

EDITOR'S NOTE

Christmas, Santa Claus, Sugarplums and the Grinch

*'Twas the night before Christmas, when all through the house,
Not a creature was stirring, not even a mouse.
The stockings were hung by the chimney with care,
In hopes that Saint Nicholas soon would be there.
The children were nestled all snug in their beds,
While visions of sugarplums danced in their heads.*

From "A Visit from St. Nicholas" by Clement Clarke Moore, 1823

These lines are probably the best-known verses from the poem written by American Clement Clarke Moore in the 19th century. Many scholars arguably believe that this poem may have inspired the popularity of the larger-than-life Santa Claus.

Santa Claus traditionally arrives in a reindeer-drawn sleigh at parades held in October, November or early December in cities across North America to herald the busy Christmas shopping season and festivities. He also appears in large department stores and shopping malls, eagerly welcoming children and their families to have photos taken with him. Santa Claus is popular and well loved by children and has become synonymous with Christmas being the season of joy and gifts.

Some of you are wondering what Christmas, Santa Claus and sugarplums have to do with diabetes. For many, Santa has now replaced the birth of Jesus as the universal icon of Christmas, especially among children and those who are not Christians. Indeed, a Canadian study among 45 in-hospital pediatric patients revealed that all of them knew who Santa was, including the older children who did not believe Santa was real (1). The popular and ubiquitous image of Santa Claus is that of a kind, plump, jolly, white-bearded old man adorning a red coat with white collars and cuffs, who delivers presents to children on Christmas Eve. His rosy cheeks, undeniably rotund physique (massively obese even by today's standard) and effervescent smile are symbolic of good health and happiness. Recently some health advocates have raised a few eyebrows about Santa's public image, as smart capitalists and marketing genius have turned Santa into a credible spokesperson for a variety of products, some of which might not be so good for our health. A notable example is the depiction of Santa drinking Coca-Cola in the advertisements beginning in the 1930s. Thus some health advocates raised concerns that Santa might become a "public health pariah" who could negatively influence our children, in a manner not dissimilar to Ronald McDonald of McDonald's restaurants fame (2). This would be particularly worrisome from a public health perspective as Santa has

become universally recognized in most emerging markets where Christmas is not normally celebrated. Fortunately a humorous and somewhat pseudoscientific analysis concluded there was inadequate evidence to impugn Santa as a poor role model for children and adults, and that more Santa studies need to be conducted (2)!

Santa Claus and sugarplums, made famous by Moore's poem and the sugarplum fairies featured in the popular Tchaikovsky ballet *The Nutcracker* have become a tradition of our Christmas holiday celebration in North America. Christmas, Hanukkah and the winter solstice make this the most joyous and festive season of the year, which people from across the world celebrate. Food is a vital part of all the celebrations. During the month of December, businesses thank their employees with lavish Christmas luncheons and dinner parties. Likewise, families and friends reunite during the holiday period for parties and dinners. The month-long celebration—even longer in the United States, where the winter holiday season generally begins after Thanksgiving—is complemented by an abundance of traditional, calorie-dense snacks and baked sweets, along with decreased physical activity levels. The temptation of yuletide logs, Christmas pudding, fruit cake and shortbread cookies (to name just a few) is simply irresistible. Consequently, weight gain is not unusual during the Christmas holiday period. The good news is that the average weight gain is actually about 0.48 kg (about 1 lb), much less than the 2.25 kg that people commonly believe (3). The not-so-good news is that most people have difficulty trimming the weight gain over the ensuing months (3) despite the best of New Year's resolutions. In addition, smoking cessation, another common resolution, can lead to overeating by substituting food and munchies for cigarettes. For a majority of people, the weight gain resulting from overindulgence in food and decreased levels of physical activity during the winter holiday season would not affect their health appreciably, although it may have a cumulative effect over the years and contribute to body weight gain during the adult years.

Unfortunately the same may not hold true for people living with diabetes. Blood sugar control can become erratic and notoriously difficult to manage, especially in children and adolescents. Seasonal variation in glycated hemoglobin (A1C) was first noted in non-diabetic adults (4) but was also reported in Swedish adults with type 1 diabetes, where higher A1C levels were noted in the winter and lower levels in the summer (5). Seasonal variation in glycemic control

has also been observed in children and youths with type 1 diabetes but is generally thought to be more correlated to the seasonal incidence of diabetes (6). Seasonal variation in A1C levels in patients with type 2 diabetes has been reported in several letters (7,8). Only one prospective study examined glycemic control in 110 people during the winter holiday period in greater detail. The baseline A1C and fructosamine levels were $7.3\pm 1.3\%$ and 2.97 ± 0.56 mmol/L, respectively, and both A1C ($0.21\pm 0.94\%$) and fructosamine (0.15 ± 0.46 mmol/L) levels rose significantly between November and February (9). Since glycemic control did not improve over the summer months, the authors concluded that the year-after-year cumulative increase in A1C levels during the winter holiday season might contribute to an overall deterioration in glycemic control in patients with type 2 diabetes. If the winter holiday period is associated with worsening of glycemic control in people with type 2 diabetes, what effect might it have on the development of diabetes? A short communication reported that indeed there was seasonality in the incidence of type 2 diabetes. Among 26 695 cases of diabetes between 1999 and 2004 in a county in Hungary, March was the peak month with 430 cases, whereas August was the trough month with 293 cases (10). The sinusoidal pattern of new cases appeared to coincide with the peak and trough months in A1C levels described earlier in the other studies. Taken together, the data on weight gain and seasonal variations in A1C levels are suggestive, but by no means conclusive, that even temporary changes in lifestyle behaviours during the festive season may result in new cases of type 2 diabetes, as well as adversely influence glycemic control in people with diabetes. While more studies are required to confirm the seasonal variation in glycemic control and the possibly higher incidence of onset of type 2 diabetes during the winter festive period, the take-home message is to advise our patients with diabetes of the increased prudence required in monitoring their lifestyle behaviours and glycemic control over the Christmas and New Year holidays.

Am I the Grinch, like the famous anti-Christmas figure created by Dr. Seuss? No, but moderation in the consumption of snacks and calorie-dense beverages such as eggnog will go a long way toward averting weight gain, however small. As well, any increase in physical activity levels, such as brisk walks after lunch or dinner, or dances on New Year's Eve, will be of benefit in reducing the fluctuations in blood sugar levels and help burn a few more calories. A new study suggested that low-volume high-intensity interval training can indeed reduce hyperglycemia in patients with type 2 diabetes (11). The training protocol in this small pilot study involved a total of only 30 minutes of high-intensity exercise and a total time commitment of only 75 minutes/week. This is exciting good news for busy people who have trouble finding time to exercise. For the majority of us who are less

well-adapted to the modern day cornucopia, mindful eating (along with a little more physical activity) will help kick-start the New Year with more zest and energy—and good health.

Christmas is not only a time for giving and sharing, but is also a time for reflection and expression of our gratitude. As this is the last issue of the *Canadian Journal of Diabetes* to be published in-house, the managing staff and editorial board would like to thank Keith Communications Inc., Comet art + design, and Maracle Press for their many years of contributions and support. We would also like to thank the former editors, former editorial board members, proofreaders and authors who, over the years, have made the journal a comprehensive and informative resource for our readers. Without their contributions, the journal would not have flourished.

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Wishing you all the best of the Holiday Season and may 2012 bring good health, happiness and joy!

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