

GRADE of Recommendations:

Cognitive leisure activities compared to no cognitive leisure activities for the prevention of dementia (OPDEBEEK et al.)

Patient or population: over 60 years, non-demented adults at baseline

Intervention: cognitive leisure activities

Comparison: no cognitive leisure activities

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	No of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no cognitive leisure activities	Risk with cognitive leisure activities				
Overall cognitive functioning	The mean overall cognitive functioning was 0 SD	The mean overall cognitive functioning in the intervention group was 0,26 SD higher (0,21 higher to 0,31 higher)	-	(31 observational studies)	⊕○○○ VERY LOW ^{a,b}	

*The risk in the intervention group (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; MD: Mean difference

GRADE Working Group grades of evidence

High certainty: We are very confident that the true effect lies close to that of the estimate of the effect

Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different

Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect

Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. I² = 94%, b. Interventions vary between studies

Video Games compared to no Video Games for the prevention of dementia (TORIL et al.)

Patient or population: 50-86 years, healthy older adults

Intervention: Video Games

Comparison: no Video Games

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	No of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no Video Games	Risk with Video Games				
Cognitive Function	-	-	-	913 (20 observational studies)	⊕○○○ VERY LOW ^a	

*The risk in the intervention group (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; SMD: Standardised mean difference

GRADE Working Group grades of evidence

High certainty: We are very confident that the true effect lies close to that of the estimate of the effect

Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different

Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect

Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. Mixing various different interventions and study designs

Cognitive leisure activities compared to no cognitive leisure activities for healthy older adults (YATES et al.)

Patient or population: over 46 years, healthy older adults, **Intervention:** cognitive leisure activities, **Comparison:** no cognitive leisure activities

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	No of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no cognitive leisure activities	Risk with cognitive leisure activities				
Incidence of AD	0 per 1.000	0 per 1.000 (0 to 0)	RR 0.610 (0.418 to 0.900)	(3 observational studies)	⊕○○○ VERY LOW ^{a,b}	
Incidence of AD	0 per 1.000	NaN per 1.000 (NaN to NaN)	HR 0.584 (0.462 to 0.739)	(2 observational studies)	⊕○○○ VERY LOW ^b	
Incidence of AD	Low		OR 0.775 (0.668 to 0.899)	0 cases 0 controls (2 observational studies)	⊕○○○ VERY LOW ^{b,c}	
	0 per 1.000	0 per 1.000 (0 to 0)				
Incidence of cognitive impairment	0 per 1.000	0 per 1.000 (0 to 0)	OR 0.685 (0.550 to 0.845)	(5 observational studies)	⊕○○○ VERY LOW ^b	
Incidence of cognitive impairment	0 per 1.000	NaN per 1.000 (NaN to NaN)	HR 0.853 (0.711 to 1.022)	(3 observational studies)	⊕○○○ VERY LOW ^{b,c}	

*The risk in the intervention group (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; RR: Risk ratio; HR: Hazard Ratio; OR: Odds ratio

Explanations

a. moderate heterogeneity, χ^2 test $p=0.09$, b. differences in interventions (definition of cognitive leisure activities varies across studies), c. high heterogeneity, χ^2 test $p=0.00$, confidence intervals do not overlap