



## DRINKING & DRIVING: PREVENTION STRATEGIES FOR WOMEN

### Traffic Injury Research Foundation

By: Robyn D. Robertson and Hannah Barrett

December 2018

Women report that the factors and circumstances that contribute to their drinking and driving are different than men. This fact sheet summarizes the latest facts about drinking and driving among women, prevention strategies that are appropriate for women, and includes tips on how women can support each other in getting home safely.

#### What factors contribute to drinking and driving among women?

According to research, some of the most common factors that play a role in their drinking and driving behaviour are: personal safety concerns, biology, and high levels of stress or loss.

- > **Personal safety.** Women report that their perceptions of safety can discourage them from relying on public transportation, using ride-sharing or ride-sourcing alternatives,<sup>1</sup> or accepting rides from persons they do not know well. In addition, options to get home after a night out drinking are even more limited in rural areas. Women express concerns about taking rides at night to locations that can be isolated, particularly in autumn and winter when days are shorter.
- > **Biology.** Women have less water in the body to absorb alcohol than men, and generally have lower mass. They initially metabolize much less (only about  $\frac{1}{4}$  as much) alcohol in the stomach and intestines as compared to men, meaning that more alcohol is absorbed into the blood.<sup>2</sup> These factors work to intensify the effects of alcohol for women and they become intoxicated after drinking half as much alcohol as compared to men.<sup>3</sup> As a result, women who drink the same amount of alcohol as men tend to have higher blood alcohol concentrations (BACs).<sup>4</sup> In addition, fatigue and an empty stomach also increase impairment.
- > **Stress and loss.** Many women report they feel greater pressure to successfully balance personal demands related to parenting, maintaining their home, and volunteer activities with professional demands related to employment and advancement. Women may be



reluctant or embarrassed to acknowledge the emotional effects associated with the end of personal relationships, parental illness or loss, and caring for children with greater needs. These circumstances can contribute to the increased use of alcohol and driving after drinking.

## What is known about female impaired drivers?

Data suggests that the levels of impairment among female impaired drivers and the prevalence of impaired driving among women in Canada is a concern.



- > **Self-reported drinking and driving.** More than 14% of women admitted to driving after consuming any amount of alcohol in the past 30 days in 2018 according to TIRF's Road Safety Monitor Poll, compared to 26.2% of male respondents. Among the 5.8% of survey respondents who admitted to driving when they thought they were over the legal limit in the past 12 months, a larger percentage of men than women admitted to this behaviour, but the difference was not statistically significant.<sup>5</sup>
- > **Blood alcohol concentration (BAC) in fatal crashes.** Although the legal BAC limit for alcohol in Canada is .08 (or 80mg%), the average BAC among female fatally injured drinking drivers in Canada from 2011 to 2015 was .171. This level

is almost equivalent to the average BAC among fatally injured male drinking drivers (.173). Similarly, the average BAC among female fatally injured drinking pedestrians was .207 as compared to .209 for males.<sup>6</sup>

- > **Impaired driving charges.** Impaired driving is the most common serious alcohol-related charge that brings women in contact with the court system.<sup>7</sup>
- > **Impaired driving arrests.** Women accounted for just 1 in 13 impaired drivers in 1986 whereas between 2005 and 2011 women represented one in six impaired driving incidents; in 2015 women accounted for one in five.<sup>8</sup> Although female impaired drivers represent a smaller percentage of the overall impaired driving population, the prevalence of impaired driving among women in Canada has increased since the 1980s.<sup>9</sup>

The prevalence of impaired driving among women in Canada has increased since the 1980s (Statistics Canada).

- > **Fatal crashes.** In 2015, women accounted for 18% of all fatalities in Canada involving a drinking driver. In addition, 34% of all passengers killed in alcohol-related crashes were women.<sup>10</sup>

## What prevention strategies are appropriate for women?

Historically, drinking and driving prevention campaigns have more often highlighted male experiences with this issue and focused on public transportation or ride-sharing solutions. Many women report that they do not see themselves in these situations and are not persuaded by messages that recommend the use of public transportation or taxis.<sup>11</sup>

In addition, general messages about alcohol consumption and the time it takes to

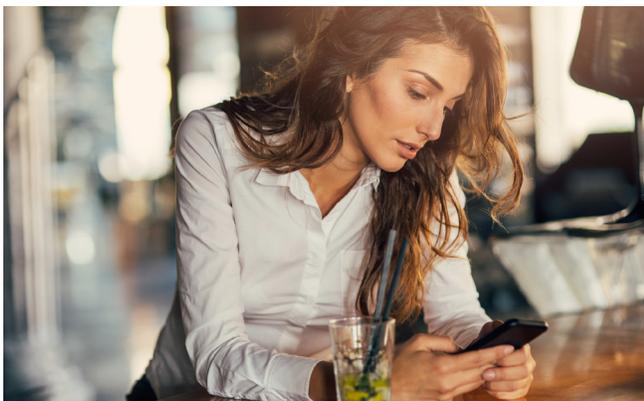
metabolize alcohol have not consistently emphasized differences between men and women. As such, there is a misperception that women can consume one drink an hour and not be impaired.<sup>12</sup>

According to women, prevention messages that can help them make safe choices when it comes to drinking and driving include:

- > Sharing knowledge about biological differences that can contribute to impairment among women, and that on average women metabolize just ¾ of a standard drink<sup>13</sup> per hour.
- > Emphasizing that personal estimates of impairment are not accurate to gauge whether it is safe to drive.
- > Encouraging women to share transportation alternatives and make sure that other women have a safe ride, or a ride from someone that they know well.
- > Creating opportunities for women to talk about personal issues and how drinking can play a role.

## Call to action

Many women report that the stigma associated with drinking as well as drinking and driving is more pronounced, particularly as women age, and this can discourage them from speaking up when they feel they may not be able to drive safely. They also report that peer pressure from other women can contribute to them driving after drinking when they have agreed to be a designated driver, but no longer believe they are safe to do so.



Women play an important role in helping other women get home safely when they consume alcohol. Knowing and sharing the facts about the impairing effects of alcohol, finding alternatives if your designated driver doesn't feel safe to drive, and checking in with other women about day-to-day pressures can help ensure that fewer women put themselves and others at risk by driving after drinking.

<sup>1</sup> Wicklund et al. 2018

<sup>2</sup> Gudrais 2011; Greenfield 2002.

<sup>3</sup> Greenfield 2002; Waller 1997; Lex et al. 1991

<sup>4</sup> Robertson & Ireland 2016.

<sup>5</sup> Brown et al. 2018

<sup>6,10</sup> TIRF National Fatality Database 2018

<sup>7</sup> Mahoney 2011

<sup>8</sup> Perreault 2017

<sup>9</sup> Robertson et al. 2018

<sup>11</sup> Tarn & Greenfield 2010

<sup>12</sup> Robertson & Ireland 2016

<sup>13</sup> A standard drink for beer and coolers is 12oz with 5% alcohol content, 5oz of wine with 12% alcohol content, and 1.5oz of distilled alcohol with 40% alcohol content. This is from CCSA's Canada's Low-Risk Alcohol Drinking Guidelines found here: <http://www.ccdus.ca/Resource%20Library/2012-Canada-Low-Risk-Alcohol-Drinking-Guidelines-Brochure-en.pdf>

## Traffic Injury Research Foundation

TIRF is a national, independent, charitable road safety research institute that studies road user behaviours.

Visit [www.tirf.ca](http://www.tirf.ca) or call (877) 238-5235

ISBN: 978-1-988945-80-4

## In partnership with Beer Canada

