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## International Diabetes Federation



## Review

# Alcohol and recreational drug use in young adults with type 1 diabetes



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## ABSTRACT

Alcohol and other recreational drug use reaches peak prevalence in young adulthood, including for those with chronic medical conditions such as type 1 diabetes. This review summarises the current literature on the patterns of substance use amongst young adults with type 1 diabetes and the mechanisms through which alcohol and recreational drugs may affect diabetes related health outcomes. These include the direct physical effect of intoxication, as well as the effects of alcohol and drugs on mental health and glucose metabolism. Evidence for increased associated mortality and morbidity is also presented, and current guidelines, management strategies and directions for further research are discussed.

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## 1. Introduction

Type 1 diabetes (T1DM) is one of the most common chronic conditions of young adulthood. It is caused by autoimmune destruction of pancreatic  $\beta$ -cells requiring lifelong administration of exogenous insulin [1,2]. It has a rising incidence rate worldwide and there were 31,895 new cases of T1DM diagnosed in Australia between 2000–2013 [3]. With over 50% of diagnoses made before the age of 18 [3], there is a large cohort of young adults who transition from paediatric to adult health care services [4].

For young people with T1DM, the burden of diabetes self-management compounds the challenges of navigating the developmental tasks of young adulthood such as pursuing further education, choosing an occupation, organising living arrangements and taking over responsibility for healthcare [6]. During these years, individuals who navigate their own life paths, also improve their flexibility and self-reliance [5]. The course of T1DM in these young adults can be complicated by both life-threatening metabolic emergencies [7] and the development of chronic macrovascular and microvascular complications related to suboptimal glycaemic control [1]. Importantly, there remains an excess mortality in this age group related to both acute complications of diabetes and an excess of trauma and unexplained events [7].

Some consumer groups and clinicians have linked the interaction between recreational alcohol and drug use and T1DM in young adults as a potential explanation for part of this increased mortality [8]. In the general population, the use of alcohol and recreational illicit drugs reaches peak prevalence in young adulthood and this poses particular challenges for people with T1DM. In Australia's National Drug Strategy Household Survey (NDSHS), over 60% of respondents in the 18–24 years age group report drinking more than four standard drinks (40gm) of alcohol on a single occasion in the previous 12 months [9]. Australia also has one of the highest rates of recreational drug use in the world with 27% of those aged 20–29 reporting illicit drug use [9]. These rates suggest that for much of the younger population, alcohol and drug use is both a normative and potentially important part of socialisation and emerging adulthood.

This review summarises current knowledge on the prevalence of use and mechanisms through which alcohol and recreational drugs may affect diabetes outcomes. This includes the physical effects of intoxication, as well as the impact on mental health and glucose metabolism. Evidence for increased associated mortality and morbidity, current guidelines, management strategies and directions for further research will be discussed.

## 2. Search strategy

A systematic keyword and title literature search was performed combining terms relevant to type 1 diabetes and alcohol or substance use in English language publications. The electronic databases MEDLINE (including Epub Ahead of Print, In-Process & Other Non-Indexed Citations, 1946-present) CINAHL, EMCARE, PsycINFO and Cochrane's Systematic Reviews were searched in December 2016.

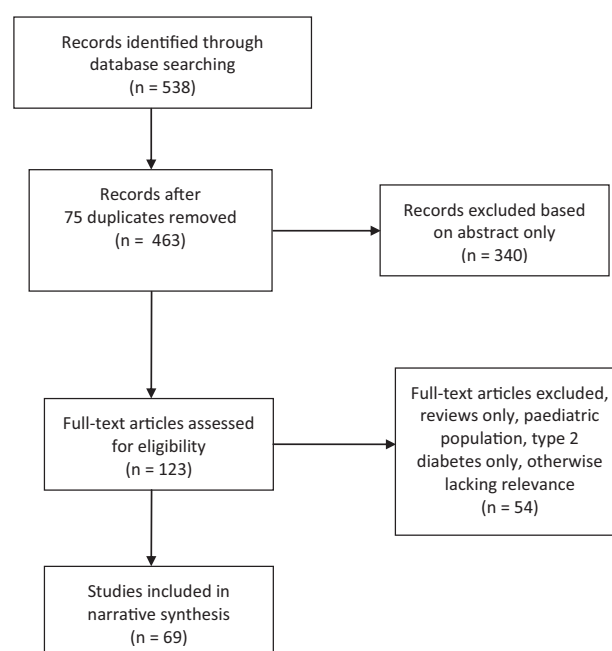


Fig. 1 – Flow chart of searches.

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