

Prostate Examiner Spring Newsletter

Visit us at www.prostatecancersupporttbay.org



Looking for Support

Local men available to talk to you

Gary Allen 621-0552

Grant Arnold 807 355 8235 or
519-584-5125

Marc Breton 628-9944
(en francais)

Bill Everitt 767-5768

David Everitt 628-5287

Marcel Girouard 705-362-8154
(en francais)

Bill Horde 767-1490

Ed Long 628-6915

Milton Marion 475-0760

Dez Stolz 577-9515

Women available to talk to you

Beth Long 629-4774

Carmen Marion 475-0760

Lise Pollard 623-3102(en français)

Northwestern Ontario Region

Atikokan

Ron Speck 807-597-2219

Dryden

Horst Lang 808-223-5516

Fort Francis

need a contact

Hearst

Marcel Girouard 705-362-8154

(en français)

Kenora

need a contact

Terrace Bay/ Schreiber

Mike Regis 807 825 9696

Geraldton

Ron Adams 807 854 1476

SPRING



Don't Fret
IT'S JUST AROUND THE CORNER

Email us at
info@prostatecancersupporttbay.org

Tobacco smoking undermines anti-cancer safeguards by causing harmful DNA mutations

Reviewed by *Danielle Ellis, B.Sc.*

Nov 3 2023

Scientists at the Ontario Institute for Cancer Research (OICR) have uncovered one way tobacco smoking causes cancer and makes it harder to treat by undermining the body's anti-cancer safeguards.

Their new study, published today in *Science Advances*, links tobacco smoking to harmful changes in DNA called 'stop-gain mutations' that tell the body to stop making certain proteins before they are fully formed.

They found that these stop-gain mutations were especially prevalent in genes known as 'tumor-suppressors', which make proteins that would normally prevent abnormal cells from growing.

"Our study showed that smoking is associated with changes to DNA that disrupt the formation of tumor suppressors," says Nina Adler, a University of Toronto PhD student who led the study during her postgraduate research in Dr. Jüri Reimand's lab at OICR. "Without them, abnormal cells are allowed to keep growing unchecked by the cell's defenses and cancer can develop more easily."

Adler, Reimand and colleagues used powerful computational tools to analyze DNA from more than 12,000 tumour samples across 18 different types of cancer. Their analysis showed a strong link between stop-gain mutations in lung cancer and the telltale 'footprint' that smoking leaves in DNA.

The researchers then looked at whether how much someone smoked had an impact. Sure enough, their analysis showed that more smoking led to more of these harmful mutations, which can ultimately make cancer more complex and harder to treat.

-Tobacco does a lot of damage to our DNA, and that can have a major impact on the function of our cells. Our study highlights how tobacco smoking actually deactivates critical proteins, which are the building blocks of our cells, and the impact that can have on our long-term health."

Dr. Jüri Reimand, an OICR Investigator and Associate Professor at the University of Toronto

The study also identified other factors and processes responsible for creating large numbers of stop-gain mutations, which are also called 'nonsense' mutations. Some, like a group of enzymes called APOBEC that is strongly linked to stop-gain mutations in breast cancer and other cancer types, occur naturally in the body. Other factors like unhealthy diet and alcohol consumption are also likely to have similar damaging effects on DNA, but Reimand says more information is needed to fully understand how that works.

As for smoking, Adler says the findings from this study are an important piece of the puzzle behind a leading cause cancer in the world. "Everyone knows that smoking can cause cancer, but being able to explain one of the ways this works at a molecular level is an important step in understanding how our lifestyle affects our risk of cancer," Adler says.

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OICR President and Scientific Director Dr. Laszlo Radvanyi says these new insights should reinforce that tobacco smoking is one of the biggest threats to our health.

"This is further proof of the immense damage smoking has on our bodies, and further evidence that stopping smoking is always the right choice," Radvanyi says.

Source:

[Ontario Institute for Cancer Research](#)

Journal reference:

Adler, N., *et al.* (2023). Mutational processes of tobacco smoking and APOBEC activity generate protein-truncating mutations in cancer genomes. *Science Advances*. doi.org/10.1126/sciadv.adh3083.

Supercharge your health with carotenoids



May 15 2023

By Dr. Chinta Sidharthan

Reviewed by Benedette Cuffari, M.Sc.

In a recent study published in the journal *Antioxidants*, researchers review existing research on the benefits of carotenoids to understand the potential use of carotenoids as nutraceuticals and functional health foods.

Background

Plants contain biologically active compounds called phytochemicals or phytonutrients with potential health benefits and uses in medicine, food, and cosmetics. Due to their ability to decrease oxidative stress, plants have also been used to treat various diseases.

Carotenoids are a group of phytonutrients with possible cardiovascular and anti-cancer benefits. These brightly-colored compounds are found in photosynthesizing organisms such as plants, cyanobacteria, and algae and are associated with chlorophyll to absorb specific wavelengths of light. Furthermore, carotenoids protect plant cells from light damage and superoxide radicals and decrease the reactivity of oxygen species.

Carotenoids are found in bright-colored vegetables, fruits, egg yolks, butter, cheese, and seafood. Apart from the selection and cultivation of staple foods that are known carotenoid sources, there is also a growing interest in exploring underused wild vegetables and fruits to discover new sources of carotenoids.

Carotenoids and their sources

There are more than 600 naturally occurring carotenoids, synthesized mainly by plants, fungi, and bacteria. All contain a conjugated double-bond system that allows them to absorb light in the 400-550 nanometer (nm) wavelength. Based on composition, these compounds are classified as carotenes, which have only carbon and hydrogen atoms, as well as xanthophylls, which also contain other oxygenated functional groups.

Carotenes, of which β -carotene is the most abundant, are found in mangos, apricots, grapes, and carrots. Lycopene is an acyclic carotene generally found in vegetables and fruits with red flesh, such as tomatoes and watermelons. Lutein is the most abundant xanthophyll, while smaller amounts of other xanthophylls, like zeaxanthin, can also be found in green vegetables and cereals.

Carrots, tomatoes, red peppers, green vegetables, mangoes, peaches, apricots, papaya, and citrus fruits are major sources of carotenoids. Beta-carotene is also found in green leafy vegetables such as spinach, kale, and lettuce. Lycopene is mainly found in fruits and vegetables that are red-fleshed, such as tomato, watermelon, pink guava, and papaya, as well as green vegetables, such as asparagus and parsley. Green leafy vegetables, such as kale, spinach, purslane, watercress, parsley, Brussel sprouts, lettuce, and broccoli, are a significant source of lutein, while red and orange peppers are a good source of zeaxanthin.

Besides vegetables and fruits, carotenoids are also found in cereals, especially maize, dairy products, fish, and mammals that accumulate yellow fat, such as cattle and birds. As carotenoids are lipid-soluble, the bio-accessibility of carotenoids also depends on the lipid content of the diet. Additionally, the presence of other phytochemicals such as fatty acids, phytosterols, tocopherols, and polyphenols also impact the absorption of carotenoids.

Role in human health

Lycopene has the highest free radical activity among the 600 naturally occurring carotenoids and has exhibited the ability to protect deoxyribonucleic acid (DNA) from oxidative stress and prevent mutations that could cause chronic diseases. Various studies on animal models, as well as *ex vivo* and *in vitro* studies using cultured cells, have reported that carotenoids have anti-inflammatory properties and exhibit beneficial effects in lipidic and glycemic impairments, as well as the apoptosis and proliferation of tumor cells.

Lycopene has been used as a nutritional supplement in the treatment of various cardiovascular diseases and appears to reduce cholesterol oxidation, enhance antioxidant properties, and reduce oxidative stress. Lycopene has also shown protective properties during arterial transplants by modulating the production of proteins involved in arteriosclerosis.

Carotenoids, such as β -carotene, have been associated with a lower risk of type 2 diabetes, whereas lycopene has been seen to decrease fasting blood glucose levels. Although data on the anti-cancer properties of carotenoids are insufficient, carotenoid consumption is linked to a reduced risk of estrogen receptor-negative breast cancer and prostate cancer.

Previous studies have also reported that the anti-inflammatory properties of lycopene have been associated with a lower risk of various cancers such as lung, breast, prostate, ovarian, and stomach cancers.

The protective properties of carotenoids against ultraviolet radiation have also been examined for the treatment of various eye and skin diseases, and carotenoids have been used in a wide range of cosmeceuticals.

Conclusions

This comprehensive review discussed carotenoids' antioxidant and anti-inflammatory properties, the numerous food sources of carotenoids, and the use of various carotenoids, especially lycopene, as nutritional supplements in treating various diseases. The findings highlight the scope of using carotenoids as nutraceuticals and functional food in treating various diseases and cosmetic treatments.

Journal reference:

- Crupi, P., Faienza, M. F., Naeem, M. Y., *et al.* (2023). Overview of the Potential Beneficial Effects of Carotenoids on Consumer Health and WellBeing. *Antioxidants* 12(5). doi:10.3390/antiox12051069

IN PERSON MONTHLY MEETINGS AT 55 PLUS

The multi purpose room has been booked for the **third Thursday of every month from 7 PM till 9 PM**

Seating will be appropriate for safe distancing and masks are welcome.

The meeting will also be available on Zoom for those who are not comfortable with in person yet.

UPCOMING EVENTS

Upcoming meetings at 55 plus

March 21st - Peer to peer discussion

April 18th - Olivia Moore and Dr Nucci on EMSELLA pelvic floor therapy

May 16th - Annual General Meeting

June 20th - Social at 55 Plus

Prostate Cancer Support Thunder Bay Christmas celebration



Above are a few pictures from our 2024 Christmas celebration at 55 Plus.

The event was attended by over 60 people and all were able to participate in an evening of good conversation, music and food.

Leading the group in song are Ed Long and Debbie Komar

Those that attended I'm sure noticed that the sandwiches ran out pretty quickly. We found out later that half our sandwiches were sent to a different event.

Also pictured above is Ken Johnson who celebrated his 95th birthday on the same day as our celebration.

PRESIDENTS MESSAGE

In the fall, the Prostate Cancer Federation of Canada (PCFC) gathered electronically 61 prostate cancer support group leaders and members from Canada to talk about our groups and supporting men with prostate cancer. These men and women were from every province except Manitoba and included NWT. Three major themes emerged from the discussions:

1. It is important to stay connected and gather to learn from each other and share resources.
2. Enhanced digital/online presence is needed to enhance the credibility and awareness of our groups.
3. We need to enhance awareness of prostate cancer support services to health care professionals.

As I reflected on the results of the “Support Hub” as it was called, I was grateful for the history of good and creative leadership of the support group and the board that I am a part of. We are doing many things well and have ideas and encouragement that we can share with other groups. There are also many ideas that we can easily adapt from other groups to better support those served by our cancer centre. We offer support to the whole area of NWO. It is more difficult to do because of the distances, but we are working at it. The equipment provided by PCFC to enable hybrid meetings is a great help when people who can not be at an in person meeting. In person is always best but a zoom meeting is better than not meeting with others.

All of us, as individuals or as a group, add to our difficulties when we try to “go it alone.” Thankfully, we do not have to. We have others to walk with on our journey with prostate cancer and the many other things that have an effect on our lives. We have experienced the benefits of uniting with others.

We are looking forward to activities we are working on. We will have our annual meeting in May and we are looking for men who would like to share their skills and join us on the board. We meet monthly as a board and share committee responsibilities.

At our June social, we will be celebrating 30 years as a prostate cancer support group in Thunder Bay. It takes a lot of dedication by a lot of men to keep this group alive and thriving for all these years. It is certainly something to celebrate.

As men who have made things happen, we are planning for our men’s health event, Men Make It Happen on Saturday, September 7 from 10:30-2:15 this year. We are hoping that moving it to Saturday, with the time starting earlier will increase the attendance. We have a committee working on logistics of putting it all together. We will be looking for volunteers later in the spring to help with the event.

There are always changes in our lives. Men are finding out about our group by searching online now. It is a new reality. The old reality is still true that the best support comes from person to person talking. Thank you to each of you for your participation and support.

Sincerely
Your President

Ed Long



DONATIONS

Prostate Cancer Support Thunder Bay is a charitable organization that relies entirely on donations to remain in operation.

donations can be e-transferred to info@prostatecancersupporttbay.org

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Recently diagnosed with Prostate Cancer ?

NEED SOMEONE TO TALK TO?

Please feel free to call anyone listed on the left side of the front page of this newsletter.

They have been where you are now and will be happy to listen to your concerns and questions.

Prostate Examiner Monthly News

Please forward photos or information that benefits communication to Prostate Cancer Support Thunder Bay members to the attention of Mike Aldrich.
email: mraldrich@tbaytel.net



"Okay, Mr. Johnson, during this next part of your exam, you may feel some slight discomfort."

GET YOUR PSA TESTED

Its important

We believe in it so strongly that

we will reimburse you for your PSA test !!!

The PSA test is a key step in early diagnosis of prostate cancer

**Early Detection Saves Lives
Get Informed!**

Talk to your health care professional! Get your blood work done!

Send us the receipt

Address below or check us out on our website

Has been extended to December 31 2024. Available for men in NWO.

PCS T Bay Members, please share the above message !

Inform your family, relatives, friends and neighbours to request a

PSA Test

Awareness Support Research

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