

Bike desks in the office

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Cycling on a bike desk positively influences cognitive performance and brain activity

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Protocol

INTAKE	FAMILIARISATION SESSION 1	FAMILIARISATION SESSION 2	TEST SESSION A
MEDICAL SCREENING	COGNITIVE TEST BATTERY (SITTING)	COGNITIVE TEST BATTERY (CYCLING)	COGNITIVE TEST BATTERY (SITTING)
INCREMENTAL CYCLE TEST TO EXHAUSTION	30' CYCLING WHILE WORKING	30' CYCLING WHILE WORKING	TEST SESSION B
			COGNITIVE TEST BATTERY (CYCLING)





	Behavioural outcomes	Neuroelectrical outcomes
Typing performance	/	
Short-term memory (RAVLT)	/	
Selective attention (Stroop test)	+	N200 amplitude ↑
Sustained attention (RCPT)	+	P300 latency ↓ (premotor cortex)

TAKE HOME MESSAGE

PEOPLE ARE ABLE TO WORK ON A BIKE DESK WITH EQUAL TYPING PERFORMANCE AND SHORT-TERM MEMORY AND IMPROVED SELECTIVE AND SUSTAINED ATTENTION.


THIS STUDY PROVIDES POSITIVE EVIDENCE FOR THE IMPLEMENTATION OF BIKE DESKS IN OFFICES

Bike desks in the office: physical health, job satisfaction, work performance, cognitive function

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Protocol

	T0 (Oct '15)	T1 (March '16)
Control group (15)	<i>Physical health Cognitive parameters</i>	<i>Physical health Cognitive parameters</i>
Intervention group (19)	<i>Work parameters</i>	<i>Work parameters</i>
	8x 25 min bike desk / week	



Bike desk use

Time: 98.1 ± 55.3 min/week

Distance: 27.3 ± 17.4 km/week

Power output: 55.8 ± 18.3 Watt

~ extra EE 140 kcal / week day



		Results
Physical health	BMI	/
	Fat percentage	+
	Waist circumference	/
	Blood pressure	+
	VO2peak	/
Work parameters	Task performance, OCB, CWB	/
	Job satisfaction	+
Cognitive parameters	Short-term memory, selective and sustained attention	/
	N200 and P300	/

Conclusion

Positive effect on some physical health parameters

No effect on work performance

Positive effect on job satisfaction

=> Important for employers and government

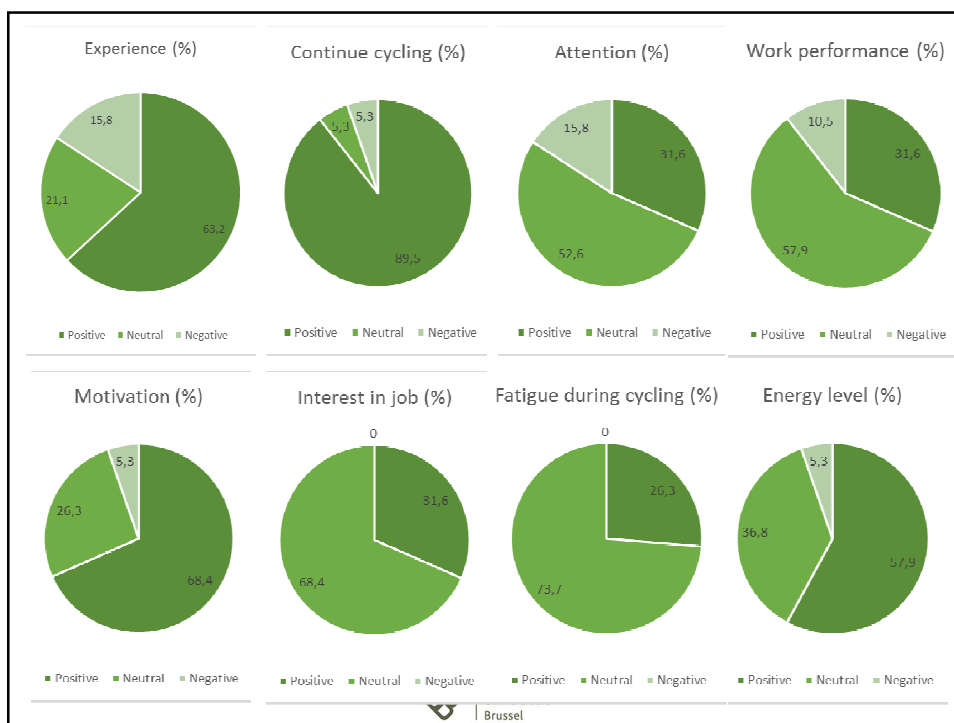
Bike desks in the office – a qualitative study

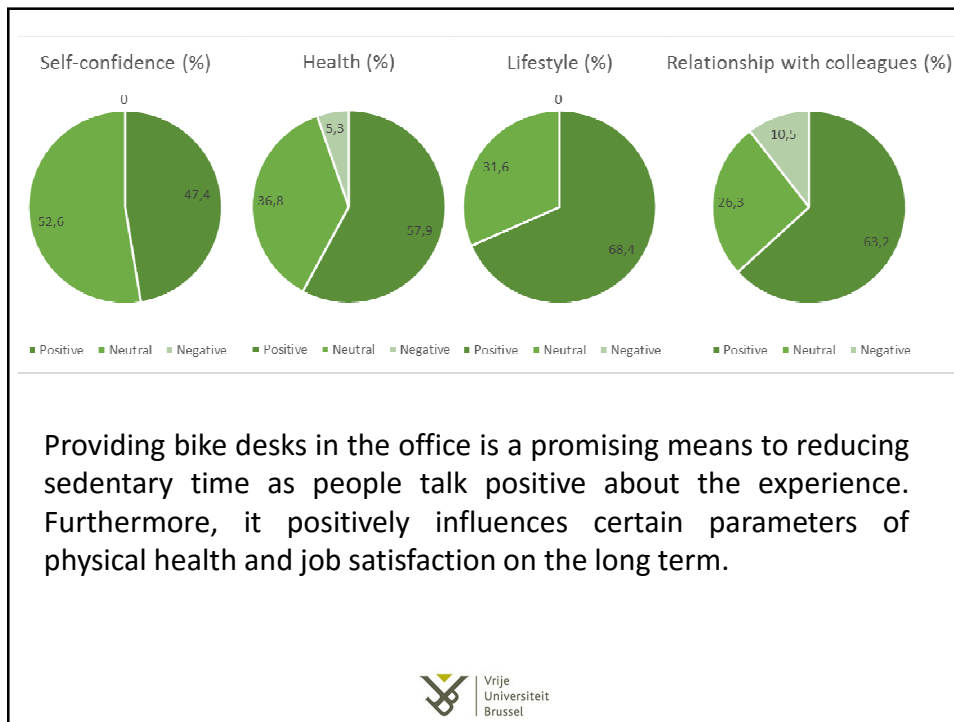
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Let's go for an active office!

DESK
↑
Upgrade