

## Dangers of Energy Drinks - Not a Safe Mix for Addiction Recovery

By Margaret Fieldhouse

A recent study conducted by Kathleen Miller at the University of Buffalo's Research Institute looked at the behaviours of 795 college students. Of the 795 students, 39 per cent reported that they used energy drinks at least once a month. The study results also revealed that energy drink consumption was correlated with risky behaviours such as substance use and unsafe sexual activity. Given their

widespread usage and the established link between energy drink consumption and risk-taking behaviour, it is important to examine the potential harmful effects of energy drinks, and the possible association between stimulant drinks and addiction. As the nutritionist at Bellwood Health Services, I find it particularly interesting to understand and examine the extent to which energy drink consumption can negatively

impact our clients who are in recovery from substance abuse.

One of the key components of addiction treatment programs is the focus on proper nutrition. Healthy eating corrects nutritional deficiencies and promotes physical and mental recovery. Having three meals and three snacks each day, with an emphasis on protein intake, balance and moderation is beneficial. At Bellwood, our nutritional goal is to maintain stable blood sugar levels in our clients, as drops in blood sugar mimic the feeling of cravings. To this end, we also limit the consumption of sugar and caffeine during early recovery. Consumption of these products can lead to rapid swings in blood sugar levels, which result in feelings of fatigue, mood swings, anxiety and cravings. Many of our clients have customarily consumed excessive caffeine prior to admission and experience withdrawal when the intake of caffeine is restricted. Many of

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### Bellwood Launches New Dynamic Addiction Resource Web Site



Bellwood recently launched our new interactive website, designed to help users learn about addiction and find treatment and support resources. We believe that understanding more about addictions is an important step towards recovery. The new site is an easy-to-navigate resource tool, providing numerous links, articles, books, and videos relating to addiction treatment, recovery, and special events.

The website also highlights Bellwood's quality treatment programs and services, including its evidence-based treatment approach and outcomes, its rich history, and its experienced staff.

The new website provides treatment information, education, and resources designed specifically for: individuals seeking treatment; family members and friends; healthcare professionals; employers.

Interactive elements include self-assessment tools designed to help users who might be apprehensive about speaking with someone about a problem, and a Cost Saving Calculator designed to help employers understand the financial impact of an addiction on their business and the savings that can realize by investing in treatment for employees.

Visit [www.bellwood.ca](http://www.bellwood.ca)

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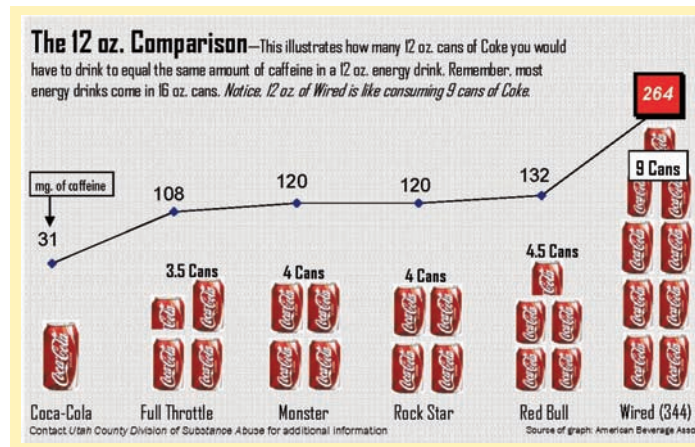
our clients are looking for the quick energy effects of sugar and caffeine. Our goal is to introduce sugar and caffeine in a moderate and healthy way.

It is also very important to address food concerns because of potential eating issues that can surface when the substance of choice is no longer consumed. Some of the behaviours that can surface in individuals recovering from substance abuse include obsessive compulsive overeating (food being used to self-soothe or self medicate), restricting, bingeing, or purging.

About five years ago, Bellwood Health Services began to notice an increase in the number of discarded energy drink cans being found around the facility. It was this discovery that prompted us to begin an investigation into the link between stimulant drinks and addiction. What we learned was concerning. For someone recovering from an addiction, stimulant drinks were definitely not a healthy choice.

Energy drinks are beverages that are marketed to have a “pick-me-up” quality. The most prevalent stimulant products currently on the market include Red Bull (regular and sugar free), Monster, Monster Assault, Rock Star, and a powder which when mixed with a beverage provides energy for a specific period of time. All these products are readily available in grocery and convenience stores and some are even marketed as natural health products. What is of concern regarding these products is their ingredients and how they can stimulate the drive for addictive behaviours. Some main ingredients include caffeine, guarana, taurine, glucuronolactone, glucose/sucrose, and certain B vitamins. Once we realized the types of ingredients contained in these beverages, we began to educate our clients about how these types of drinks can have a negative impact on their recovery.

The following is a review of the ingredients found in most stimulant drinks and their physiological effects.



### Caffeine

Energy drinks contain extremely high doses of caffeine. Using Coca Cola as a benchmark, the above diagram illustrates the levels of caffeine included in popular energy drinks. Caffeine stimulates the central nervous system, respiratory system, skeletal muscles, and cardiovascular system where it dilates coronary vessels and relaxes cardiac smooth muscles. It operates and stimulates the brain using the same mechanisms as amphetamine, cocaine and heroin. While caffeine’s effects are milder than these other drugs, it does manipulate the same channels within the brain, and can be addictive. Symptoms of caffeine withdrawal include headaches, irritability, sleeplessness, confusion, nausea, anxiety, restlessness, tremors, palpitations and raised blood pressure. These symptoms are similar to the withdrawal symptoms of amphetamine, cocaine and heroin.

Caffeine causes the release of glucose from glycogen stores in the body. It is considered a diuretic and causes water to be lost from the body through the kidneys. An increased consumption of caffeine is concerning as these factors can have a negative impact on the physical health of alcohol and drug dependent clients who may already have compromised renal and liver

functioning.

Not only does caffeine elicit a physiological response, but it has also been linked to certain disorders such as anxiety disorders and eating disorders. Winston, Hardwick, and Jaberl noted in the “Neuropsychiatric Effects of Caffeine” that caffeine can lead to the precipitation, exacerbation or maintenance of anxiety disorders. Clinical reports have suggested that these symptoms improve when caffeine is eliminated or limited.

Clinical evidence suggests that eating disorder clients often consume a large volume of caffeinated beverages. Eating disorder clients believe that the caffeine intake leads to an increased metabolic rate and suppressed appetite. There are serious health concerns associated with clients who struggle with anorexia and consume large quantities of caffeine. Since they are already at risk for cardiac arrhythmia, the stimulant effect of caffeine can place the already struggling heart at an even greater risk.

According to a study by Krahn, an increased frequency of binge eating was associated with high (over 750 mg) and moderate (250–750 mg) intakes of caffeine. The study also revealed that individuals ingesting high levels of caffeine are more likely to misuse laxatives and diet pills and experience higher levels of anxiety.

Studies examining the association between caffeine and various drugs have also revealed:

- Caffeine appears to prime reward-relevant dopamine circuits related to cocaine misuse. The consumption of caffeine may influence the intake or actions of alcohol and benzodiazepines.
- Patients who are addicted to other drugs use more caffeine than general psychiatric patients.

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## ... Dangers of Energy Drinks continued from P. 2

### Guarana

Guarana is a South American plant that is chemically similar to caffeine. It has similar stimulant effects and has been noted to have a more prolonged effect than an equivalent amount of caffeine. The total amount of caffeine in stimulant beverages equals the amount of caffeine plus the guarana equivalent. Guarana is currently regulated by Health Canada as a drug if it is administered in pill form. If guarana is added to any food or beverages and still maintains its food-like structure, it is considered a food and not an additive, and is therefore not regulated as a drug. Due to these regulations, it is difficult to accurately determine the total amount of caffeine in these beverages. It is also unlikely that the consumer is even aware of guarana and its impact on the body.

### Glucuronolactone

Glucuronolactone is a naturally occurring sugar metabolite and is considered a high level carbohydrate in the form of glucose. Alcoholics in early recovery crave sugar because alcohol breaks down into sugar in the bloodstream. When absent of alcohol, the body starts craving sugar.

### B Vitamins

Energy drinks are marketed as containing levels of B vitamins. However, B vitamins are water-soluble and coupled with the large diuretic effect of the other ingredients in stimulant drinks, there is likely minimal added value to their inclusion in the product.

### Taurine

Taurine is found in our skeletal muscles and is included in performance enhancing energy drinks because it provides strength in workouts and is considered the "power behind the muscle." Taurine, however, has a highly effective regulatory system in our bodies; it seems unlikely that an

increase of taurine intake would greatly alter this stringent balance. Taurine is also present in the brain and plays an important role in neurotransmission. It is hypothesized that the combination of taurine and caffeine enhances reaction speed and concentration. However, there is no research that clearly demonstrates that this combination affects cognitive or physical performance.

Awareness of the different ingredients in stimulant drinks can help one understand how some of the ingredients, (e.g. glucuronolactone, caffeine, and guarana) can impact our bodies and potentially interfere with successful treatment and recovery.

The easy accessibility of stimulant drinks has added yet another challenge to the already difficult process of addiction recovery. Through education and experience, people in treatment and recovery must realize that it is the little things they do that will help them maintain a strong recovery. ***Most importantly, this includes making healthy and informed choices about what they eat and drink.***

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*Originally published in the Spring 2009 issue of Moods Magazine, [www.moodsmag.com](http://www.moodsmag.com).*

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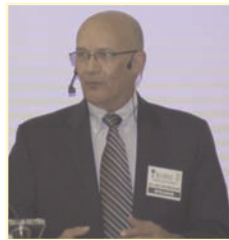
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***It is important to monitor the consumption of sugar and caffeine during early recovery because following withdrawal, an individual will look for the emotional and physical effects that are found in these two food elements.***

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Penny Lawson



Dr. Mark Weiss



Left to right: Linda Bell, CEO; Her Honour Ruth Ann Onley; The Honourable David C. Onley, Lieutenant Governor of Ontario; Dr. Janice Hambley, Clinical and Research Consultant; Laura Bhoi, President.

**canada.com**

**Experts gather to discuss invisible addictions**

By Misty Harris, Canwest News Service September 22, 2009 3:01 PM Comments (1)

**Chronic dependence on things such as shopping treated across North America, despite the fact that this is one of these so-called "addictions" is officially recognized as a disorder.**

Photograph by: Brendan McDermid, Reuters

Grandma collected one too many cookie jars? She may need rehab.



## The Many Faces of Addiction

On October 1st and 2nd, a celebrated panel of addiction experts joined over 170 healthcare and corporate professionals at the Ontario Science Centre to analyze the *Many Faces of Addiction* at Bellwood's 25th Anniversary Symposium.

The symposium covered a wide array of addiction-related topics, including:

- "The New Addictions": Sex and the Internet – online shopping; gaming and gambling;
- The Science of Addiction: The neurobiology that gets us hooked;
- Mindfulness: The application of meditation practices to clinical problems;
- Workplace Trauma: How safe are we at work?;
- Post Traumatic Stress Disorder: The addiction/PTSD link;
- Acupressure Tapping for Trauma and PTSD.

The Honourable David C. Onley, Lieutenant Governor of Ontario, spoke to delegates after lunch on the opening day. On Friday, Heather Mack, the Chief of Staff to the Ontario Minister of Health and Long Term Care, addressed the importance of the availability of quality addiction treatment services in Ontario.

The agenda for Bellwood's next symposium is currently being finalized and we look forward to hosting another valuable addiction education and training event in 2010.

Watch our web site and your email for further details as they are available.

# THE BELLWOOD FOUNDATION

Throughout 2009, the Bellwood Foundation, formerly the Gordon Bell Foundation for the Prevention of Addiction, has launched a number of advertising campaigns designed to raise awareness about addiction. The goal of the campaigns is to highlight addictions as one of society's most serious, **but treatable**, health problems.

Toronto advertising agency Doner Canada designed a series of impactful gambling-focused ads and approached the Bellwood Foundation with the opportunity to use the ads as promotional education material to highlight problem gambling as a serious issue. Doner Canada

successfully placed these ads as public service announcements in a number of venues and publications, including TTC subway stations and GO Transit stations, the PATH, Toronto Life and T.O. Night. Doner Canada has received critical acclaim for their creative designs and the ads have also been featured on a number of web sites in Canada as well as internationally, including eastern Europe.

The Foundation has also developed a series of radio public service advertisements that can be heard on various Toronto radio stations, including Q107 and 680 News. Listen for the ads and **"Let's Start Talking."**

The Bellwood Foundation is a charitable organization engaged in addiction prevention activities. The Foundation promotes awareness of problems related to abuse of alcohol, drugs, food, tobacco and gambling, and strategies to promote healthy options for living.

If you would like to support the Foundation's initiatives with a tax-deductible donation, please forward a cheque, made payable to:

**The Bellwood Foundation  
1020 McNicoll Avenue  
Toronto, ON M1W 2J6  
Attention: J. Laird**



For more information about Doner Canada, visit [donerCanada.com](http://donerCanada.com), or call 416-485-9901.

To obtain copies of the gambling awareness posters, contact J. Lezcano at 416-847-0752, or [jlezcano@bellwood.ca](mailto:jlezcano@bellwood.ca).



In September, Accreditation Canada assessed Bellwood Health Services' processes and services to ensure compliance with quality standards. By participating in the accreditation process, Bellwood demonstrates a commitment to providing quality care and service. Bellwood has consistently met Accreditation Canada's high quality standards and rigorous external reviews since 1986. In 1995, we became the first addiction treatment program to be Accredited with Distinction.

In 2009, Bellwood was once again accredited and recognized for our organization's leadership, staff commitment and organization-wide quest for improvement!

## 2010 Professionals in Residence Days

Are you a healthcare or corporate professional who wants to learn more about addictions and how Bellwood can be a resource for treatment and education?

Join us for a complimentary Professionals in Residence Day. Meet our staff and learn about our comprehensive range of services and treatment programs for addictions.

### 2010 Seminar Dates

February 24    September 15

April 21        October 27

June 2         November 24

To register, contact Jennifer Lezcano at [jlezcano@bellwood.ca](mailto:jlezcano@bellwood.ca), or call (416) 847-0752, toll free (800) 387-6198, Ext 302.

Here is what attendees have said after attending a Professionals in Residence Day:

*"Very intense workshop. Lots of valuable information. Very pleasant atmosphere, welcoming."*

*"This was a very informative and beneficial seminar. Great variety of information and great to meet all the wonderful staff."*

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## Bellwood Alumni Corner



## Celebrating the Freedom of Being Well with Bellwood Alumni at Our 25th Anniversary Alumni BBQ



On Saturday, October 3rd, Bellwood alumni and staff celebrated Bellwood's 25th anniversary at Bruce's Mill Conservation Authority with a BBQ, games and special presentation by CFL Hall of Fame star, Terry Evanshen. Terry's remarkable story of perseverance and courage was an inspiration to everyone in attendance.

*Visit our web site for information about upcoming Bellwood alumni events in 2010.*

### Aftercare Mini Treatment Programs

Bellwood's **Mini Treatment Programs** provide an excellent opportunity for out-of-town clients to stay connected with Bellwood once they have completed treatment.

Each Mini Treatment Program is an intensive two and a half day refresher course designed to support the continuing aftercare our clients are participating in within their home communities. It is an excellent opportunity for clients to review and reflect on their recovery to date, as well as learn and practise new recovery skills and tools.

**For more information or to register for an upcoming Mini Treatment Program, call 1-800-387-6198, Ext 119.**

Bellwood Recovery Counsellor, Chris Morris, visited Crossroads Centre while in Antigua to raise awareness of Bellwood's quality aftercare programs.

Bellwood regularly collaborates to provide ongoing aftercare support for clients who completed their primary treatment with an out-of-town program and have returned to Toronto. For more information about Bellwood aftercare support, call our Intake Department at 1-800-387-6198.

