**Hummingbirds Live an Extreme Lifestyle Thriving on All-Sugar Diet That Would Put Us in a Coma**

Everyone loves to watch hummingbirds—tiny, brightly colored blurs that dart about, hovering at flowers and pugnaciously defending their ownership of a feeder.

But to the scientists who study them, hummingbirds offer much more than an entertaining spectacle. Their small size and blazing metabolism mean they live life on a knife-edge, sometimes needing to shut down their bodies almost completely just to conserve enough energy to survive the night—or to migrate thousands of miles, at times across open ocean.

Their nectar-rich diet leads to blood sugar levels that would put a person in a coma. And their zipping, zooming flight sometimes generates g-forces high enough to make a fighter pilot black out. The more researchers look, the more surprises lurk within those tiny bodies, the smallest in the avian world.

“They’re the only bird in the world that can fly upside down and backwards,” says Holly Ernest, a conservation ecologist with the University of Wyoming. “They drink pure sugar and don’t die of diabetes.”

To fuel their sky-high metabolic rate, hummingbirds suck down about 80% of their body weight in nectar each day. That's the equivalent of a 150-pound person drinking nearly a hundred 20-ounce Cokes daily—and nectar is often much sweeter than a soda.

The human gut is incapable of absorbing sugar that fast, which is one reason why consuming too much soda or Halloween candy upsets the stomach, says Ken Welch, a physiologist at the University of Toronto at Scarborough.

That much sugar in the blood leads to serious physiological problems in people. It's still unclear how hummingbirds avoid these problems.

By studying the hummingbird and their strategies to cope with high blood sugar may one day reveal practical benefits for managing diabetes in people. "There could be a gold mine in the genome of the hummingbird," says Welch.