



Dr Stephen Hardy serves on the Cancer Care Centre Board and is a cancer biologist and immunologist. He has many years' experience in the preventative health, wellness and environmental sector and is the founder and managing director of Promoting Good Health Pty Ltd.

## Causes of Cancer Part 2: What we do to ourselves

In the first article of this series (1) we discussed why cancer is preventable and how six simple lifestyle changes could prevent 37,000 cancer cases in Australia each year.

In the first article we also discussed the current thinking on the causes of cancer. These were:

- 30 % of cancer is caused by what we do to ourselves;
- 30 % of cancer is caused by what we've done to the environment;
- 30 % of cancer is caused by what you catch; and
- Only 5 – 10 % of cancers are genetic.

In this and subsequent articles, we will look in more detail at each of these categories. We'll start with the 30 % of cancer caused by what we do to ourselves.

Changing just six lifestyle factors can significantly reduce your cancer risk (2), with some arguing this alone can reduce your risk of preventable cancers by up to 90%! To refresh, the six lifestyle factors are:

- Alcohol;
- Smoking;
- Poor Diet;
- Obesity;
- Lack of regular exercise; and
- Excessive exposure to UV light.

And I won't be discussing any of them, which may seem a little odd: An article on preventing cancer, which won't discuss the major risk factors?

The reason I won't be discussing any of the risk factors or how to change them is because there is something far more important to consider: Why you do them in the first place.

We like to think we are logical creatures and our actions and decisions based on sensible and rational decisions. Yet when we look at our behaviour honestly, this isn't how it works. We all have 'Go To Behaviours' for when we are tired, stressed or feeling down. Behaviours to help us cope, relax or feel better. The sad reality is these 'Go To Behaviours' –

which often include the six lifestyle factors above - may make us feel better in the short term but are often self-destructive and doing harm to us or those around us. And we know it. So why do we continue to do them again and again and again? It's an important question as until you understand the drivers behind why you keep doing things to sabotage your health and happiness, you have little chance of successfully changing the behaviours and turning your life around.

To start, I'll re-tell a well-known story attributed to the Cherokee:

An elder was teaching his grandson about life

*"You have two wolves fighting inside you"* he said.

*"One is black and driven by anger, envy, greed, guilt, resentment, selfishness and arrogance. The other is white and is love, joy, benevolence, compassion, truth, generosity and humility."*

After a moment's reflection, the young boy asked: *"Which wolf wins?"*

*"The one you feed"* came the reply.

While *"The one you feed"* answer is fundamentally true and the usual ending given to this story, it isn't the whole story.

The story reflects the internal battle between your subconscious and conscious mind. The black wolf is your subconscious, the white wolf your conscious.

The reality is both wolves – the subconscious and the conscious - must be fed. Starve one and it will feel threatened and fight back. For wholeness, yin must balance yang.

To understand this story we need to know what your subconscious and conscious minds do. In a nutshell: Your subconscious feels, your conscious thinks.

The feelings and emotions arising from the subconscious provide the power, passion and drive to keep you going. But what are the motives for these feelings and is what the subconscious wants in your best interests? This is a massive topic we cannot cover here other than to say the motives of the subconscious are often dark, selfish, irrational and not to be trusted. Being driven by passion is a wonderful thing. Being a slave to your emotions is not. Your conscious mind decides what you do with the emotional energy.

But it's not that simple. Because the subconscious hides its motives from the conscious, you are largely unaware of what is going on under the surface. In this case, what you don't know can hurt you, because the subconscious gets its way – a lot more than you may realise - and we've already discussed what that can mean.

Understanding what stresses you and how you handle it tells you a lot about the interplay between your subconscious and conscious minds and how it relates to your default 'Go To Behaviours'.

First we need a common definition of what stress is. All stress isn't the same: There is good stress and bad stress. What's the difference? One way to look at it is good stress you control while bad stress makes you feel out of control. Let's start with good stress.

The purpose of training is to deliberately stress your body. Pumping iron or working against your body weight builds muscle strength and tone. Aerobic exercise builds cardiovascular system stamina and endurance. Practising a musical instrument builds competence and dexterity. Doing puzzles and problem solving builds mental acuity and agility.

Good stress means you handle things better next time: You get fitter, stronger, smarter and more able to cope. We need stress to grow: Physically, mentally and emotionally.

But what about when the boss is yelling at you again; the children are fighting; the wife is angry; you're worried about the bad turn Aunt May took yesterday and you don't have the money to cover the bills that came in the mail this morning. You feel unappreciated, threatened, helpless, trapped. That's bad stress.

Dealing effectively with stress – both good and bad – involves three things:

- Knowing what stresses you;
- Knowing when, how and where your body reacts to or stores stress; and
- Having a healthy way to get the effects of stress out of your system.

The 'fight or flight response' is your inbuilt system to deal with danger. Your adrenaline surges, your heart races, your senses become keener. And while very useful on the rare times you came face to face with a sabre tooth tiger, having it trigger several times a day in situations having nothing to do with your survival creates a physiological stress your body could do without – and which also encourages the growth and spread of cancer (3). Your subconscious and your body have been fooled into thinking the stresses of daily life are real threats when they're not.

Having a way of burning off the emotional tension associated with stress means you're not constantly living in the 'fight or flight response'. If your way is destructive 'Go To Behaviours' and reaching for a smoke, another beer, more comfort food or any or all of the other six cancer lifestyle risk factors, you'll have two things working against you: The physiological effects of chronic stress and the effects of your self-destructive 'Go To Behaviour' coping mechanisms. You're creating The Perfect Storm and playing right into the hands of a potential cancer.

Developing healthy strategies to deal with stress may include exercise, meditation, going for a walk, playing music or engaging in a hobby. Anything to take the emotional energy generated by the subconscious and channel it away from your self-destructive 'Go To Behaviours' and into something harmless or productive. Then both the black and the white wolves get fed: Your subconscious can still feel the emotion and your conscious can put the energy associated with those feelings to good use.

Finally, it would be remiss not to point out this article is just the tip of the iceberg. Developing an understanding of how powerful your subconscious mind can be; how it affects your everyday life and the subtleties of the interplay between your subconscious and conscious mind can take a lot of time and effort. But without this understanding, bringing about meaningful and lasting behavioural change will be difficult. Or you could just enlist the aid of comedian Bob Newhart (4).

As for how the other things you do affect your cancer risk, we'll save them for the next article in this series.

**For information on Stress, please see page 5 "Cancer Survivorship - dealing with stress"**

*References and Suggested Reading*

(1) Hardy, S. J.: *Causes Of Cancer: Everything Old Is New Again*. *Healthy Living*, January – March 2016, pages 6 – 7. Available online at: <http://drstephenhardy.com/causes-of-cancer-part-i-everything-old-is-new-again/>

(2) Whiteman, D. C.; Webb, P. M.; Green, A. C.; Neale, R. E.; Fritschi, L.; Bain, C. J.; Parkin, D. M.; Wilson, L. F.; Olsen, C. M.; Nagle, C. M.; Pandeya, N.; Jordan, S. J.; Antonsson, A.; Kendall, B. J.; Hughes, M. C. B.; Ibiebele, T. I.; Miura, K.; Peters, S.; Carey R. N.: *Cancers in Australia in 2010 attributable to modifiable factors: Introduction and overview*. *Aust NZ J Public*

*Health*; 39:403 – 407, 2015; doi: 10.1111/1753-6405.12468. Available at: <http://onlinelibrary.wiley.com/doi/10.1111/1753-6405.12468/epdf>

(3) *The link between chronic stress and the spread of cancer has received recent media attention. Some popular press articles and the scientific study on which they are based are shown below.*

*Popular Press Articles*

<http://www.sciencealert.com/study-finds-that-chronic-stress-really-does-spread-cancer-in-the-body>

<http://www.abc.net.au/news/2016-03-02/chronic-stress-enhances-spread-of-cancer-through-lymph-system/7211536>

<http://www.theage.com.au/victoria/chronic-stress-spreads-cancer-monash-university-study-finds-20160301-gn7jv.html>

*Scientific Study*

Le, C. P.; Nowell, C. J.; Kim-Fuchs, C.; Botteri, E.; Hiller, J. G.; Ismail, H.; Pimentel, M. A.; Chai, M. G.; Karnezis, T.; Rotmensz, N.; Renne, G.; Gandini, S.; Pouton, C. W.; Ferrari, D.; Möller, A.; Stacker, S. A.; Sloan, E. K.: *Chronic stress in mice remodels lymph vasculature to promote tumour cell dissemination*. *Nature Communications* 7, Article number: 10634 doi:10.1038/ncomms10634 Published 01 March 2016. Available online at: <http://www.nature.com/ncomms/2016/160301/ncomms10634/full/ncomms10634.html>

(4) Bob Newhart and Mo Collins: "Stop It": <https://www.youtube.com/watch?v=Ow0lr63y4Mw>



**A daily yoga practice is a good 'Go to Behaviour' to help with stress. Yoga is offered at the Cancer Care Centre on Wednesday afternoons during school term.**