



Caffeine

◀ Steamed milk decorates the top of an espresso in what coffee fans call “latte art.” “I drank this cappuccino,” says photographer Bob Sacha, “and it tasted even better than it looked.”

1 It’s 1:45 a.m. and 21-year-old Thomas Murphy is burning the midnight oil,¹ studying for an important engineering exam he has at 2:00 in the afternoon later today. To stay

5 **awake** and focused, he’s had two cups of coffee in the last three hours and is now downing a popular energy drink—one that has two to three times the amount of caffeine as a similar sized can of soda. Many students like

10 Murphy, as well as marathon runners, airline pilots, and long-distance travelers, owe their energy—and sometimes their efficiency—to one of mankind’s oldest stimulants: caffeine. Many say they couldn’t live without it.

15 The power to counter physical fatigue and increase alertness is part of the reason caffeine ranks as the world’s most popular mood-altering drug. It is found not only in sodas, energy drinks, coffee, and tea, but also in diet

20 pills, pain relievers (like aspirin), and chocolate bars. Many societies around the world have also created entire rituals around the use of caffeine: afternoon tea in the U.K., the café culture of France, tea ceremony in Japan, and

25 the morning cup of coffee or tea that in many cultures marks the start of the day.

Caffeine is in many of the foods or drinks we consume, but is it really good for us? Charles Czeisler, a scientist and sleep expert

30 at Harvard Medical School, believes that

caffeine causes us to lose sleep, which he says is unhealthy. “Without adequate sleep—the typical eight hours—the human body will not function at its best, physically, mentally, or emotionally.” Too often, Czeisler says, we

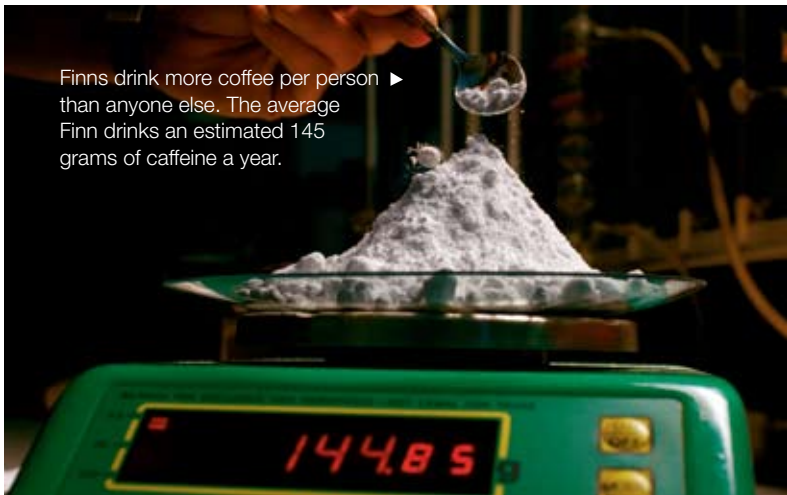
35 consume caffeine to stay awake, which later makes it impossible for us to get the rest we need.

Health risks have also been tied to caffeine consumption. Over the years, studies have attributed higher rates of certain types of cancer and bone disease to caffeine consumption. To date, however, there is no

40 definitive proof that caffeine actually causes these diseases.

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¹ If someone is **burning the midnight oil**, they are staying up very late in order to study or do some other work.



Finns drink more coffee per person ▶ than anyone else. The average Finn drinks an estimated 145 grams of caffeine a year.



▲ Allowed just three hours of sleep in 52 hours of exercise, a Canadian soldier chews caffeine gum to help stay awake. Chewed caffeine is absorbed directly into the mouth, and goes to work three times faster than caffeine in coffee or pills.

A number of scientists, including Roland Griffiths, a professor at the Johns Hopkins School of Medicine in the U.S., believe that regular caffeine use causes physical **dependence**.
 50 Heavy caffeine users, Griffiths says, **exhibit** similar behaviors: their moods **fluctuate** from high to low; they get mild to **severe** headaches; or they feel tired or sad when they can't have a coffee, soft drink, energy drink, or cup of tea.
 55 To minimize or stop these feelings, users must consume caffeine—a behavior Griffiths says that is characteristic of drug addiction.²

Despite these concerns, the general opinion in the scientific community is that caffeine is not
 60 dangerous when consumed moderately—for example, by having one or two small cups of coffee (about 300 milligrams of caffeine) per day. **Furthermore**, a lot of current research **contradicts** long-held negative beliefs about
 65 caffeine and suggests that it may, in fact, have health benefits. For instance, studies have shown that caffeine can help ease pain by reducing muscle inflammation.³ Because it is a

stimulant, caffeine can also help improve one's mood. Research has also shown that some caffeinated drinks—specifically certain teas—have disease-fighting chemicals that can help the body fight a number of illnesses, including certain types of cancer.

75 In addition, as a type of mental stimulant, caffeine increases alertness, memory, and reaction speed. Because it fights fatigue, it **facilitates** performance on tasks like driving, flying, and solving simple math problems. And
 80 while it is true that caffeine can increase blood pressure, the effect is usually **temporary** and therefore not likely to cause heart trouble—especially if caffeine is consumed in moderation.

85 And despite its nearly universal use, caffeine has rarely been **abused**. “With caffeine, overuse tends to stop itself,” says Jack Bergman, a specialist at Harvard Medical School. If you consume too much, “you get . . .
 90 uncomfortable, and you don't want to continue.”

Caffeine's behavioral effects are real, but most often, mild. Getting that burst of energy, of course, is why many of the most popular
 95 drinks on Earth contain caffeine. Whether it's a student drinking coffee before class or a businessman enjoying tea with lunch, mankind's favorite stimulant is at work every day, all over the world.

² An **addiction** to something is a very strong desire or need for it.

³ An **inflammation** is a painful redness of part of your body as a result of infection, illness, or injury.

▼ Tea, green tea, and oolong tea are all made from the same plant; the differences in taste and color come from the way in which they are processed.

