



Folkhälsomyndigheten
PUBLIC HEALTH AGENCY OF SWEDEN

Socioeconomic costs related to use of doping in Sweden

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The Public Health Agency of Sweden

- Our Mission: to promote health, prevent illness and protect against health threats
- We do this by
 - providing knowledge base and methodological support
 - following up and evaluate methods and interventions
 - paying special attention to people with the greatest risk of suffering ill-health
 - coordinate work within the areas of alcohol, narcotics, doping, tobacco and gambling



Good and equal health - Eight key areas of life

Background

- The use of doping is considered a societal problem and is especially prevalent among younger men in gym environments
- About 1% of boys in high school have ever used doping substances, especially anabolic androgenic steroids (AAS)
- Use of of AAS is associated with a range of serious side effects

However:

- Lack of knowledge about the socioeconomic effects of AAS use in Sweden
 - Lack of evidence of effectiveness or cost-effectiveness regarding preventive methods in the AAS area
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Aim of the study

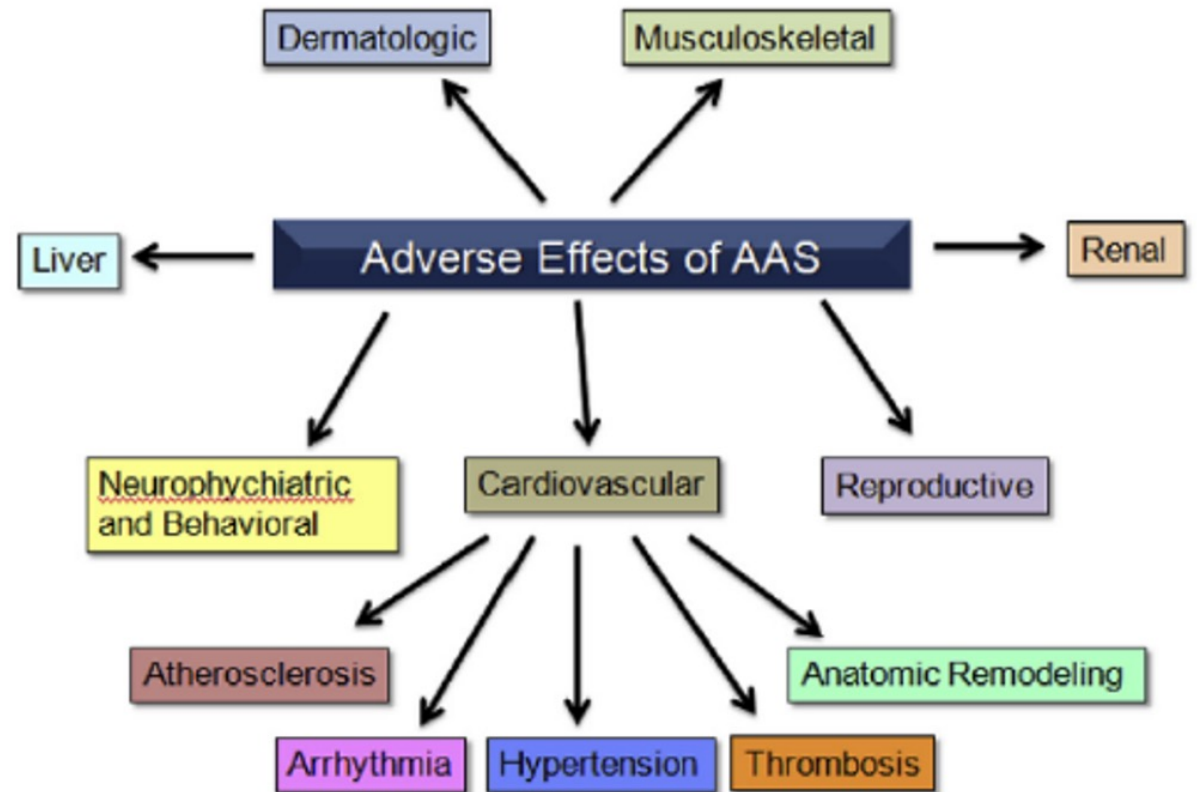
- Estimate the health economic consequences related to use of AAS in Sweden
 - Develop a socioeconomic model to estimate the short- and long-term health economic consequences of AAS use
 - Evaluate the cost-effectiveness of a hypothetical prevention intervention in the area of doping
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Method

- Identifying complications associated with current or prior use of AAS
 - Expert opinions: Cardiovascular, Reproductive, Mental health (behavioral, criminality)
 - Scoping literature review
 - Prevalence and health effects related to use of doping (economical, quality of life, mortality)
 - Assess the mortality related to use of AAS
 - Develop a model to test a hypothetical preventive intervention
 - Scenarios of a reduction to initiate AAS use by 5, 10, or 20 percent
 - Cost-efficiency
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Complications related to AAS use

- Identifying complications associated with current or prior use of AAS
 - Expert opinions
 - Literature review
- Cardiovascular
- Reproductive
- Mental health, incl. behavioral, criminality (costs related to imprisonment)



Scoping literature review

PICOS		
P	Population	People who use AAS: people attending gym, weight lifters, bodybuilders NOT elite/professional athletes. All age groups and both male and female (exploratory)
I	Intervention	Use of AAS (only AAS; no other substances such as opioids or growth hormones)
C	Comparison	People with no use of AAS
O	Outcome	Epidemiology, Health consequences (cardiovascular, reproductive and mental health)
S	Study design	RCT, cohort, case-control, cross-sectional including a defined intervention (no case reports)

Epidemiology of the use of AAS

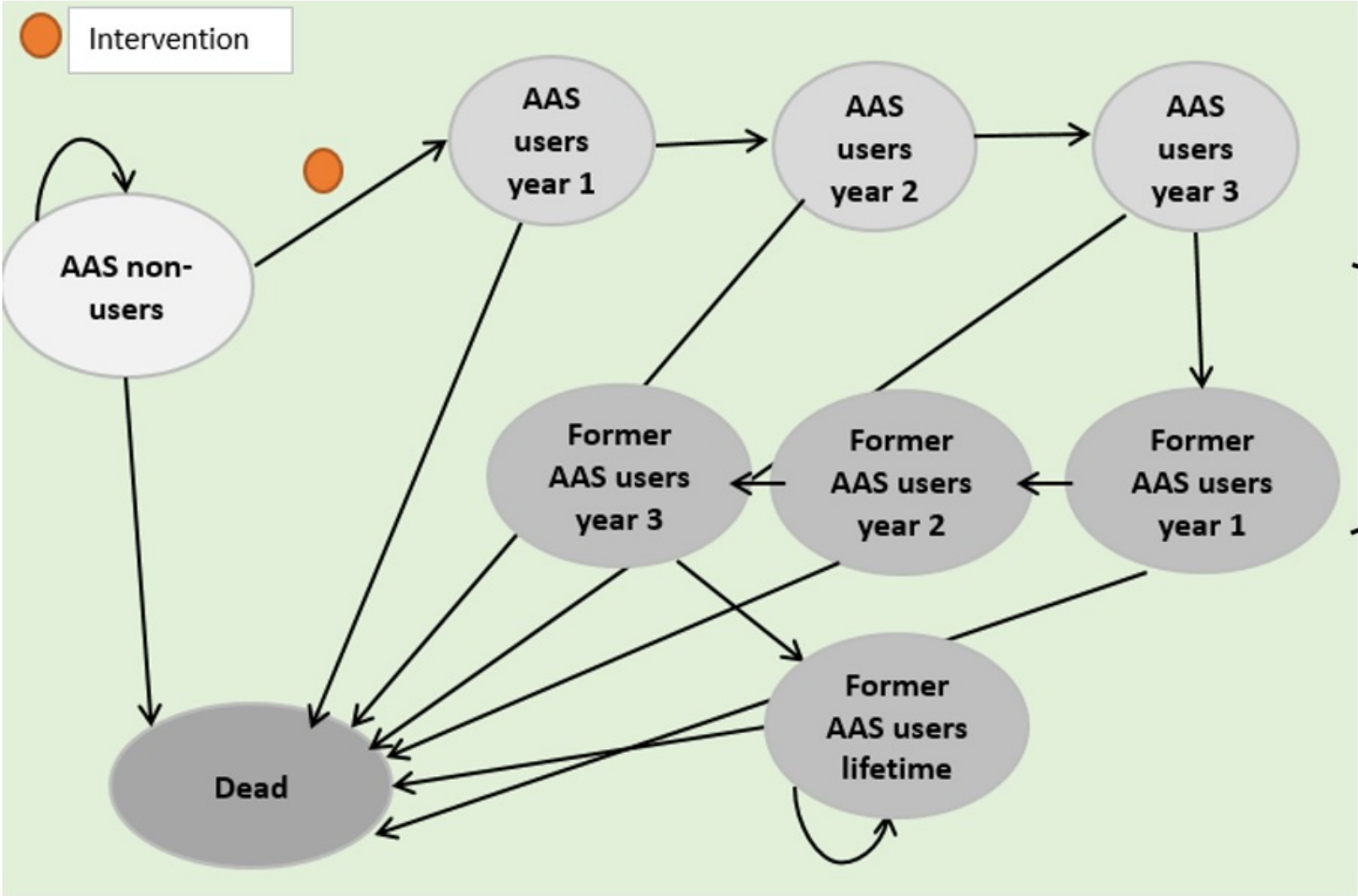
- Studies published between year 2000 and 2018
 - Total of 27 studies found, 21 conducted in Sweden
 - Final inclusion of 9 studies
 - Lifetime prevalence of AAS
 - 1,68 % (age interval 19-35 year)
 - 0,7 % (age 18 year)
 - Cumulative time of AAS use for active users
 - 142.3 weeks (during period 18-50 years of age)
 - Mortality related to use of AAS (2 studies)
 - 5,56 %
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Theoretical model of prevention

Population of men 18 y.o.



Population of men 18 y.o. who actively exercises in gym (40 %)



- Complications of states:**
 - Hypertension
 - Hypogonadism
 - Depression
 - Criminality

❖ Simulation period: up to 41 years of age (23 cycles / years)

Preventive intervention

- Preventive action in a gym environment
 - Activities to create awareness about AAS and its complications
 - Involve gym staff in the process
 - Coordination and collaboration at local and regional level
 - Information campaigns
 - Assumption of efficiency
 - Intervention reduces prevalence of AAS users by 10%
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Costs for a hypothetical intervention

Cost	Amount (SEK)
National coordination	
- Staff	1 765 000
- Activities	600 000
Regional coordination	
- Staff	1 662 312
- Activities	600 000
Municipal coordination	
- Staff	591 105
- Activities	118 221
Total costs	5 336 638

- Using official allocated budget at the respective level
- Proportion of staff working with ANDTS prevention at regional and municipal level (incl. salaries and activities)

Estimated societal costs for people who use or have used AAS

Total costs	Yearly	Thru the total simulation period up to 41 years of age	
	Use (AAS)	Use (AAS)	Previous use (AAS)
Health care	8 295 000	165 900 000	59 280 000
Judicial	682 500	13 650 000	NA
Travel	4 169	83 377	213 622 SEK
Loss of productivity due to morbidity	1 980 000	39 660 000	44 490 000
Total	10 960 000	219 290 000	103 990 000

323 million SEK



*Costs estimated for a cohort 18 year olds, up to 41 years of age (n = 226)

Cost effectiveness of the hypothetical intervention

Costs	Difference in costs in relation to an intervention or no intervention
Costs for an intervention	5 340 000
Costs use of AAS	-162 100 000
Net costs	-156 760 000
QALYs	700

- Largest savings is related to decreased need for health care and decreased loss of production

Conclusion

- 11 million SEK: the annual societal costs in Sweden related to active use of AAS
 - 320 million SEK: the total societal costs until people who use or have used AAS turn 41 years old
 - The biggest cost related to use was due to healthcare, followed by loss of production
 - A preventive intervention that reduces the probability of starting AAS use by 10% leads to societal savings
 - Preventive interventions that reduce use of AAS can lead to large cost savings for society and better health for individuals
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Europeiska webbundersökningen om narkotika 2024

- European Web Survey on Drugs (EU:s narkotikamyndighet, EMCDDA) i samarbete med Folkhälsomyndigheten
- 21 maj – 1 juli (resultat publiceras 2025)
- **Även frågor om dopningsmedel i Sverige**
- Användningsmönster, köp, hälsoeffekter, vård och behandling
- Bidra till mer kunskap – sprid länken!
- Länk till webbenkät
<https://ec.europa.eu/eusurvey/runner/EWSD2024-Sweden>
- Webbplats www.folkhalsomyndigheten.se/drugsurvey
- Kontakta oss via drugsurvey@folkhalsomyndigheten.se



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