



Lights Out! Nature of Things

View the episode online.

Our planet is lit up 24 hours a day, 7 days a week. Recently scientists have been discovering that exposure to artificial light at night, even the glow of a cell phone or computer screen, can throw our internal body clock out of sync with the planet and may even be leading to serious illnesses like cancer, obesity, heart disease and certain forms of depression.

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Thunder Bay Breast
Cancer Survivors Forum



Night Shift Workers Face Increased Breast Cancer Risk

Study looked at hundreds of women in diverse occupations.

CBC News Online Posted: July 02, 2013

www.cbc.ca/news/health/night-shift-workers-face-increased-breast-cancer-risk-1.1313542

Working night shifts for 30 years or more could increase breast cancer risk, a Canadian review suggests. The World Health Organization's International Agency for Research on Cancer (IARC) considers shift work as a probable carcinogen based on limited evidence in humans and stronger associations in animal studies.

Nurse Nglia Buchan says her sleep and eating habits are affected by working night shifts. (CBC) Previous research on breast cancer risks associated with night shifts were largely based on nurses. Now Prof. Kristan Aronson of Queen's University in Kingston, Ont., has extended those findings to include prolonged shift work in non-health professions as well.

"Long-term night-shift work in a diverse mix of occupations is associated with increased breast cancer risk," Aronson and her co-authors concluded in the journal Occupational and Environmental Medicine.

The researchers also asked about lifetime occupational histories to capture both rotating and permanent night-shift schedules for more than 1,100 women with breast cancer and more than 1,100 others without the diagnosis who were the same ages and lived in Vancouver or Kingston. Most were in their mid to late 50s.



Continued inside

This article is a follow-up from a discussion that took place at the February meeting.

Self-Advocacy

What is self-advocacy?

Self-advocacy is advocacy that you do to achieve a specific goal or outcome for yourself. Self-advocacy is about speaking and negotiating for yourself, making your own informed decisions and knowing how you would like a problem to be resolved.

Self-advocacy is also about empowerment, recovery and standing up for your rights. You may also want to get help from an independent advocate, or another person of your choice who can provide information, resources, or support you as you advocate for yourself.

Why is self-advocacy important?

Self-advocacy is important because it helps you solve your issues in the way that you would like them resolved and it allows you to take ownership of the issue. Self-advocacy can help you learn new skills, improve the skills you already have and work together with others to improve your situation. Self-advocacy also heightens accountability and breaks the cycle of dependence on others to resolve issues for you. By making a complaint, you are giving the other person an opportunity to review existing practices, policies and procedures and make sure that these are respectful of your rights and entitlements. Self-advocacy can lead to positive change.

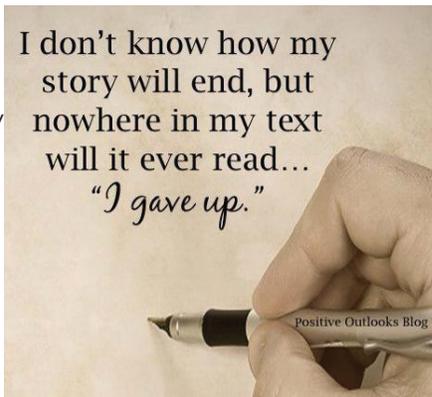
What are the steps to successful self-advocacy?

Successful self-advocacy involves planning, preparation, research and knowing when to reach out for support. It also involves knowing how your rights were violated and what you would like to achieve in resolving your issue. To help you plan a self-advocacy strategy, consider the following basic steps:

1. Define or explain the problem – be clear, to the point and have all the facts
2. Develop an action plan – know where to begin and be prepared with information
3. Carry out the action plan – don't be afraid to reassess or modify the plan as you go
4. Evaluate the results – what worked and what didn't work? – this will help you the next time you self-advocate

Helpful Tips

- Clearly state the issue and know what you want
- Keep records and document the process
- Educate yourself and others about the issue
- Research your topic and know your rights
- Know the options for resolution
- Have a back-up plan
- Treat others like you would like to be treated
- Provide feedback to those who worked with you to resolve the issue
- Don't be afraid to say "thank you"



Izabela Piro photography

THE DRAGON IS COMING! SAVE THE DATE

The Thunder Bay Dragon Boat Festival will be held on July 18th at McKellar Island, due to the Boulevard Lake dam construction. Watch for further information as the event develops.



A black silhouette of a dragon boat with several rowers and a dragon head at the front. The boat is shown in profile, moving towards the right.

"Hope" is the thing with
feathers,
That perches in the soul,
And sings the tune with-
out the words,
And never stops at all.
~Emily Dickinson,
c.1861

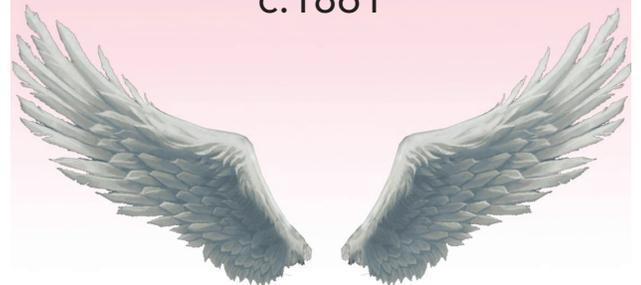


Image by Amiamy111, Diviant Art Website



Cover Story Continued.....

They also reviewed hospital records for information on cancer diagnoses.

About a third of women in both groups said they had a history of night shift work.

“Our ultimate aim is to prevent breast cancer all together,” Aronson said in an interview Tuesday.

“So if this is truly an environmental risk factor for breast cancer, we can develop healthy workplace policy that would reduce the impact of shift work on women.”

Sleep and hormone melatonin

The researchers considered other factors that can affect cancer risk, such as reproductive history, body mass index, smoking and alcohol consumption.

In Kingston, the ongoing research is looking at how current shift-work patterns may be related to cancer risk.

One hypothesized mechanism focuses on melatonin, a hormone that is blocked by light and has been suggested to be protective against cancer. Suppression of melatonin is a possible explanation,

agreed Russel Reiter, a researcher at the University of Texas Health Science Center in San Antonio, who has also studied the topic. “The strength of the study is in the number of individuals included,” Reiter told HealthDay News.

Sleep disturbances, throwing off the body’s internal clock mechanism and low vitamin D levels are other possibilities.

Nglia Buchan has worked night shifts as a nurse in Toronto for 14 years. She averages about five hours of sleep. “I give up my sleep so that I can be with my children,” Buchan said.

“Hoping that as they get a little older then I can try to regain my health again, do some more exercise, eat properly because you eat a lot to stay awake.”

Provincial workplace insurance boards and employers are already interested in the findings and ways of reducing the impact of shift work, Aronson said.

In Denmark, 37 women who got breast cancer after working night shifts were compensated following a 2007 decision by the International Agency for Research on Cancer.

“It depends on people’s value systems and judgments for at what point they will consider this causal,” Aronson said.

The Canadian researchers plan to combine their updated data with groups in Europe to judge the carcinogen relationship of night shifts.

The research was funded by the Canadian Institutes of Health Research. With files from CBC’s Kelly Crowe and Melanie Glanz

goodfood



Parmesan Spring Chicken

Full of spring flavours, the Parmesan coating gives a satisfying crunch and the meat stays tender.

Heat grill to medium and line the grill pan with foil. Beat the egg white on a plate with a little salt and pepper. Tip the Parmesan onto another plate. Dip the chicken first in egg white, then the cheese. Grill the coated chicken for 10-12 mins, turning once until browned and crisp.

Meanwhile, boil the potatoes for 10 mins, adding the peas for the final 3 mins, then drain. Toss the vegetables with the spinach leaves, vinegar, oil and seasoning to taste. Divide between four warm plates, then serve with the chicken.

- 1 egg white
- 5 tbsp finely grated parmesan
- 4 boneless, skinless chicken breasts
- 400g new potatoes, cut into small cubes
- 140g frozen peas
- good handful baby spinach leaves
- 1 tbsp white wine vinegar
- 2 tsp olive oil



Victoria Inn Grand Ballroom
April 16, 2015 at 6:00 pm
Ticket Price: \$95.00

A Look Ahead



March 2015

A film festival featuring movies about breast cancer.
www.breastfestfilmfest.com

The elegant evening will include a gourmet dinner and entertainment followed by the auction of 10 of Thunder Bay's finest and most eligible bachelors. Each bachelor comes with a fabulous date package including a main event, dinner at one of Thunder Bay's finest restaurants and a pamper package for the successful bidder. Women have the option of taking the bachelor on the date or taking their significant other!

Ticket information coming soon!
Contact the Thunder Bay Regional Health Sciences Foundation at 684-7112.

For Support and Encouragement

Thunder Bay
Breast Cancer
Support Group



As fellow support group members, we would be happy to hear from you.

394 Cougar Crescent
Thunder Bay, ON P7C 0B3

(807) 475-0025 (Voice Mail)
bcsbg@tbaytel.net
breastcancersupporttb.com



MEETINGS

March 11th
April 8th
May 13th
June 10th

7:00 pm
St. Michael's Church
Red River Road



Canadian Breast Cancer Network
Réseau canadien du cancer du sein

www.cbcn.ca



Breast & Hereditary Cancer Support

www.willow.org
1-888-778-3100



Supportive Care
(807) 684-7310
Toll Free
(877) 696-7223
No Referral Needed

Thunder Bay Regional
Health Sciences
Foundation

The Thunder Bay Breast Cancer Support Group gratefully acknowledges the funding support of the Northern Cancer Fund of the Thunder Bay Regional Health Sciences Foundation. All gifts made to the Foundation stay in Northwestern Ontario to benefit its residents.

healthsciencesfoundation.ca

GO GREEN

If you have an email address, please consider receiving the newsletter electronically. Not only does it help to keep our postage costs lower, it helps to keep our environment green. Simply sign the guest book at the next meeting and provide your email address or send a quick email to bcsbg@tbaytel.net and you will be added to our E-List.

Hot Topic SABCS 2014 The Genetics of Hormone Resistant Breast Cancers

by **Donnas Stuart**
Member of the **Thunder Bay Breast Cancer Support
Group and
the Dragons of Hope Dragon Boat Team
Thunder Bay Ontario Canada**

It was thrilling to attend the 37th annual San Antonio Breast Cancer Symposium held in San Antonio Texas from December 9th -13th 2014 as a breast cancer survivor and advocate sponsored by the Alamo Breast Cancer Foundation. My assigned sessions were about endocrine resistance and genomic changes.

It is common knowledge that of all diagnosed breast cancers, about 75% are considered Estrogen Receptor positive (ER+). This female hormone, estrogen, can promote the growth of some breast cancers. Two types of endocrine therapy, also called hormone therapy, are the use of drugs or surgery to block or inhibit hormones from getting to breast cancer cells, or to turn off the production of hormones from the ovaries to stop or slow the cancers growth. Some common types of drugs that you may be familiar with that do this job are known as aromatase inhibitors such as Arimidex, Aromasin or Letrozole. Tamoxifen, which is known as a SERM (Selective estrogen-receptor modulator), is also used. Because endocrine therapy plays such a big role in the treatment of ER+ breast cancers when we hear that some of these cancers are developing a resistance to these drugs, it is a big problem, and we want to know why and what can be done about it. And that is what these researchers are working towards.

In S1-3 Hartmaier and colleagues presented their research where they studied tissue samples of 6 women with metastatic breast cancer at more than one site, such as bone, liver, and lung. They found that large structural changes in genes, where pieces of DNA from one chromosome move to another, are often shared between the primary tumour and the metastases, all be it in much smaller amounts after chemotherapy. This sharing was not seen for the smaller changes in DNA, such as mutations in genes. As Dr. Steffi Oesterreich went on to explain to me, this is where they also found a new alteration in the estrogen receptor that causes tumours to be resistant to hormonal therapy! It is these large structural changes that Dr. Hartmaier was speaking of in his presented abstract when he identified one patient in his study with metastases who was receiving endocrine therapy where he found a fusion gene between ESR1 (estrogen receptor alpha) and DAB2 (disabled 2) and concluded that changes in ESR1, in different manners, is a common method of endocrine therapy resistance. Of interest also to this writer is that

Dr Hartmaier believes that DAB2 may be a tumour suppressor gene in ovarian cancer. By understanding genetic mutations which characterize ER+ breast cancer, and the poorly understood genomic changes in metastatic breast cancer, and determining how frequently this change occurs, the hope is Doctors will be able to predict even more accurately than they presently can, which treatments will work best for each woman, and save her from toxicities and delays in adjusting treatments that don't work.

In S1-05 Dixon presented a detailed look at genetic mutations which characterize ER+ breast cancers. There was a lot of talk at SABCS about the heterogeneity of breast cancer tumours, where one tumour can have many different types of cells in it, and even more complexity was demonstrated in this research. Karuna Jaggar in Breast Cancer Action expressed the surprise that many of us in the audience felt upon hearing how tumours can change. The tumours sampled actually switched back and forth, effectively changing cancer subtype! These changes occurred in response to endocrine therapy. These findings led Dixon to conclude that baseline analysis of tumours is insufficient to predict endocrine response and that there is a need to analyze cancer tumours in an ongoing basis during treatment because it changes. Knowing of tumour heterogeneity Dixon takes multiple sample bits from each tumour. Finally, Dixon found 4 genes that can reliably predict responses to endocrine therapy and which will help doctors in the clinic to predict which patients tumours will respond and which ones will be resistant to therapy.

As breast cancer survivors there is not much that we can control about the heterogeneity of tumours, or when, why, and how those tumours genetically mutate or their response to current treatments, however, knowledge is power. In the face of all of this complexity, and at times discouraging new information, we need to focus on what we CAN do to stay well. Such as eating healthy foods, keeping active in both mind and body, and finding healthy ways to cope with stress. In closing, and continuing on in the theme of cancer and genetics, here is something that may inspire you, as it did me. Medical Oncologist, Dr Dimitri Verigidis, tells me, and research bears him out, that regular sustained exercise, such as running, can reduce the rate of telomere shortening (telomeres are the ends of our chromosomes) and longer telomeres equal longer life! Time to head out for my run:)

My assigned Lectures were:

General Session 1

S1-3

Identification of base pair mutations and structural rearrangements acquired in breast cancer metastases including a novel hyperactive ESR1-DAB2 fusion gene specifically in hormone recurrence.

Hartmaier RJ, Puhalla SL, Oesterreich S, Bahreini A, Davidson NE, Brufsky AM, Lee AV

S1-5

In depth genomic analysis of ER+ breast cancers during development of endocrine resistance.

Dixon JM, Turnbull AK, Fan C, Parker JS, He X, Arthur L, Martinez-Perez C, Renshaw L, Perou C

In writing my article I used information provided by the researchers as above as well as authors :

Zosia Chustecka, Medscape 11/25/2014

Karuna jaggar, Executive Director Breast Cancer Action 12/10/2014

Masood A. Shammam, Telomeres, lifestyle, cancer and aging- ncbi.nlm.nih.gov/pubmed

Personal Communication Dr Steffi Oesterreich ~ Professor of Pharmacology and Chemical Biology at the University of Pittsburgh Cancer Institute and co-author of S1-03 12/29/2014

Dr. Ryan Hartmaier, quoted in MedicalResearch.com - Gene Mutation Identified in Metastatic Breast Cancer 12/17/2014

Personal Communication Dr. Dimitri Vergididis Chief of Medical Oncology Regional Cancer Care, Thunder Bay Regional Health Science Centre

All of the research presented at the San Antonio Breast Cancer Symposium (SABCS) can be accessed free of charge by going to:

www.sabcs.org

Then SABCS 2014 Resources

then SABCS on Demand ~for 37th annual SABCS

December 9-13 2014

Browse by schedule

For instance:

Day 1-Tuesday Dec 9 2014

Type in the search bar the title of the presentation that you want to watch : Immune Checkpoints and Cancer Therapy

Then View Now.

All of these presentations will be available on-line for the next 3 years. I will bring the Pocket Program when I come to the group for people to have a look at. It might be easier to find topics of interest that way.

Donnas will be the guest presenter at the BCSG April Meeting. She is looking forward to meeting with the group and sharing some of the highlights of SABCS with everyone.