

Studies show caffeine negatively affects sleep

BY SARAH SMITH
for the Index

Swimming inside that steamy cup of morning coffee and hidden in the creamy confines of that chocolate afternoon snack lives the most widely used drug in the United States: caffeine.

Nine out of 10 Americans consume caffeine on a regular basis, making it the most popular behavior-altering drug, according to the Mayo Clinic Web site. Beside giving a morning jolt of energy, caffeine possesses some negative consequences.

Brenda Higgins, director of the Health Center and family nurse practitioner, said consuming caffeine results in alertness and can lead to restless nights.

"[Caffeine is] kind of a double-edge sword," Higgins said. "If someone wants to drink a lot of coffee to be alert, to do well on an exam or stay up late, but then they may be more tired the next day, and when they are ready to sleep, they won't be able to."

Even after falling asleep, people still can experience the effects of caffeine.

Higgins said caffeine increases the number of times a person wakes up in the middle of the night. Caffeine, which is a diuretic, also increases the loss of fluids, which can be bothersome at night as well, she said.

For people with difficulty sleeping, Higgins recommends abstaining from

consuming caffeine for about eight hours before going to bed. She also recommends getting a good night's rest.

"One of the biggest problems with college students is they don't get enough sleep," Higgins said.

Junior Theresa Perkins said she has had experiences with a late-night, early-morning work crunches.

"I had to finish a research paper," Perkins said. "I decided I needed to stay up 'til five in the morning. There was a couple pots of coffee involved in that one."

However, steaming cups of coffee and chocolate snacks not only disrupt sleep but also can affect someone physiologically.

Depending on the amount consumed, caffeine can increase blood pressure, lower or raise heart rate and elevate some of the same hormones that stress increases, she said.

"If one is drinking caffeine and they are already stressed, ... you may be actually making yourself potentially more stressed," Higgins said.

Despite this fact, Perkins said that during a stressful finals week, she drinks more caffeine to stay up studying and to keep going.

"It's so much all at once," Perkins said. "Because it's not broken up, [keeping up is] kind of hard."

Junior Heather Zaehler said she doesn't consume more caffeine during finals week but did admit to using caf-

feine to stay up late at night.

"If I know I have to write a paper or study, I'll get a cup of coffee," Zaehler said.

Yet another effect of caffeine use can come from its reaction with certain types of medication, Higgins said.

Mixing some antibiotics, Ephedra or Theophylline with caffeine is not advised, Higgins said.

Ephedra increases the risks of stroke, heart attacks, seizures and even death. Therefore, mixing it with caffeine further increases those risks, according to the Mayo Clinic's Web site.

However, with college students especially, Higgins' main concern remains with mixing caffeinated drinks, such as energy drinks, with alcohol, a depressant.

"It can be really harmful when it's combined with alcohol because people are able to experience the alcohol toxicity much more because of the effects of the caffeine," Higgins said.

The Mayo Clinic Web site also advised against mixing these two liquids in order to avoid the risk of serious health consequences.

Lora Cunningham, the assistant to the director of Sodexho, said Sodexho sells five different types of energy drinks at four locations around campus. She said in a given day, Sodexho sells 102 energy drinks. This number increases by about 50 drinks a day during finals week, Cunningham said.

One of the five energy drinks sold, Full Throttle, contains 144 milligrams of caffeine per 16 ounces, while a 12-ounce Mountain Dew contains only 54 milligrams.

Higgins said the caffeine in energy drinks is not the only factor of concern. These drinks normally contain a mixture of caffeine, high doses of sugar and, many



Jackson Groves/Index

Nine out of 10 Americans consume caffeine, which can have negative effects, on a daily basis, according to the Mayo Clinic Web site.

times, herbal supplements, she said.

"I think that sometimes there is a little more danger than just in the caffeine alone," she said.

Higgins said she is not worried about students consuming caffeine in moderation, meaning a couple cups of coffee or sodas daily. She said more adverse effects occur with six to eight cups of coffee or sodas a day.

Perkins admitted she drinks many

caffeinated sodas — having about six or seven on an average day.

"[I'm] kind of addicted to Diet Coke," she said.

Perkins said caffeine could possibly act as a physical addiction but thought it remained more a mental one.

"If you think [caffeine is] helping you stay awake, then eventually you'll get to the point where you think you need it," she said.

Hunt for gold in Missouri continues after 132 years

BY JESSICA RAPP
Assistant Features Editor

"The gold fields! Excitement on the increase."

This headline from an 1875 Adair County newspaper clearly was meant to attract attention. Twenty-six years after many Adair County residents left for California in the Gold Rush, miners made one last attempt to strike it rich on their own soil.

The historical aspect of gold prospecting in America dates back to the early 1800s.

Pat Ellebracht, President of the Adair County Historical Society, said events like the 1849 California Gold Rush are similar to a large jackpot in the lottery. He said some people from Kirksville headed west during the Gold Rush, much like people living anywhere else at the time. Ellebracht said the frenzy in 1875 could be compared to the frenzy of the California Gold Rush on a much smaller level.

"They all have characteristics of mass hysteria," he said. "It's something you have when you're looking for something of great value and the possibility of wealth."

Darren Thornhill, a fisheries management biologist at the Missouri Department of Conservation, said he finds it hard to believe that an article such as the one published in 1875 could be accurate based on his knowledge

of the area.

"I'm highly suspect of anything that says we might have found gold in the Chariton River," he said.

However, the article is backed by published information about the area and the miners themselves. It goes on to say that several reliable citizens in both Macon and Adair counties claimed to have found amounts of gold ranging in size from specks to nuggets in the Chariton River. People with knowledge of the area doubt these discoveries had any monetary value, but the article adheres to the assertion that the miners unearthed payable quantities.

"It's not something you can make a living at, but it's a pretty fun hobby. It amazes me that we don't have everyone out there looking for that stuff."

Doug Foster
President of Show Me Gold

In fact, during 1875 a business owner who had taken part in the expedition called for an organization of laborers to refine the areas where they had made discoveries in order to start a profitable reservoir.

Other skeptics, like Gary Lloyd — who wrote and edited a history book of the Novinger area that surrounds part of the Chariton — said they think documentations like these most likely were scams. Lloyd said that in some cases, people would make mine claims to convince others to come to the area and so the miners could buy up the land more quickly.

"It is possible that the minor gold rush that occurred in Macon County in 1875 could have been [a] fraud scheme, but that is just my own opinion," Lloyd said. "If

there was gold, it was nothing economically feasible."

Experts on the area also point out that the Chariton River contains many man-made, straightened channels that did not exist in 1875, which they said would further narrow the chance of any findings.

Some people at Truman have yet to familiarize themselves with their surroundings, let alone the geography of Kirksville. Freshman Tyler Binkley said he knows where Novinger is but did not know that there was a possibility of finding gold there.

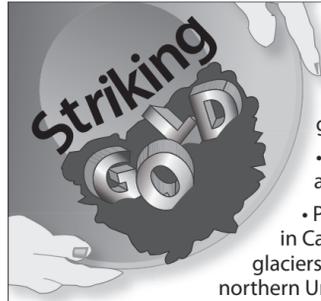
"I would go panning for gold if I knew how to," he said. "I never would have thought there was gold here. If there was, I thought I would've known about it."

Whether the claims had truth to them or not, people continue to pan for gold in rivers or rocks north of the Missouri River. The Gold Prospectors Association of America has a Missouri chapter that sends people out daily to pan as part of an organized hobby.

Doug Foster, president of Show Me Gold in Wellington, Mo., the Missouri chapter of the GPAA, said his association has more than 220 members who participate in recreational panning in muddy rivers located in areas north of the Missouri River and as far east as the Mississippi.

"There's definitely gold in Kirksville, Mo.," Foster said. "It has been found by some of our members. Gold in Missouri is found in the glacial tilt that originated in the Canadian Shield and came down with the glaciers. We have found it in almost every county in Northern Missouri."

He said that in Elmer Gulch, a suburb of Macon County, people will tell stories — sometimes ex-



- Gold can be found in two types of deposits.
- Lode deposits form when gold accumulates in underground veins through volcanic or other geologic processes.
- Placer deposits, the type found in Missouri, form after gold veins are exposed to erosion.
- Prehistoric glaciers scraped away gold from lodes in Canada and carried them southward. When the glaciers melted, the gold was deposited all over the northern United States, including Missouri north of the river.

• Streams carry gold dust and flakes and deposit them where the current slows and turns around bends. Once the flakes collect in the gravel, these "pay streaks" can be mined with basic equipment, including pans, screens, sluices and shovels.

Source: United States Geological Survey

Design by Andrea Bailey/Index

aggerated — about finding gold. He said the key to finding gold is being able to correctly identify the rocks in the area. Foster said specks of gold are found in the glacial rocks like quartz, granite and black basalt.

Foster said that on expeditions in the rivers, they try to help the environment by removing lead and mercury they find in the river. These metals, which originate from litter and rifle shells, can harm fish and other wildlife.

"I have a half-gallon pickle bottle that's full of lead that I have taken out of the environment," Foster said. "If you dug three or four buckets and processed that material, you might find a pound of lead."

Foster said it also is important to dig in the gravel bars toward the center of shallow water instead of digging in the banks, which will cause erosion.

Kevin Shelton, chair of geological sciences at the University of

Missouri-Columbia, said that despite claims, he doubts much gold could be found in northern Missouri because he believes the area does not contain the right type of rock. However, he acknowledges many people will look, sometimes with the wrong devices.

When presented with a report stating that someone asked for a permit to use a suction dredge to look for gold, Shelton said he disliked the idea. He said a machine like this has a negative impact on the environment because it sucks up large amounts of gravel and soil and replaces it, causing small-scale erosion. Shelton said he did not think the results outweighed the trouble.

"Why should we be disturbing habitats ... for something like that?" he said.

However, Foster said most of the people in the association use small tools that won't harm the environment, like hand sluices, small trowels and pans. He said he

prefers using inexpensive items such as a colander and a small shovel. Although he doesn't use expensive dredges, he thinks that they yield positive results.

"If you went out there, and if you took a suction dredge ... and suctioned it, you would actually improve the fish habitat," Foster said. "Whenever you use a dredge in the stream you're actually irrigating it, and if you're irrigating it, you're creating loose gravel, which creates habitat for all sorts of little organisms ... that the fish feed on."

Foster said GPAA members take their searches seriously, and that they find gold during nearly every expedition. He said they keep their collections at home to prove it.

"It's a hobby," Foster said. "It's not something you can make a living at, but it's a pretty fun hobby. It amazes me that we don't have everyone out there looking for that stuff."

the iINDEX: now in audio



Subscribe to the Index **podcast**, available in iTunes and at www.trumanindex.com every Thursday, for a summary of the week's news.

