

## HTA-Report | Summary

# Prevention of alcohol misuse among children, youths and young adults

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### Health political background

Alcohol misuse among children and adolescents is a growing problem, from a clinical and social as well as from a health policy perspective. The number of children, adolescents and young adults with acute alcohol intoxication is increasing. In 2009, 26,428 children and young adults aged ten to 20 years left hospital in Germany after an acute alcohol intoxication.

### Scientific background

The term "risky alcohol consumption" designates a drinking behaviour which can have negative effects on the healthy and (psycho-)social development of children, adolescents and young adults. There are different definitions of risky alcohol consumption. For adolescents who are 14 years old and older the tolerable upper amount of alcohol of < 12 g pure alcohol for women and < 24 g for men is defined as risky alcohol consumption. But it has to be considered that these upper limits are based on adult samples. Children and adolescents under 14 years should be abstinent from alcohol.

Binge drinking is as well defined as risky alcohol consumption. Binge drinking is the consumption of four (women) or five (men) and more standard units of alcohol at one occasion. Alcohol misuse is defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) 305.00 and in the International Statistical Classification of Diseases and Related Health Problems (ICD-10) F.10.1.

Different results are prevalent concerning the frequency of risky alcohol consumption among adolescents and young adults aged twelve to 25 as various measurements are used.

The causes of risky alcohol consumption are seen in the followings factors: social environment, personality and family factors, the influence of peers and reference groups, alcohol specific expectations and norms. Behavioural prevention and structural prevention try to influence these factors.

### Social medical research questions

- How effective are behavioral interventions which are directed against risky alcohol consumption patterns and alcohol related problems among children, adolescents and young adults?
- How effective are simple school or community interventions in comparison with multi-component or combined interventions among children, adolescents and young adults?
- How effective are the different interventions in comparison? Which advantages and disadvantages do the interventions have? How is the efficacy in relation to the target group?

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Within the scope of the



Bundesministerium  
für Gesundheit

- How is the transferability of international results to Germany?
- Which interventions for behavioural prevention of risky alcohol consumption patterns and alcohol related problems among children, adolescents and young adults are implemented in Germany? Which kind of target group orientation (universal, selective, indicated prevention) do these interventions have? In what kind of structures are they embedded? For which interventions are evaluations available?

### Health economic research questions

- Are the behavioural preventive interventions for risky alcohol consumption patterns and alcohol related problems cost-effective?
- How is the cost-effectiveness of the interventions in direct comparison?
- Which economic and health economic consequences do the preventive interventions have for the German healthcare system?

### Social and juridical research questions

- Which influence does the relation to parents have?
- Which influence do the social environment and the peers have?
- In which way is the treatment of alcohol misuse among children, adolescents and young adults covered by the health and pension insurances?
- Which legal regulations are existing for the realization of behavioural prevention activities?

### Methods

In July 2010, a systematic review of German and English literature was done in 34 databases, among others Cochrane, DAHTA, EMBASE, MEDLINE, SciSearch, SOMED.

### Sociomedical results

40 studies (including 13 reviews) deal with sociomedical aspects of behavioral prevention. Most of the behavioural interventions are done at schools, colleges or universities in the United States. Therefore, the transferability to the German context is limited.

Several studies demonstrate the efficacy of brief motivational interventions for all included age groups. One study proves that alcohol consumption can be reduced for students with a strong sensation seeking need (number-needed to treat: 2) by a personalized cognitive-behavioural intervention.

The majority of computer- or webbased prevention programmes shows positive results. But there are as well examples for inconsistent or ineffective interventions, for instance concerning the efficacy of community programmes.

Interventions directed to parents achieve mostly positive effects especially the Strengthening Families Program (SFP; NNT: 9). Multi-component programmes are generally effective. Structural prevention, such as increasing alcohol taxes and prices, traffic control, restricting the proximal access to

outlets and the days and hours of sale, control of the sales staff, limiting the advertising opportunities (floor displays). Traditional (universal) media campaigns or education/information campaigns at schools are in contrast not effective.

### **Health economic results**

There are three US and one German study which deal with health economic questions. The German study regards an increase of alcohol taxes to reduce juvenile alcohol consumption as effective. The same conclusion arises from the three US-studies.

### **Ethical and juridical results**

In the fifteen ethical studies (including two reviews) several predictors are named which should be considered for the development of prevention programmes: drinking habits of the parents, the grade of liberality in education, the age of first drinking experience, the drinking frequency and amount, the trouble and expectations of weak results at school. US-studies show favourable results for involving parents in the education at school.

Two studies point out that good socio-economic situations promote alcohol consumption among adolescents. On the contrary a value based school culture with a balanced relation of support and control helps to reduce alcohol consumption. Advertising alcoholic beverages has a negative effect. Social norms campaigns against alcohol consumption are not effective.

The enforcement of regulations and legal restrictions is generally effective.

### **Discussion**

In the included studies, the term risky alcohol consumption is used in a broad variety which makes it difficult to evaluate the effects of the preventive activities.

Though the evidence level of most of the studies is high, many studies suffer methodological weaknesses (missing randomization, missing or too short follow-ups, not clearly defined outcome parameter). The studies differentiate between children, adolescents and young adults but use different age group classifications for that. Studies regarding the situation of working juveniles and young adults or of minorities are missing. The transferability of US-results to Germany is problematic. Only a few prevention activities are successful in reaching sustainable reductions of alcohol amount or frequency.

Overall it can be seen that alcohol consumption is increasing by age despite preventive interventions. The influence of age specific drinking norms for the transition period from youth to adulthood is not really discussed and insufficiently examined. The effects of multi-component and community based interventions are rarely examined and – if yes – with deficient study design. In none of the studies explicit benchmarks for the intended grade of behavioural change are given. The evaluation of the effectiveness of the preventive measurements is only done as ex-post judgement in comparison with control groups.

## Conclusion

We recommend several activities for the prevention of risky alcohol consumption among children, adolescents and young adults: a binding and evidence based definition of risky alcohol consumption; the definition of primary target groups; the development of prevention programmes which address the school culture and the feeling of belonging; the evidence based evaluation of German preventive activities; the development of specific interventions for 15 to 17 aged males, adolescents from well-off families and working adolescents and young adults; price increase for all alcoholic beverages; better enforcement of the law for the protection of the adolescents and consequent sanctions against violations of the law.

The HTA-report (HTA = Health Technology Assessment) shows the need for a unified and binding definition and operationalisation of risky alcohol consumption. Furthermore, there should be clear benchmarks for what is intended to be reached by means of preventive interventions. The transferability of the mainly US-generated study results to the German context is difficult, therefore the development of specific target-group oriented preventive interventions is needed.