

## Former Male Elite Athletes Consume More Alcohol than Controls, but There is No Difference in Alcohol-Related Morbidity or Mortality

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### Introduction

There is a widespread scientific consensus that heavy use of alcohol, smoking, and lack of physical activity contribute to morbidity and mortality [1-3]. The increased mortality related to heavy alcohol consumption is associated with multiple somatic diseases (such as cirrhosis, pancreatitis, certain cancers, stroke, accidents and other external causes of deaths) [4,5], but also with several mental health outcomes (such as depression and suicide). Studies have found that people who drink are much more likely to smoke [6,7], and dependence on alcohol and tobacco is also correlated [8,9]. Many studies have indicated that athletic participation is associated with more excessive use of alcohol, but most studies are focused on drinking habits among college athletes [10,11].

According to previous studies former athletes have lower morbidity and mortality than general population [12-15], but there is lack of evidence on how continuation of physical activity, alcohol consumption and smoking habits contributes to former athletes' health in later years. So, a recent study includes novel data and findings analysed previously neither from the Finnish former athlete cohort nor from any other comparable cohort worldwide [16].

A recent study [16] had three aims, the first of which was to investigate how former competitive sports career was associated with alcohol-related morbidity and mortality and with use of alcohol among former athletes. Secondly, the risk of alcohol-related diseases or deaths and alcohol consumption were compared between different sports groups. Thirdly, it was examined how different factors, such as smoking status and physical activity, were associated with use of alcohol among former athletes after their active athletic career.

### Methods

In a recent study [16] occurrence of alcohol-related diseases and deaths were followed using national hospital discharge register from 1970 to 2008 among Finnish male former elite athletes (n=2202) and matched controls (n=1403) alive in 1970. Age-adjusted hazard ratios (HRs) for alcohol-related diseases and deaths were calculated by Cox proportional hazards model. In 1985 cohort members answered a questionnaire including items on use of alcohol, smoking habits and physical activity.

### Principal Findings and Conclusions

It was found in a recent study [16] that there was no significant difference in alcohol-related morbidity or mortality between former athletes and controls. However, morbidity and mortality was higher among both weightlifters and combat sports athletes compared to endurance sports athletes, jumpers & hurdlers or shooters. Former athletes reported higher alcohol consumption than controls, especially team sports athletes used more alcohol and had heavier drinking occasions than other sports athletes. Use of alcohol after active sports career was greater if participation in physical activities or leisure-time sports was discontinued. Correspondingly, current and ex-smokers used more alcohol than non-smokers [16].

In conclusion, it seems that engagement to competitive sports does not become replaced with alcohol dependence among former athletes after elite level sports career termination. Former athletes' overall better health habits (such as less smoking), and the directly or indirectly subsequent biological factors are likely to explain observation that there was no difference in the risk of alcohol-related morbidity or mortality among former elite athletes compared to controls. This was found despite that former elite athletes consumed more alcohol than controls [16].

The novel findings from a recent long-term follow-up study [16] give new evidence for the benefits of continuing physical activity at an older age. It is important to notice that the risk of excessive alcohol consumption may increase among individuals, who discontinue leisure-time sports after their active sports career. The results may motivate coaches, sports clubs and public health officials to develop models to prevent such as excessive alcohol consumption among risk sports during career termination. Mostly due to the apparent association with a healthier lifestyle, especially physical activity engagement, and consequently, a lower prevalence of risk factors associated with major chronic diseases. Recent study findings will be considered as a stimulus for engaging in sports at an older age among athletes and non-athletes [16].

### Future Directions

It is not known exactly how well the results can be generalized to today's athletes, non-athletes or women. So, it is important to investigate alcohol consumption, alcohol-related morbidity and mortality among those subgroups in the future. Furthermore, a deeper understanding of the relationships between use of alcohol and the risk of alcohol-related diseases and sports is necessary to determine the true consequences of alcohol on health and well-being in athletes. Models should be developed how to avoid an excessive use of alcohol among risk sports after an active athletic career.

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Received May 17, 2017; Accepted June 05, 2017; Published June 12, 2017

Citation: Kontro TK (2017) Former Male Elite Athletes Consume More Alcohol than Controls, but There is No Difference in Alcohol-Related Morbidity or Mortality. *J Yoga Phys Ther* 7: 265. doi: [10.4172/2157-7595.1000265](https://doi.org/10.4172/2157-7595.1000265)

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