaching about this for years. It is an epidemic in the Nashville Tn FD. You young men need to listen to us old gray hair before it's too late.

CLEAN YOUR GEAR DO NOT STORE YOUR GEAR IN YOUR BAYS, REPLACE YOUR HOODS AFTER EVERY FIRE !!!!

3. *Chuck // April 6, 2017 at 2:38 pm // Reply*

AS a Hazmat Firefighter of about 25 years, and a cancer survivor, it made more than sense to me. I never thought of my gear as a problem. But if it were not for the IAFF, no one would have cared. They were in the front of this movement years ago when they were looking for better turnouts. I am retired now and seeing many of my fellow firefighter die from this disease. Why do we work for 25 to 30 years to only live 5 after we retire???????

4. *Jon Pearl // April 6, 2017 at 4:09 pm // Reply*

"When the realization of his not being able to return to the job he loved so much began to set in, it was a heart-wrenching chapter in our lives."

Cancer causing agents, aside – I don't understand why this FF could not return to work. I had the same surgery by Dr. Vipul Patel of Celebration Florida, who has performed more than 10,000 robotic radical prostatectomies and there was never the first discussion or thought about me not returning to work.

○ *Anonymous // April 7, 2017 at 9:26 am // Reply*

I am also perplexed by this. I am 6 weeks out from the same....my surgeon did not tell me I had to retire....although I did several years ago...I currently am still in a command role with a small combination department.

Just wondering.....

○ *Tom Carey // April 8, 2017 at 4:25 pm // Reply*

Everybody reacts differently to treatment. I am coming up on five years of being cancer-free (testicular not prostate) but I am one of a small percentage looking at possibly a lifetime of dealing with peripheral neuropathy from chemotherapy. There might of been some other post-surgery

complications not mentioned in the article.

○ *Ray Blessing // [April 9, 2017 at 12:21 pm](#) // [Reply](#)*

I was diagnosed with prostate cancer in April of 2012 at age 47, had the exact same surgery in June 2012, was out 30 days, returned to work with no problems and have been working ever since. My PSA remains at 0 and I will be five years out this June. Don't understand the retirement thing either. The first few days after surgery is fairly brutal, but healed up quickly. I do have one side effect but it's manageable with a prescription. Must be more to his surgery recovery. Certainly good information and really appreciate passing on but makes me have doubt overall.

5. *Joe Heverly // [April 6, 2017 at 4:43 pm](#) // [Reply](#)*

Great read. Great information. Being a Firefighter from a small career dept. (53+ -) and over the last 5 years I have seen 4 of my coworkers fight some type of cancer. Including losing my own brother who was 12 years on the job to brain cancer. Not to mention the number of retirees whom have passed over the past few years. This is an alarming epidemic. It needs to be solved and firefighters need to be taken care of. Thank you for all of this information.

6. *John Tutein // [April 6, 2017 at 8:34 pm](#) // [Reply](#)*

Not to downplay the seriousness of this issue. But, be happy you're not drinking PFOA. The water in Hoosic Falls, New York is contaminated with PFOA from runoff from local manufacturing plants. The EPA, EnCon, etc. have been working on the problem for several years, installing water filters, giving out bottled water, etc. There have been a number of cancer cases.

7. *Anonymous // [April 6, 2017 at 11:08 pm](#) // [Reply](#)*

What are they going to do about this. This is outrageous they are one of our defenses. They take care of everyone else, now we have to take care of them.

8. *Robert Haubrick // [April 7, 2017 at 7:51 am](#) // [Reply](#)*

Very well written and VERY informative. I have been in the fire service as a volunteer for 42 years and have always tried to stay healthy. This information is important and should be considered by ALL firefighters. The job is dangerous enough without worrying about the gear that is supposed to protect us!! Thank you for your research and dedication.

9. *Anonymous // [April 7, 2017 at 8:15 am](#) // [Reply](#)*

Between paid and volunteer I have 24 years as a firefighter and 26 years (11 years overlapping) as a full time law enforcement officer wearing a ballistic vest. I am 58 and was just diagnosed with stage 2 prostate cancer with a Gleason scale of 9. I have no family history of cancer and now I am preparing to have the radical prostatectomy. I too am looking for something to be a cause of this cancer that is a very aggressive form of prostate cancer. Did I get double dosed by bunker gear and ballistic vests? I don't know. This is certainly a topic that needs to be studied much more aggressively with the safety of firefighters and law enforcement officers health and safety as the first priority. As for those who were trying to pick apart the chemistry in this article; this is not a scholarly research paper. This is the bell ringing that sounds the alarm to get the scholarly research done.

10. *Michael Skellie // [April 7, 2017 at 11:16 am](#) // [Reply](#)*

Awesome site, folks! Please take a look at our website to learn about our current project: The American First Responders Memorial Monument.

○ *Jon Marr // [April 7, 2017 at 11:03 pm](#) // [Reply](#)*

Unfortunately, your website does not appear to be working... THE afrmm.com

11. *Glenda Farrin // [April 8, 2017 at 10:30 am](#) // [Reply](#)*

I lost my husband to aggressive prostate cancer. He was not a fire fighter but he taught auto mechanics. I believe his might have come from some of the materials in brake shoes, paints, and other materials he was in contact with over the 27 years he taught.

○ *w4abc // [April 9, 2017 at 2:47 am](#) // [Reply](#)*

"I lost my husband to aggressive prostate cancer. He was not a fire fighter but he taught auto mechanics. I believe his might have come from some of the materials in brake shoes, paints, and other materials he was in contact with over the 27 years he taught."

Hi Glenda,

Sorry for the loss of your husband.

The owner of the shop where I've always gone to get my brakes done, now has cancer. I think everyone in that shop has finally come to realize that all of the aerosols, lubricants and solvents that they've soaked into their skin over the years isn't good for long term survival. They've finally started wearing Nitril gloves and moved the brake lathe to an outside wall with an exhaust hood to the outside. We all have to be our own best advocates.

12. *J // [April 8, 2017 at 4:39 pm](#) // [Reply](#)*

Thanks for looking into this. I'm a fire fighter and my father was as well. My father retired with prostate cancer as well. Keep up the great work!

13. *Jim Reidy // [April 9, 2017 at 2:24 pm](#) // [Reply](#)*

Thanks for the information and the obvious passion put into the article. I'm sorry that you and your husband have gone thru this. I've watched my friends and brothers die or have to retire from cancers we're sure come from the job. As a firefighter member and rep on the 1971/1851 committee, I can tell you that cancer reduction for our brothers and sisters is a primary focus among the end user/firefighter reps; as I'm sure it is for everyone on this 35 member committee. We receive a great deal of information as its discovered, validated, and processed. We've tried to reduce our carcinogen contamination by adding to the standard better and more frequent on scene decon, routine cleaning, and advanced cleaning of our PPE. Hopefully we'll close off the last opening for dermal absorption by allowing creation of a hood (optional) that will block the carcinogenic particles contained in the smoke. But dermal absorption also comes during overhaul and later in cross contamination and while we can try to address this, culture is also a part of the problem. We are trying, but we're only as good as the information we can gather or receive. Since the Cincinnati Meta Study and the subsequent ones done by various fire service, research, and government entities; more and more information is being brought forward. While i don't speak for everyone, please be assured that; the committee is very focused on reducing firefighter carcinogen contamination, and the firefighter/end user group is not subservient to the manufacturers. I would invite you to attend any of our upcoming 1851 committee meetings to see what goes on firsthand and provide whatever input you want to. Thanks again for the information. I'll certainly be seeking information regarding PFOA. Jim Reidy

14. *Keith moore // [April 10, 2017 at 3:31 am](#) // [Reply](#)*

Had this gone to the FBU?

15. *Bomberos San Rafael // [April 13, 2017 at 9:35 pm](#) // [Reply](#)*

Muy buena la nota, acá comparto algo que publique en su momento en mi blog, los saluda atentamente el Oficial Azor de la Policía de Mendoza-Argentina.

“NACIDO PARA MORIR”

<https://bomberossanrafael.blogspot.com.ar/2012/08/nacido-para-morir.html>

16. JJ // *November 26, 2017 at 2:47 pm // Reply*

They should go back to the old rubber coats and boots. The carcinogens washed off them rather than getting imbedded in the fabric. Manufacturers make up the NFPA and that's who lobbies the politicians to make this cancer causing gear mandatory.

17. *survival gear // December 21, 2017 at 5:45 am // Reply*

Nice post. I learn something totally new and challenging on sites I stumbleupon everyday. It's always useful to read through articles from other authors and use something from other web sites.

18. William // *January 31, 2018 at 7:55 am // Reply*

“This is sad..I've been a fireman for over 35 years and now I've been diagnosed with Prostate Cancer about a month and a half now..I also know of about sixteen plus Fireman who has Cancer..this is very Sad and Scary..!!

19. Arthur // *June 5, 2018 at 8:51 pm // Reply*

Was there thismuch cancer happening when firefighters were wearing rubber coats and pull-up boots, before they started wearing this bunker gear?

20. mat // *July 23, 2018 at 2:11 pm // Reply*

<https://www.firerescue1.com/cancer/articles/349394018-PPE-manufacturer-refutes-false-claims-about-turnout-gear-hazards/>

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1. [Fire Gear & PFOA – The Data \(The Real Cancer in Your Gear-Follow-Up\) – Station Pride](#)
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