change, skills that are useful for the aspiring politician. However, physicians can also use these strengths on a daily basis to save lives, by recognizing, assessing, and advocating for patients who are at risk for suicidal behaviour.[4]

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Evidence for the Benefits of Carbohydrate Restriction in Metabolic Syndrome and Diabetes

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According to 2009 estimates by the Centers for Disease Control and Prevention, 34 % of Americans over the age of 20 are living with metabolic syndrome—a complex metabolic derangement characterized by insulin resistance, atherogenic dyslipidemia, hypertension, and elevated body mass index.[1] In addition, the prevalence of diabetes mellitus has more than doubled for all age groups since 1980.[2] The pervasiveness of these conditions suggests that a factor as universal as diet may be causative. Indeed, several studies have shown that the current recommended diet from the "Dietary Goals for Americans," which is mimicked closely by Canada's Food Guide, the Canadian equivalent of America's Dietary Guidelines, may predispose individuals to diabetes and metabolic syndrome.[4]

As widely promulgated in 1977, when the first Dietary Goals for Americans was published, current guidelines encourage increased consumption of carbohydrates in conjunction with reductions in fat, saturated fat, cholesterol, and salt ingestion. The benefits of such a diet, however, have remained contentious since their inception. The American Medical Association (AMA) responded to the initial Dietary Goals for Americans with an opinion wrought with concern, "The evidence for assuming that benefits to be derived from the adoption of such universal dietary goals ... is not conclusive and there is potential for harmful effects from radical long-term dietary changes."[3] Arguably, these early concerns of the AMA may have forecasted the increased incidence of diabetes and metabolic syndrome that are observed in the U.S.A. and Canada.[5]

Many clinical trials have failed to show reductions in cardiovascular disease risk with adherence to low fat, increased carbohydrate diets. The Women's Health Initiative randomly assigned over 48,000 post–menopausal women to low fat and free living comparison groups. After six years of follow–up, there was no significant difference in non–fatal coronary heart disease risk and total cardiovascular disease risk between the groups.[7] Moreover, the Nurses' Health Study showed an increase in coronary heart disease risk in association with high glycemic load from refined carbohydrates, independent of other known risk factors.[8] Another prospective cohort study included more than 15,000 middle–aged women and found similar increases in coronary heart disease in association with increased dietary glycemic load.[9]

Evidence suggests that carbohydrate restriction may lead to favorable changes in currently accepted biomarkers of cardiovascular disease when compared to low fat diets. Low carbohydrate diets restrict carbohydrates to 30 130 grams per day, without caloric restrictions of other macronutrients. Very low carbohydrate ketogenic diets typically restrict carbohydrate consumption to below 30 grams per day.[6] A meta–analysis examining the effects of low carbohydrate versus low fat diets on cardiovascular disease risk included 13 studies that lasted at least six months and pooled 1222 participants of both sexes. Less attrition was noted in the low carbohydrate groups, as well as more beneficial alterations in HDL cholesterol (increased), triglycerides (decreased), and blood pressure.[10] Similarly, Garner et al randomized 311 overweight premenopausal women into four diets for one year.[11] They found that the most improvement in metabolic profile occurred in the dietary group with the greatest carbohydrate restriction (less than 20 grams per day, without caloric restriction), with benefits also noted in the less carbohydrate restricted groups.

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Since the dietary goals were instituted in 1977, overall fat, saturated fat, and cholesterol consumption by North Americans has decreased while carbohydrate ingestion has increased to proportions resembling those recommended by the advisory institutions.[3] In spite of mean caloric intake falling to within the recommended range and a slight increase in average physical activity, incidences of the metabolic syndrome and diabetes mellitus continue to rise. Public compliance with the prescribed caloric intake and increased average physical activity suggests that policy may be contributing to the etiology of this epidemic.[3] As evidence–based medical practitioners, the lack of data to support the current dietary recommendations should be alarming. Current evidence supports recommending reductions in dietary intake of carbohydrates (refined sugars, starches, foods with high glycemic index) with concomitant increases in fat intake to replace lost calories for patients with metabolic syndrome and diabetes. Further research is necessary to determine optimal levels of carbohydrate restriction, but restriction prescription for our patients should start now.

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Insite: A Harm Reduction Success Story

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In a landmark ruling that received international attention, the Supreme Court of Canada unanimously ruled in favor of Insite, Vancouver's safe injection facility, ensuring that its vulnerable users will continue to benefit well into the future from the harm reduction services it provides. This ruling comes at a time when the effectiveness of the international campaign against the illegal drug trade is being questioned and governments begin to seek new strategies to try and successfully control what has been dubbed the "War on Drugs". Although harm reduction strategies such as Insite will not end the illegal drug battle, they remain essential to the health outcomes of their users. As we begin the search for a new strategy to control the increasing illegal drug epidemic, we must realize that the inclusion of harm reduction will be integral to its success.

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It was in June 17, 1971 that U.S. President Richard Nixon initiated the "War on Drugs". Nixon's goal was to use prohibition, incarceration, and military intervention to define and reduce the illegal drug trade.[1] As we enter the 40th year of this campaign, there is increasing reason to believe that this strategy has all but failed. Since 1981, drug control budgets around the world have increased exponentially.[2] In Canada it is estimated that over $2.3 billion is spent annually on enforcing drug laws.[3] While increased spending has resulted in the highest levels of drug related incarceration rates ever seen[4], this prohibitionist stance, which focuses on law enforcement, has yet to translate into decreased drug use or availability. Meanwhile, the average cost of marijuana, cocaine, and heroin has decreased, and their purity levels have significantly increased. Effectively, these circumstances facilitate acquisition of illicit drugs while enhanced purity increases drug potency and thus risk of overdose.[5-7]