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The Efficacy of Disulfiram for the Treatment of Alcohol-Use Disorder – A systematic Review

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Background

Treatment of alcohol-use disorder (AUD)

- Non-pharmaceutical interventions (brief intervention, specialized treatment programs, mutual help groups i.e. AA)
- Pharmaceutical interventions (acamprosate, naltrexone, disulfiram)

Disulfiram (DIS)

- AUD patients who wish to remain abstinent
- Today: Supervised administration combined with behav therapy, effect not recently evaluated



Aim

To evaluate the effect of DIS compared with placebo, treatment as usual, none or other for patients with AUD

AUD

- > 20 g/d for women and > 30 g/d for men (*British Medical Association*)
- AUD includes hazardous and harmful use and alc dependency



Methods

Search strategy

- MEDLINE, EMBASE & Cochrane Central Register of Controlled Trials (CENTRAL)

Outcomes

- Primary: Continuous alcohol intake < 20 and 30 g/d for women and men
- Secondary: Number of days until relapse, reduced alc intake and number of drinking days



Methods

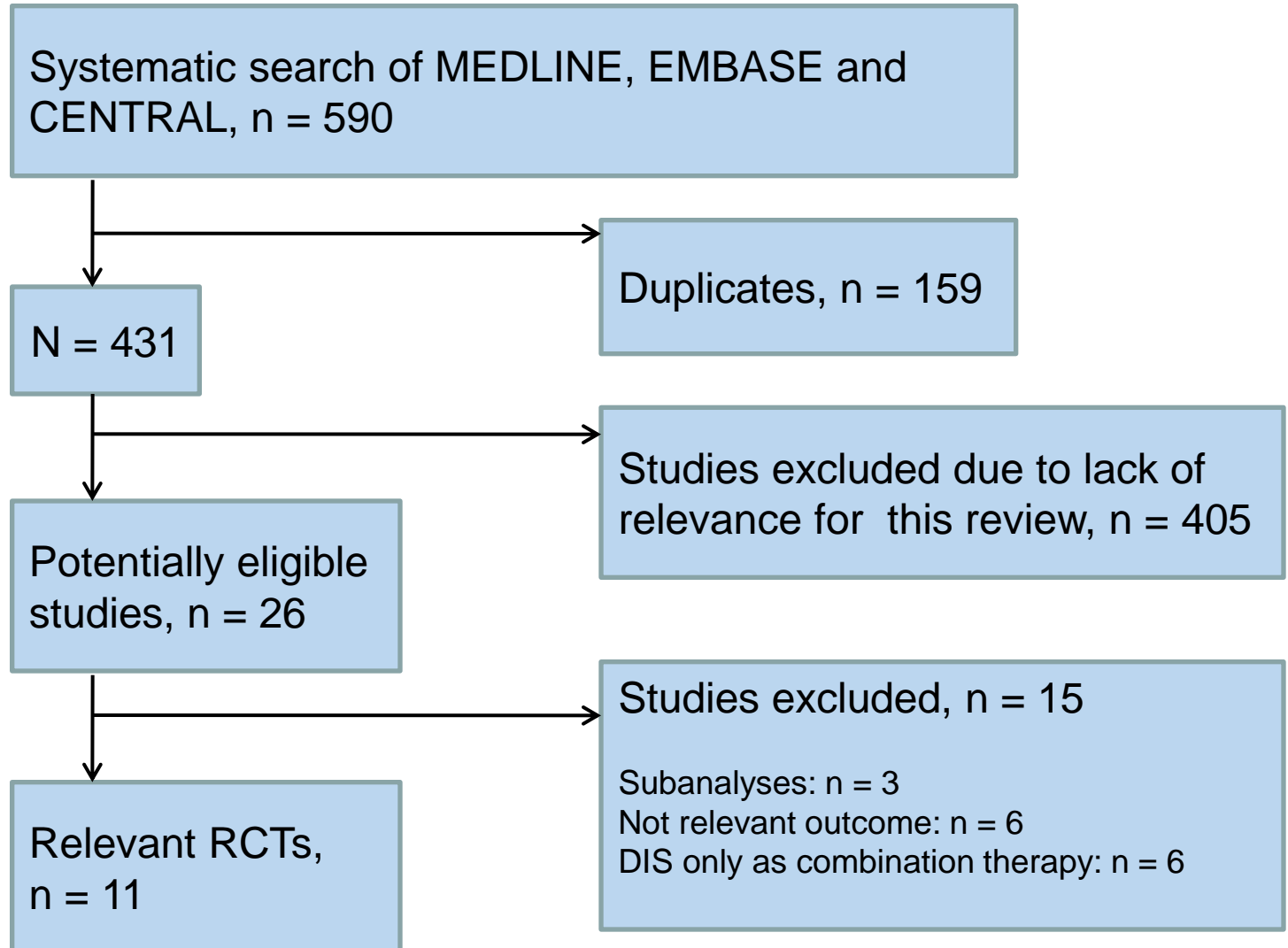
Criteria

- Inclusion of RCTs only studying
 - DIS in various doses (+/- control group)
 - DIS against placebo, no treatment or other medical or behavioral treatment
- Exclusion of
 - Studies published several times, subanalyses, no relevant primary outcome, no ITT analysis and studies that combined DIS with other treatment

Extraction and analysis

- Data from included studies
- Assessment of methodological quality
- Meta-analysis where possible (low heterogeneity)

Trial profile



Characteristics

Included studies and patients

- 11 RCTs including 1527 patients ranging from 26 to 605 patients (mean 139 patients)
- Duration between 2 and 12 months
- The primary outcome was abstinence, but def. of abstinence and relapse varied
- Predominately men with alcohol dependence (DSM) aged 15 to 76 years
- Baseline alc intake ranged from 72 g/d to 110 g/d
- Compliance and alc intake was self-reported (+/- validation)

- Median inclusion rate 58% (range 8-85%)
- Median compliance rate 85% (range 19-100%)
- Median follow-up rate 93% (range 18-100%)





Results

Effect on primary outcome

DIS versus...

- Other pharmacological treatment: 4 in 6 studies reported significantly more abstinent patients
- Placebo: 1 in 3 studies reported significantly more abstinent patients (short term)
- No treatment: 1 in 2 studies reported significantly more abstinent patients
- No treatment showed to be significantly better than DIS

Effect on secondary outcomes

- 5 in 9 studies reported increased number of days before relapse among patients treated with DIS



Results

Meta-analyses

- DIS versus placebo (2 studies): Non-significant effect on abstinence for 12 months, OR = 1,48 (95% CI: 0,98-2,23)
- Unsupervised DIS (3 studies): Compared with other or no treatment DIS was more effective regarding abstinence, OR = 1,59 (95% CI: 1,07-2,37)
- Heterogeneity was significant in the other meta-analyses

Risk of bias

- Overall moderate risk of bias in the studies
- 3 studies were at low risk of bias



Conclusion

DIS treatment has some effect on short-term abstinence and days until relapse for patients with alc dependency or abuse

Long-term effect on abstinence has not been evaluated yet

Need for more homogenous and high-quality studies in the future