

# **Hazards to Caffeine in Energy Drinks and Healthy Alternatives**

**The OTC supplement, Citicoline may really enhance brain function aiding in memory, focus, and alertness**

**Tag Words:** Citicoline; Energy Drinks; Hazards of Energy Drinks; Alzheimer's; Stroke

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## **Summary**

As college students, there are many sleepless nights of studying for exams, writing papers, and working on projects, which usually requires extra energy. There are many hazardous issues, and dangerous ingredients in energy drinks that are not healthy or natural for the body. The current solutions for this problem are not having much effect on the general public. We feel that the product Nawgan, which is comprised of the substance citicoline, could be a healthy alternative to other harmful energy drinks. For our service project we will edit the Wikipedia site on Citicoline, which can be viewed at <http://en.wikipedia.org/wiki/citicoline>. Also, we will give out free samples of Nawgan and brochures at a Rutgers University Event.

## **Video Link**

<http://youtu.be/yoWGjt9vcKo>

## **Dangers of Energy Drinks**

### **What is Energy?**

In order to perform tasks in a variety of dynamic environments, elite athletes, students and individuals with active lifestyles have constantly strived for enhanced performance, motivation, concentration and energy. It is this reason they opt for various strategies to reach their goals. Including energy drinks in their daily routine has become an inevitable strategy. Caffeine is the main "energy" ingredient in energy drinks. Many of the energy drinks promotional campaigns in the market explicitly state that these beverages improve functioning, implying that energy drinks are vital stimulants that boost performance and energy.

However, what is energy really and how do we use/create it in the body? Metabolism is a process the body uses to create usable energy for the body. Our bodies must create this energy

from the calories we consume. If the body is depleted of this, it can be extremely dangerous, so our bodies usually try to balance the input and output of energy (Andrews 1). However, some energy drinks do not even consist of any calories, so it makes you wonder how they are creating energy for the body. Regardless of how they are providing energy, it cannot be healthy. Also, the efficiency of how much energy is expended is very dependent on the respiratory and circulatory systems. The caffeine in energy drinks speeds up your heart rate, which would actually make one expend more energy. Obviously the type of energy that these drinks provide is not natural or healthy. People need to take a look at the hazards of these drinks before consuming them.

Manufacturers of these energy drinks have amplified sales mostly because of stating that its effects not only enhance energy but also benefit consumers through medicinal properties since they include vitamins as well as ingredients such as ginseng, taurine and guarana. As a result these beverages are offered alongside soft drinks in vending machines and even available in convenience stores between sports drinks like Gatorade and PowerAde, reinforcing assumptions of its positive relationship of enhancing activity when utilized. However numerous catastrophic events related to energy drinks linked overdose of caffeine brought considerable concern regarding their negative effects to human health. Visits to the emergency room from consuming multiple energy beverages have become a common place recently. The death of a healthy Irish teenager before a basketball game as a result of cardiac arrest after consuming four cans of Red bull led to bans on energy drinks in European countries like France, Denmark and Norway. There are multiple hazards to these drinks that need to be discussed.

### **Hazards of Energy Drinks**

As a college student there are many nights spent slaving over papers, projects, and studying, and what better way to stay awake than taking a quick shot of energy. People must think again. Energy drinks are a very prominent and established industry, which attained sales of around 9 billion dollars in 2011 (Joelving 1). However, energy drinks pose a major health threat to today's society. Recent surveys have shown that 30 to 50% of young adults and adolescents consume energy drinks daily (Seifert et al. 520). Since there are young adults and adolescents chugging down energy drinks in raising amounts, there is more of reason for scientists and doctors to study the effects of these concoctions. The ingredients in energy drinks are all inorganic, unnatural, and most are unhealthy. All the unhealthy ingredients mixed together in a single beverage that is consumed daily by mass amounts of buyers, poses an issue to the health of our nation, particularly teenagers. Although most adults and college students are well aware of the health hazards related to such energy drinks, they still seek to acquire these as a result of their demanding work or college schedules to avoid sleep deprivation, as well as to enhance mood and quality performance. A survey of 496 college students found that 51% consumed energy drinks on a regular basis and 54% of those students combined the drink with alcohol (Seifert et al. 514). Energy drinks contain caffeine, taurine, guarana, vitamins and herbal supplements. Currently the FDA does not regulate these, because energy drinks are categorized as dietary supplements. Although recent reports have shown a 15-year-old experiencing a seizure after drinking two 5-hour ENERGY shots in rapid succession and studies by the U.S Substance Abuse and Mental Health Services Administration have reported more than 13,000 patients, in the past year, being treated in emergency rooms for energy drink related problems, the FDA is still not allowed to regulate these (Pulver 1).

## **Dehydration**

As most are familiar with the health problems related to energy drinks, one of the main hazards related to the beverages, especially for athletes, is dehydration. Energy drinks are promoted and marketed to athletes involved in extreme physical sports where they desire that extra boost to perform in intense practices and competitions. Companies like Red Bull and Monster sponsor certain extreme sport athletes like snowboarders and BMXers. However, this promotion is not good for athletes, because they need to stay hydrated. Athletes naturally lose a great amount of water through sweating, and if energy drinks are consumed before, during, or after athletic events, the dehydration can be even more severe and may cause negative side effects, such as nausea, fainting, and dizziness. Unlike the sports drinks containing electrolytes and sodium, such as Gatorade, the intake of energy drinks after a workout indeed puts the human body at risk, as it prevents quick recovery and causes the body to become extremely dehydrated. Dehydration may be caused by the extreme amounts of caffeine in energy drinks, which is a diuretic.

## **Caffeine**

Caffeine is one of the major active ingredients in energy drinks. In many energy drinks, there is a reported 70-80 mg dosage of caffeine (Seifert et al. 512). Because of the extremely high amounts of caffeine present in a beverage, which already contains several other unhealthy ingredients, the problems caused by caffeine alone should be evaluated. Caffeine abuse leads to health issues such as anxiety, headaches, upset stomach, irregular or increased heartbeat, high blood pressure, diarrhea, tremors, insomnia, high cholesterol, and many other unhealthy symptoms. Withdrawal from caffeine is also an issue as it can cause cramps, temperature swings, irritability, depression, vomiting, etc. Caffeine is harmful itself but is only one of many unhealthy ingredients in energy drinks. Although coffee is not necessarily good for you, it is much better than energy drinks, because it does not combine caffeine with other unnatural ingredients.

## **Other Harmful Ingredients in Energy Drinks**

The contents of energy drinks should be researched individually to come up with an alternative to the unhealthy ingredients. In most of the current energy drinks none of the ingredients are healthy, or natural. One ingredient, ephedrine, a stimulant that concerns itself with the central nervous system, poses a threat because it is associated with cardiovascular issues. Taurine, an amino acid is also a major ingredient in energy drinks. Its primary function is to regulate the beating of the heart, and controls muscle contractions. With too much taurine the homeostasis of the heart and muscles may be affected, because when mixed in an energy drink it can alter the function severity of the muscles and heart. Carnitine, another risky amino acid found in energy drinks, is not recommended to be taken as an isolate. In high dosages it can lead to nausea and vomiting. A better-known ingredient, Creatine (also found in steroids) is associated with health risks; it can also cause stomach problems, muscle cramping and dehydration. However, most importantly it can cause liver and kidney damage ("Creatine Dangers: A Look At The Side Effects" 1). Also, many people have allergic reactions to B-vitamins, which are in energy drinks, causing skin rashes, chest pain, heart palpitations, and

breathing issues (“Vitamin B Benefits & Side Effects” 1).

### **Alcohol and Energy Drinks**

The age group energy drinks target are mostly in the high school to college range, where drinking is typically practiced. The risks of energy drinks alone pose a threat to students and mixing them with alcohol, which is also not a healthy substance, can cause an even bigger threat. Combining two harmful beverages is dangerous, and it affects many students due to the urge to drink alcohol and the need energy. Everyone knows that the more college-aged kids drink the more things get out of hand. Fights break out, people get taken advantage of, and drunken students get in the car and drive, none of which are good things. Studies shows that those who consumed alcohol mixed with energy drinks are “twice as likely to be hurt or injured, twice as likely to require medical attention, and twice as likely to ride with an intoxicated driver. Students who drank alcohol mixed with energy drinks were more than twice as likely to take advantage of someone else sexually, and almost twice as likely to be taken advantage of sexually,” (Marczinski et al. 3). This is because, when mixing a depressant, alcohol, with a stimulant, energy drinks, the stimulant masks the drunkenness feeling, and people end up consuming more alcohol. These drinks alter the perception of drunkenness in young adults, and it is poses a huge risk to the drinker, as well as the drinker’s peers.

### **ADHD and Energy Drinks**

Many parents have also considered energy drinks as an alternative to Ritalin for children with ADHD. This may be because of energy drink manufacturers promoting the enhanced concentration, motivation and cognitive performance for a period of time as a result of its consumption. Also many are even made to believe that these drinks may involve the daily servings of vitamin in a single bottle. However studies show that energy drinks contain large amounts of artificial additives that may be infamous for causing ADHD. Research at the University of Buffalo showed that the consumption of energy beverages increased the likelihood of risky behavior. This is very dangerous for individuals with ADHD as the nature of the disorder already makes them more likely to engage in activities like violence, substance abuse and even unprotected sex. Although energy drinks if consumed occasionally are not detrimental to health, it should not be assumed as an alternative of long-term treatment for ADHD.

Energy drinks are marketed and sold in hopes to improve physical and mental energy, focus, and weight loss, and concentration (Seifert et al. 512). They are proven to be the United States’ fastest growing drinks mainly targeting ages twelve and up. This makes them an even bigger hazard because students are brainwashed to their “marketing promises” and cave in to purchase these harmful drinks. Because many students have exams and need energy and focus to pull an all-nighter or study for hours at the library, many buy these drinks and put themselves at risk. Some consumers of energy drinks already know the risks they pose to their health, but knowing is not always enough. People need to have what they crave and desire and will stop at nothing to get what they want. Students especially fall victim to the consumption of hazardous energy drinks despite there being many cases correlating energy drinks to seizures, stroke, cardiovascular problems, and even some with sudden death. If these cases are not big enough to open up consumers’ eyes to the hazards of energy drinks, what will? There are some current

solutions to this issue, but they do not seem to be working and we need to fix this.

### **Current Solutions- Are They Working?**

There are numerous current solutions to energy drinks, but it is a matter of finding out if these are actually healthy for the human body, or if they are simply companies jumping on the energy drink bandwagon. Some of the solutions are simply not working even if the United States' population is educated on these topics. However, other solutions may contain substances that have very positive effects, but there is no education to the public on these products. People need to be informed of the healthy alternatives and they need to stop consuming the dangerous products.

### **Food and Drug Administration Control**

The Food and Drug Administration enforced a controversial ban of Four Loko drinks as a solution to the deteriorating health hazard incidents related to the 'black-out-in-a-can' beverage last year, which was followed by emergency orders issued in numerous states for sellers to take the Four Loko drinks from shelves. This was met with much protest as the public declared "the FDA was making an unwarranted extrapolation to premixed commercial products in order to justify its regulatory overreach" (Wood 1). While the long-term health risks of the beverage have not been proven by any published scientific studies, the physiological consequences of its chemical components are a cause enough for concern. Even though nine students at Central Washington University were hospitalized after drinking Four Lokos' at a party, banning energy drinks, which is part of an industry that has already acquired exponential growth in the global world, is far from happening. If the FDA had trouble banning a drink that is so clearly unhealthy to the human body, the trouble that they would see trying to ban energy drinks without alcohol would make the task impossible. Since energy drinks are considered dietary supplements, the FDA has no control over them, and therefore this solution will not be successful, although it may make a world of difference if it was possible.

### **Beneficial "Energy" Drinks and Teas**

Some other current alternatives consist of drinks with all natural products, like teas, herbs, and vitamins. Some examples of these products are Bio 3 Energy Solution, MonaVie, and Acai Superfruit Booster. The natural beverages have herbal nutrition supplements for energy which include Guarana, Ginseng, Hibiscus, Green Tea, Vitamin B12 and Vitamin C. Unlike the usual energy drinks, which have around 100mg of caffeine per can that can cause palpitations after boosting the heart rate, according to the National Institute of Health, the health benefits of Bio 3 Energy Solution consist of a natural body boost without any chemical imbalance in the human system ("Energy Solution: Natural Energy Drink" 1). This could be very beneficial to the public in increasing ones' daily energy. The invigorating herbal supplements that are contained within this natural energy drink provide its customers with a mental lift and an increased physical effort to perform tasks actively. One of the major attributes of the Bio 3 herbal nutrition supplement for energy is that besides relieving stress and elevating endurance and the individual's mood, it is also caffeine free unlike normal energy drinks ("Energy Solution: Natural Energy Drink" 1). Although these products sound promising, they do not seem to be

enough support of energy. These products will help students have a rise in energy over the day or the week, but they will not provide that instant boost like 5-hour ENERGY to keep one up the entire night. These products are much healthier, but students will not give into drinking a beverage every day that increases energy over time, they want results fast. Even though they are much healthier and they sound good on paper, most people will not choose these, because college students are looking for something to keep them up and alert all night long. They are not concerned with how natural a product is, they just want to be able to study or party through the night and into the morning.

## **Healthy Lifestyle**

Keeping dehydration and health risks in mind, scientific studies have shown that another current solution to avoiding ingestion of energy drinks is promoting a healthy lifestyle. According to the Chicago healer's practitioner, Ian Wahl, all the natural activities that enhance body performance and reduce stress are that most favorable alternatives to energy drinks. He explains how food choices and high caloric energy drinks may be detrimental to cognitive performance. First of all, getting enough sleep is key. Although college kid's end up staying up all night before their exams, this could actually have a counter effect. If a person can allow 6-8 hours of sleep per night, they will be able to accomplish much more the following day ("Natural Energy Boosters- Sleep, Exercise, Water, Diet 1). However, this will never work in a college environment, because students are too prone to procrastination. Next, exercise is a key enhancer of brain function and energy. Adults should generally get at least 45 to 60 minutes of light exercise per day ("Natural Energy Boosters- Sleep, Exercise, Water, Diet 1). Mental stimulation, as well as physical activity enhances brain function and protects the brain. This is why gym class is so important in grade school, because studies have shown that it actually helps brain function if a person is getting regular exercise. It is the natural remedies that are required to boost comprehension and information retention for young adults when bogged down with assignments, presentations and exams. Also, drinking immense water or regular tea brings the added bonus of hydration. The brain is 95 percent water, which leads to smooth and consistent brain function ("Natural Energy Boosters- Sleep, Exercise, Water, Diet 1). Therefore, staying hydrated can increase memory and help one when studying for a big exam. Lastly, diet plays a huge role in energy and brain function. As discussed before, calories equal energy, but some calories are better than others. For example, fatty foods bring harm to brain cells as they effect the blood flow to the brain, whereas fruits and vegetables do wonders for the human health. Receiving a healthy diet, consisting of fruits, whole grains, vegetables, and nuts will provide the body with ones' everyday energy for their daily activities ("Natural Energy Boosters- Sleep, Exercise, Water, Diet 1). If individuals worked to improve these four things, they would have no need for energy drinks. Using these tips students and young adults can have less stressful experience when performance is needed in upcoming important tasks, but this solution has not been working. Even though the most efficient and cheapest requirements for energy are natural ways, energy drinks are always experimenting and seeking that extra edge and quick results. This country is continuing to get bigger and bigger, not only in the amount of people, but the size of people also. The fact that this country can not even succeed in getting individuals to diet and exercise for their personal health, there is no way we are going to convince them to eat healthy, drink water, and exercise for there energy needs, even if this is the best solution. Educating people on these healthy, natural facts is not working, because everyone in America is moving so

quickly, that they want their results to be just as quick.

### **Citicoline**

Citicoline could be a beneficial organic molecule to study in hopes of using it to provide a healthier alternative to energy drinks. Further studying on the drug and testing on it would have to be issued before presenting it as an alternative. Because the idea that citicoline provides benefits both to energy and memory, it would appeal to college students more than energy drinks which only provide energy and focus. This should also be emphasized to be a healthier alternative to energy drinks, and the risks energy drinks bring about should be presented more strongly to the public.

A newly discovered naturally organic molecule, citicoline, can be a potential replacement for energy drinks. Studies on the molecule have shown improvement in memory, focus, and energy, and boosts neurotransmitter production in the brain. Citicoline is used as a prescription drug in other countries to aid in regeneration of the brain after a stroke. The only harmful issue that studies have shown the drug to cause is minor gastrointestinal upset.

Citicoline is a potentially great solution to the energy drink dangers problem. After educating students on the risks of energy drinks to their health, they are going to seek an alternative to give them the same desired amount of energy and focus to get through the day or night. Proposing they try the citicoline takes care of that. Educating someone on risks about something is not going to solve their craving of its outputs. By not only educating students, but also providing them with something that also increases focus, concentration, and energy and is even said to go an extra step and improve memory, will reduce energy drink consumption among students.

Since citicoline is proven to increase brain function, focus, and memory, it could be a possible solution to the danger of energy drinks. Citicoline could be a potential replacement for harmful energy drinks, and with the furthering of research; this could solve a problem that affects 30-50% of young adults and adolescents. (No studies to date have proven this organic molecule to be severely harmful, yet I would propose that we wait until more studies and further research is done to prevent any possibly potential harmful risks before any action).

Citicoline can be purchased in local drug stores in dosages of 250, and 500 mg. The forms include powder and pills. A well-known form of stabilized citicoline is a water-soluble compound that is a necessary intermediate in function for brain tissue synthesis (grey matter). This breakdown in the brain matter promotes brain metabolism and neuronal membrane stimulation regulation. It is termed a “brain booster” by many pharmacists and researchers. The benefits (more descriptive) include memory and mood, concentration, mental clarity, focus, and alertness. It is also said to support the nerves located in our eyes.

The organic molecule citicoline protects nerve cells in nearly anaerobic conditions. It has been proven to help in the process of recovery from comas, neurological deficiencies, and strokes. There is an unknown dosage of citicoline in the 5hour ENERGY shot, proving it has successful responses to energy promotion.

Citicoline is a disphosphate choline, and has a structure that synthesizes phospholipids (including PS and PC), which is called the Kennedy Pathway by scientists and researchers. Its structure with a phosphate tail supports the brain structure, once again enhancing function. The molecular weight is around 488 g/mol and it is a white crystalline fine powder.

Responding to certain health issues such as comas, stroke, and Alzheimer's, many doctors use citicoline. Citicoline helps stroke by speeding up motor deficit recoveries. In regards to post-traumatic coma, it increases the ability to walk afterwards (speeding up brain function and recuperation of habits) and lets patients get out of the hospital sooner. Alzheimer's disease is progressed more slowly with the usage of citicoline as a supplement, due to citicoline increasing cognition.

A newly marketed drink, Nawgan, uses citicoline as its primary ingredient. The focus in making the drink was entirely based off using citicoline, being a brain enhancer, by scientists Rob Paul and Jim von der Heydt. Nawgan is a natural, healthy energy supplement that contains low calories and sodium (40-45 calories per can). Nawgan sells for about \$2.39 a can (11.5 oz), which is significantly lower in price than red bull.

Energy drinks are marketed and sold in hopes to improve physical and mental energy, focus, and weight loss, and concentration (Seifert et al. 522). They are proven to be the US's fastest growing drink mainly targeting ages 12+. This makes them an even bigger hazard because students are brainwashed to their "marketing promises" and cave in to purchase these harmful drinks. Because many students have exams and need energy and focus to pull an all-nighter or study for hours at the library, many buy these drinks and put them at risks. Providing them with the knowledge of an all natural, healthy alternative could be a plus.

### Public Information on Citicoline

As for our solution, we will break it into three parts, all dealing the citicoline. First of all, we are going to edit the Citicoline Wikipedia website. There is limited information for the public on this site right now. The Wikipedia site only included this information:

**"Citicoline (INN)**, also known as **cytidine diphosphate-choline (CDP-Choline) & cytidine 5'-diphosphocholine** is a **psychostimulant/nootropic**. It is an intermediate in the generation of **phosphatidylcholine** from **choline**. Sold in over 70 countries under a variety of brand names: Ceraxon, Cognizin, NeurAxon, Somazina etc.

Studies suggest that CDP-choline supplements increase dopamine receptor densities,[1] and suggest that CDP-choline supplementation can ameliorate memory impairment caused by environmental conditions.[2] Preliminary research has found that citicoline supplements help improve focus and mental energy and may possibly be useful in the treatment of attention deficit disorder.[3][4] Citicoline has also been shown to elevate ACTH independent of CRH levels and to amplify the release of other HPA axis hormones such as LH, FSH, GH and TSH in response to hypothalamic releasing factors.[5] These effects on HPA hormone levels may be beneficial for some individuals but, may have undesirable effects in those with medical conditions featuring ACTH or cortisol hypersecretion including, but not limited to, PCOS, type II diabetes and major



depressive disorder.[6][7]"

We have added this to the site:

Since citicoline is proven to increase brain function, focus, and memory, it could be a possible solution to the danger of energy drinks. Citicoline could be a potential replacement for harmful energy drinks, and with the furthering of research; this could solve a problem that affects 30-50% of young adults and adolescents. (No studies to date have proven this organic molecule to be severely harmful, yet I would propose that we wait until more studies and further research is done to prevent any possibly potential harmful risks before any action).

Citicoline can be purchased in local drug stores in dosages of 250, and 500 mg. The forms include powder and pills. A well-known form of stabilized citicoline is a water-soluble compound that is a necessary intermediate in function for brain tissue synthesis (grey matter). This breakdown in the brain matter promotes brain metabolism and neuronal membrane stimulation regulation. It is termed a "brain booster" by many pharmacists and researchers. The benefits (more descriptive) include memory and mood, concentration, mental clarity, focus, and alertness. It is also said to support the nerves located in our eyes.

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Citicoline is a disphosphate choline, and has a structure that synthesizes phospholipids (including PS and PC), which is called the Kennedy Pathway by scientists and researchers. It's structure with a phosphate tail supports the brain structure, once again enhancing function. The molecular weight is around 488 g/mol and it is a white crystalline fine powder. Responding to certain health issues such as comas, stroke, and Alzheimer's, citicoline is used by many doctors. Citicoline helps stroke by speeding up motor deficit recoveries. In regards to post-traumatic coma, it increases the ability to walk afterwards (speeding up brain function and recuperation of habits) and lets patients get out of the hospital sooner. Alzheimer's disease is progressed more slowly with the usage of citicoline as a supplement, due to citicoline increasing cognition.

Next, we are going to edit these three Wikipedia sites:  
[http://en.wikipedia.org/wiki/Energy\\_Drink](http://en.wikipedia.org/wiki/Energy_Drink), [http://en.wikipedia.org/wiki/List\\_of\\_energy\\_drinks](http://en.wikipedia.org/wiki/List_of_energy_drinks),  
 and [http://en.wikipedia.org/wiki/Category:Energy\\_drinks](http://en.wikipedia.org/wiki/Category:Energy_drinks). None of these pages talk about citicoline or Nawgan. Therefore, we will add these products to the list and add information about them. We feel that the public has had no education on these products, and it would be beneficial for them to learn more.

Lastly, we are providing information to the public with brochures at a Rutgers University event with presentations from Dr. Fagan and some of her students on April 19, 2012. At this event we will provide brochures, as well as samples of Nawgan to Dr. Fagan and her students. We feel that if they read about this information and try this drink and feel that it works, they may

switch over from other harmful energy drinks to this one. We believe that citicoline can have profound effects on the brain and we think the public should be aware of these features.

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Dear Editor.

As a graduating Rutgers senior, I have spent countless nights at the library hyped up on 5-hour ENERGY or at the bar chugging down Red Bull vodkas to try and stay up and alert after a long day of class and work. If you walk through Alexander Library during finals week you will undoubtedly see every other student with a Red Bull, Monster, AMP, etc. However, after researching the subject I have found out how horrible these concoctions really are for us. The ingredients in energy drinks are all inorganic, not natural, and most are unhealthy. I understand that procrastination among college students will never stop, leading to the all too familiar all-nighters, but we must find a healthy alternative to these drinks to decrease the strain on our young bodies.

The main ingredients in energy drinks consist of caffeine, taurine, ephedrine, carnitine, and creatine. There are numerous negative effects to these components, including: headaches, anxiety, increased heart rate, tremors, high cholesterol, irregular central nervous system activity, irregular muscle contraction, nausea, and health risks concerning the liver and kidneys. There are no positive effects of energy drinks on the body, except insomnia, when you are looking for a long night of studying. Although these drinks are already harmful to our bodies when we consume them alone, imagine the dangers that occur when we combine them with alcohol.

Considering the Food and Drug Administration has banned pre-mixed drinks, such as Four Loko and Joose, it is easy for us to tell these cannot be good for us. Mixing alcohol and energy drinks leads to increased dehydration due to the fact that alcohol causes dehydration and caffeine acts as a diuretic. Also, when these two drinks are combined, we are mixing a stimulant and a depressant, which is extremely dangerous. The stimulants in energy drinks are said to "mask" the feeling of drunkenness, so students will intake more alcohol than they normally would if they did not mix the energy drink with alcohol. Studies have shown that when energy

drinks are consumed with alcohol there is a better chance people will be injured, need medical attention, accept a ride from an intoxicated driver, and/or take advantage of someone sexually, versus when they simply consume alcohol. These facts are alarming and should be recognized by all local bars and by us as students. Local bars should stop promoting these drinks, because if college students did not see these on the “special’s board” most would not even think to order them. People must stop consuming energy drinks for both their health, as well as the safety of their peers. So, the next time you go to order a “Jager Bomb,” think about the hazards you are inflicting on yourself and others.

Carrie McCaw, (908)240-8687, Class of 2012, Exercise Science and Sports Studies Major, Class Affiliation: Ethics in Science

Ms. Emily Landgraph  
Executive Editor  
Rider News

Dear Ms. Landgraph,

As an undergraduate student at Rutgers University I have been given an opportunity to research the hazards of consuming energy drinks in general and its combination with alcoholic drinks by our student body. My letter today is to inform and generate interest by your institute on reporting that energy drinks pose a major health threat to today’s society.

Recent surveys, especially by the National Institute of Health, have shown that 30 to 50% of young adults and adolescents consume energy drinks daily. Since there are high amounts of young adults and adolescents consuming the drinks, there is more reason for scientists and doctors to further study the effects of energy drinks. The ingredients in energy drinks are all inorganic, not natural, and most are unhealthy. For students, drinking Redbull vodka is indeed pleasurable and beneficial to their desires of getting drunk off the alcohol and getting energy from the red bull. This appeal’s to them so as a result many college campus bars promote the drink with reduced pricing to profit from it. This problem cannot be completely solved, but it can be reduced and avoided more if the communities are made aware of their hazardous effects.

My concern is, with the help of your organizations influence on public perception, to simply educate others on why energy drinks are harmful, and try to propose alternatives and potential solutions to minimize and reduce the issue. Although studies cannot prove that energy drinks directly cause such hazards as diabetes, seizures, cardiovascular issues, and mood changes in the consumers, they can correlate the energy drinks to each of those cases. By several studies, energy drink consumers have shown a higher risk of each health risk stated above than those who do not consumer them.

Thank you very much for taking the time to read my proposal. I hope you understand that without your help and support this alteration cannot take place. I hope the consideration of this could potentially alleviate a colossal problem weighs in to your decision making process. If you would like to learn more about my proposal, ideas or plans, feel free to contact me via e-mail at

mktoru@eden.rutgers.edu. I look forward to hearing from you, and initiating change.

Sincerely,

Mikail S. Khan  
School of Environmental and Biological Sciences  
Rutgers University – The State University of New Jersey

Dear editor,

I am currently a student at Rutgers University in the Ethics in Science course with Professor Julie Fagan. We are required to do a service project and report on a topic of our choice and my group chose the consequences and dangers of mixing energy drinks and alcohol. I am sure you, being the editor of a college paper, have heard of the well known drink, Red Bull and vodka. It is in my intentions and hopes to prevent the harmful consequences that this mixture, and any mixture of alcohol and energy drinks, causes. Energy drinks are full of vitamins, caffeine, and many unnatural substances and stimulants. Alcohol is a depressant, and combining the two is a risk. Energy drinks make you feel less drunk than you actually are, and alcohol is harmful when consumed in large amounts. Preventing this will not be easy, but I plan on reaching out and trying my best to at least lessen the mixture. By reaching out to other colleges, local bars, and college students I hope to educate them on the risks of alcohol and energy drinks. By not promoting these drinks as specials and reduced prices at bars, it will lessen the purchase because college kids are, for the most part, cheap due to money being tight. Also, I would like to present a substitute, a naturally organic molecule, citicoline. There have been studies on citicoline that have proved effective in the areas of memory, focus, and energy. No harmful effects have been observed from this molecule and it is natural and healthy. Replacing energy drinks such as red bull with this could lessen intake of energy drinks and alcohol. I just need to reach out and get the word out there to the public, and I will start with the most obvious target, college students. If you could contribute in any way to help publicize the dangers of energy drinks mixed with alcohol, or present the potential replacement, citicoline, I would much appreciate it.

Thank you,  
Sydney Gentile