



# Patient insight - perioperative smoking and alcohol cessation intervention?

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## Abstract

**Background** The involvement of patient preferences is sometimes forgotten in the evidence-based medicine and the development of clinical guidelines. Many preunderstandings among clinical staff exist on patients' preferences towards smoking and alcohol cessation programs.

The aim of this project was therefore to get insight of the patients' preferences regarding undertaking smoking and risky alcohol cessation intervention to reduce postoperative complications.

**Method** Six Scandinavian interview studies on adult surgical patients were identified and the focus of the analyses was on preference and motivation of the patients in relation to cessation programs taking place in the perioperative period.

**Results** Five intensive programs and one brief program were offered for smoking and alcohol cessation. All participants welcomed being offered the hospital's support to quit smoking and risky drinking in relation to surgery. Most of them felt especially motivated by the possible health gain following the coming surgery it-self.

**Conclusion** The patients seem to have a high preference for smoking- and alcohol cessation intervention in relation to surgery, especially towards the intensive programs.

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## Introduction

Patient preferences are an important part of the evidence-based medicine in addition to the evidence it-self and the necessary clinical competences (1). Daily smoking and risk drinking are important risk factors for development of post-operative complications. To date twelve randomised studies have evaluated the effect of perioperative smoking and alcohol cessation intervention (2-13) and more are coming soon (14;15).

In these studies, the inclusion rate varies from 50% to 82% in the different studies, but overall the compliance to the program is relatively good, ranging from 67% to above 90%. However, the successful quit rates in relation to surgery differ with the type of intervention. Thus, the intensive interventions with at least four meetings including patient education, motivational counselling and pharmaceutical support are followed by the highest quit rates of 27% to 90%. Interestingly, the long-term effect is also significantly. (16)

In contrast, successful quitting is more seldom after the shorter programs –

about one third to one fifth of the levels obtained in the intensive programs. The shorter programs often contain one or two meetings building on motivational counselling and supported by pharmaceutical. Though, the shorter programs may seem attractive in a surgical setting with a heavy work-load, they are not followed by a significant risk reduction surgery, such as lower complications after surgery (16).

Some of the randomised studies above have nested interviews of the patient expectations, and experiences. The aim of this literature review was therefore to gather insight into the patients' preferences of participating in smoking and alcohol cessation intervention in the perioperative period.

## Methods

Using the following online search strategy Interview\* AND (Smoking OR alcohol) AND surgery AND postoperative complication\* a total of 157 publications were found; 59 from Pubmed, 87 from Embase and 12 from Cinahl. The manual search from reference lists and infor-



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mation from experts revealed two more studies. After excluding 35 duplicates, 108 of the 125 titles and abstracts were considered not relevant for the subject. Furthermore, 8 studies were excluded as 5 did not use an interview design and 3 did not involve the surgical patients. Thus, 9 publications were further evaluated and 7 of those fulfilled the inclusion, but not the exclusion criteria. They were therefore included (17-23). One publication only existed as detailed abstract (23), but the related quantitative study has been published afterwards (24). The 2 excluded full text articles evaluated relevant aspects of perioperative smoking and

smoking cessation, but did not perform analyses and interpretation as requested for a qualitative study design (25;26).

Altogether, 6 of the 7 included studies explored the experiences of regarding perioperative lifestyle intervention on short time (Table 1), while the last study focused on the 1-year follow-up (18). All studies were performed as individual or focus group interviews by semi-structured interview guides.

**Table 1** Characteristics of the participants and methods in the six interview studies on patient preference of perioperative smoking and alcohol cessation intervention

	<b>Moller 2004 (16)</b>	<b>Villebro 2008 (17)</b>	<b>Thomsen 2009 (18)</b>	<b>Lindstrom 2010 (19)</b>	<b>Pedersen 2011 (20)</b>	<b>Parsons 2012 (22)</b>	<b>Lauridsen 2017 (21)</b>
<b>N° of participants</b>	18	<i>(1 yr FU of Moller 2004)</i>	11	27	13	12	11
<b>Lifestyle</b>	Smoking	Smoking	Smoking	Smoking	Alcohol	Smoking	Alcohol Smoking
<b>Period of Intervention</b>	6-8 weeks preop	6-8 weeks preop	Few days preop	4+4 weeks pre+postop	6 weeks postop	2 weeks preop + late postop	6 weeks postop
<b>Type of intervention</b>	Intensive program	Intensive program	Brief program	Intensive program	Intensive program	Intensive program	Intensive program
<b>Relation to intervention</b>	Intervention group: 10 quitters 8 smokers	Intervention group Mixed quitters and smokers	Intervention group: 5 quitters 6 smokers	Control group	Prior to intervention start	Prior to intervention start	Intervention group
<b>Women</b>	9	Mixed	11	15	5	6	1
<b>Men</b>	9		-	12	8	6	10
<b>Operation / diagnoses</b>	Knee – hip arthroplasty	Knee – hip arthroplasty	Breast cancer surgery	General surgery	Fracture surgery	Lung cancer surgery	Bladder cancer surgery
<b>Age (range of years)</b>	40-77	30-85	40-72	42-66	28-78	<i>(Not given)</i>	43-77
<b>Sampling</b>	Purposive sampling	Representative sampling	Representative sampling	All control patients	Data saturation	Representative sampling	Data saturation
<b>Analyses</b>	Long table-model	<i>(Not given)</i>	Ricoeur's theory	<i>(Not given)</i>	Applied qualitative framework	Applied qualitative framework	Thematic network

## Results

The studies recruited 92 surgical patients (47 women and 45 men), ranging 28-85 years of age. Across the studies, the participants were positive and found it relevant to be offered the support from their hospital / clinic support to quit smoking and/or risky drinking prior to surgery.

### Intensive interventions

The analyses and interpretation identified important facilitators for successful quitting, such as a competent counsellor, measurements like lung function and CO concentration, free nicotine replacement therapy,

the relative long intervention program over 6-8 weeks as well as the smoke-free surroundings at the hospital. The major barriers were lack of support from the staff and psycho-social stress from family and friends to reuptake smoking (17).

At follow-up after 1 year the patients agreed that improved health and money saving were the main reasons for successful quitting smoking. All wanted a longer intervention period than the 6-8 weeks. The facilitators for continuous quitting included low nicotine dependency, being a man and having a non-smoking spouse. Even a year after the operation still several participants



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mentioned the operation, anaesthesia and the risk of post-operative complications as supportive for quitting (18).

Patients undergoing bladder cancer resection together with neo-bladder construction received the intensive smoking and alcohol cessation intervention very well. They did not have an urge to smoke or drink alcohol in the smoke- and alcohol-free surroundings at hospital. *This patient group saw smoking and alcohol cessation intervention as an integral part of the surgical treatment. In contrast, after the 6 week program returning to everyday life was a barrier to continue successful quitting of smoking and risky drinking (22).*

The large majority of patients in the control group would have preferred to take part in the intensive intervention group, and many expressed that they were disappointed by being in the control group. *Most participants agreed to take part in the perioperative smoking cessation study because they wanted receive the intervention (20).*

### Brief intervention

Only one study analysed the brief intervention program. The majority of women with breast cancer expressed a need for prolonged smoking cessation support instead of the brief intervention, which had only minor effect on quitting smoking in the perioperative period. However, the brief program had triggered their reflection upon smoking, health and addiction, and they experienced it as an opportune aid to escaping the social stigma of being a smoker (19).

### Expectations to the intensive programs

The patient group with lung cancer found the programme highly acceptable and attributed emotional, informational, motivational and physical benefits to their participation (23). Also the patient group with ankle fracture saw alcohol intervention in relation to surgery as a good idea. However, they did not consider quit drinking as a major problem during their short hospital stay, because of the alcohol-free surroundings - and had all remained abstinent in this period. The patient opinions reflected their stage of readiness to stop drinking in the perioperative period, their general acceptance of supportive disulfiram as part of an alcohol intervention as well as their awareness of postoperative complications (21).

### Discussion

An important result is that the large majority of patients welcomes intensive smoking and alcohol cessati-

on intervention as part of the peri-operative care. Those receiving a briefer program strongly express need for more intensive intervention. Furthermore, the patients benefit from the smoke- and alcohol-free surroundings during hospital stay and the competences of the counsellor. Other facilitators are the expectation of fewer complications, improved health and saved money from quitting. The knowledge of unhealthy lifestyle as a risk factor for complications after surgery is related to motivation for changing lifestyle at surgery. It seems that the surgical patients prefer intensive intervention, as participants in the control group become disappointed of not being allocated to the intervention group; however, the briefer intervention may at least trigger reflections on smoking and health.

Numerous interview studies have been performed among smokers receiving different smoking and alcohol cessation programs (16). Many of them have taken place in the surgical setting, but very few studies have combined the perspective on successful quitting with the perspective of successful outcome after the operation, like the six studies included in our article (17-23).

There are several bias and limitations in this article. First of all, those already introduced in the six original interview studies. Second, the generalisation from qualitative studies should be done very carefully, as the results are closely related to the context where the data are collected. In this case, the majority of the interviews have been performed in Sweden and Denmark, which make it difficult to generalise the results to other countries, cultures, patient groups and settings. Furthermore, the seven studies have used several different research methodology and performed the interviews at different time in relation to the operation (Table 1). On this background, it is interesting to identify the general positive attitude to and experiences from lifestyle intervention in the perioperative period.

In conclusion, it seems that patients are rather positive to intensive smoking- and alcohol cessation intervention in relation to surgery – across the included studies.

### Conflicts of Interests

Nothing to declare.



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