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Competitive consumption: Ten minutes. 20 000 calories. Long-term trouble?

It all started, according to legend, as an argument between four immigrants about who loved their adopted homeland the most. The heated discussion took place in 1916 at Nathan's Famous, a hot dog stand that had recently opened on Coney Island in New York City. The establishment's owner, Nathan Handwerker, feared fistcuffs might ensue, so he proposed a contest.

Whoever could eat the most hot dogs in 12 minutes would be declared the most patriotic of the bunch. James Mullen, a native of Ireland, claimed the title by downing 13 hot dogs, buns included. That contest continues to this day. Held annually on July 4, it is considered the top dog of all eating competitions, with US\$10 000 going to the champ.

Do today's winners eat more than 13 hot dogs? Ah, yeah, a few more. Let's just say masticating a baker's dozen of sodium-rich beef tubes isn't much to brag about anymore. Reigning 6-time champion Joey Chestnut took Nathan's coveted Mustard Belt in 2012 by laying waste to a record-tying 68 hot dogs in 10 minutes. Mullen had eaten just over one hot dog per minute. Chestnut ate one every 9 seconds.

The annual contest at Nathan's Famous is but one of dozens of events sanctioned by Major League Eating, the franchise behind the professional competitive eating circuit. Other competitions include Ben's Chilli Bowl's Work Chilli Eating Championship (total cash purse: US\$3000), Western Days Festival World Tamale Eating Championship (total cash purse: US\$3500) and the Oktoberfest Zinzinnati World Bratwurst-Eating Championship (total cash purse: US\$2000).

If an item is edible, there is probably somebody somewhere eating a whole lot of them in hopes of winning a prize.

Reactions to the rise in popularity of the "sport" of extreme eating generally fall into two categories. There are those who marvel at the ability of these rubber-bellied gurgitators to wolf down (and keep down) mountains of food. The Nathan's Famous contest draws about 40 000 spectators and is broadcast internationally on ESPN. Then there are those who find the whole affair grotesque. Celebrating overconsumption in a nation suffering an obesity epidemic, they argue, is just plain wrong, and competitive eaters are setting themselves up for a lifetime of health problems.

But are participants in speed-eating contests really putting their health at risk? And if so, to what extent?

"The bottom line is, there is such minimal data that we are doing a lot of conjecture," says Dr. David Metz, professor of medicine at the University of Pennsylvania in Philadelphia, who contributed to a study of competitive eating (*Am J Roentgenol* 2007;189:681-6).

That said, physicians do know enough about how the human body works to take some educated guesses about the possible effects of repeatedly bingeing on massive quantities of food. According to the study, these risks include gastroparesis (slowing of food movement out of the stomach), intractable nausea, vomiting, gastric perforation,

Mallory-Weiss tear (tear in the lining of the lower esophagus), Boerhaave syndrome (rupture of esophageal wall) and morbid obesity (due to loss of ability to feel satiated). The repetitive stretching of the stomach may also damage its muscles.

“My concern is if they do this for years and years and years, this long-term chronic overeating may lead to some kind of muscular dysfunction,” says Metz.

The risks posed to world-class masticators are likely different than those faced by average individuals who try their hand (and mouth) at speed eating. The stomachs of competitive eaters appear to have unique properties, including the ability to expand by an incredible amount. A typical eater simply could not put away the same amount of food in one sitting.

“In our opinion, average eaters have as much chance of ingesting 50 hot dogs in 12 minutes as executing a triple axel on the ice or running a 4-minute mile,” states the study.

One of the greatest risks to average individuals who enter eating contests appears to be choking. In 2002, a 14-year-old in Japan choked to death during a competition against friends at his school. In 2004, a 36-year-old man from Canada choked to death after a chicken wing-eating contest in Regina, Saskatchewan. In late 2012, a Florida man choked and died following a bug-eating contest.

The professionals who compete in many contests put themselves at risk of becoming obese. Or at least you would think so, considering the amount of calories they consume during an event. The recommended daily caloric intake for the average man is 2000–2500. A typical hot dog has around 300 calories. So eating 68 at the Nathan’s famous contest works out to more than 20 000 calories — in 10 minutes. Then again, perhaps the body doesn’t actually use all those calories.

“There are only so many calories you can consume in 10 minutes,” says Peter Czerwinski, a professional eater known as Furious Pete (furiouspete.com). “A lot of stuff goes through undigested.”

Like many of the top eaters, Czerwinski remains fit through exercise and controlling calories when not competing. Many competitive eaters fast before and after an event. In fact, being thin allows you to eat more during a contest, according to the “belt of fat” theory, which posits that belly fat restricts the stomach’s ability to expand.

The part of competitive eating that may be most risky isn’t the competition. “It’s a very dangerous thing to train for,” says Czerwinski, who is something of a natural and never really took to training to expand his already-pliable belly.

One common technique used to stretch the stomach, for example, is called water loading. It involves chugging one or two gallons of water, which could dilute the electrolytes in the body enough to cause death.

Despite finding a way to stay fit while gorging on high-calorie foods, though, Czerwinski acknowledges that the lifestyles of professional eaters are somewhat crazy. “I think it’s stupid for anyone to do, to be frank, though I’m having fun with it,” says Czerwinski. “I don’t encourage anyone to do it.” — Roger Collier, *CMAJ*

Editor’s note: Second of a two-part series on competitive consumption.

Part I: **A profusion of pie, pizza and pulled pork**
(www.cmaj.ca/lookup/doi/10.1503/cmaj.109-4394).

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