Supplementary Material for:

Farioli A, Kriebel D, Mattioli S, Kjellberg K, Hemmingsson T.
Occupational lifting and rhegmatogenous retinal detachment: a follow-up study of Swedish conscripts.
Occup Environ Med. 2017;74(7):489-495. doi:10.1136/oemed-2016-104172.

Supplementary table 1. Classification of myopia, educational level, income, body mass index, cigarette smoking, blood pressure levels and intelligence quotient.

Variable/categories	Definition	Source	Notes
Lifting index		1990 census	Each subjects was classified based on the occupational code reported at the 1990 census. The lifting index was calculated as the geometric mean of the answers provided at the Swedish Work Environment Surveys 1989–97
<2	Lifting index below 2		
2/3	Lifting index between 2.0 and 3.9		
4/7	Lifting index between 4.0 and 7.9		
≥8	Lifting index of 8.0 or more		
Myopia		Conscription examination	[a]
Absent	No refraction error or hyperopia		
Mild	Less than 3.0 diopters of myopia		
Moderate	From 3.0 to 6.0 diopters of myopia		
Severe	More than 6.0 diopters of myopia		
Educational levels		LOUISE	
Primary	Up to 9 completed years of education		
Secondary	11-12 completed years of education		
Tertiary	14 or more completed years of education		
Income	Individual income (SEK per week)	LOUISE	
Body mass index		Conscription examination	
Underweight	BMI below 18.5 kg/m^2		
Normal	BMI between 18.5 and 24.9 kg/m^2		
Overweight	BMI between 25.0 and 29.9 kg/m^2		
Obese	BMI of 30 kg/m^2 or more		
Cigarette smoking		Conscription examination	
Non-smoker	0 cigarettes per day		
Light smokers	1-10 cigarettes per day		
Moderate smokers	11-20 cigarettes per day		
Heavy smokers	21 or more cigarettes per day		
Blood pressure levels		Conscription examination	The blood pressure level of each subject was classified according to the ranges of either the systolic or diastolic blood pressure; whichever resulted in the poorer category[b]
Optimal	Systolic <120 mm Hg; diastolic <80 mmHg		
Normal	Systolic 120–129 mm Hg; diastolic 80–84 mmHg		
High normal	Systolic 130–139 mm Hg; diastolic 85–89 mmHg		
Hypertension	Systolic ≥140 mm Hg; diastolic ≥90 mmHg		
Intelligence quotient		Conscription examination	Cognitive assessment performed using four sub-tests (logical-inductive, verbal and visuospatial ability, and technical–physical comprehension)[c]
Low	IQ score below 90		
Medium	IQ score between 90 and 110		

High	IQ score above 110		
Age		Conscription examination	Age was introduced in the regression models as a time dependent covariate
40–49 years	Age between 40 and 49 years		
50–59 years	Age between 40 and 49 years		
Occupational group		1990 census	Subjects were classified as manual or non-manual workers based on the socioeconomic classification made by Statistics Sweden and the NYK-83 occupational codes (3-digit level)
Non-manual workers	Workers performing non-physical jobs		
Manual workers	Workers performing physical jobs		

Abbreviations: BMI, body mass index; IQ, intelligence quotient; ISCO-88, 1988 version of the International Standard Classification of Occupations. LOUISE, Longitudinal Database of Education, Income and Employment; SEK, Swedish Krona

Ref.

[a] Cline D, Hofstetter HW Griffin JR. Dictionary of Visual Science (4th ed.). Boston, MA: Butterworth-Heinemann, 1997.

[b] Mancia G, Fagard R, Narkiewicz K, et al. 2013 ESH/ESC practice guidelines for the management of arterial hypertension. Blood Press 2014;23:3–16.

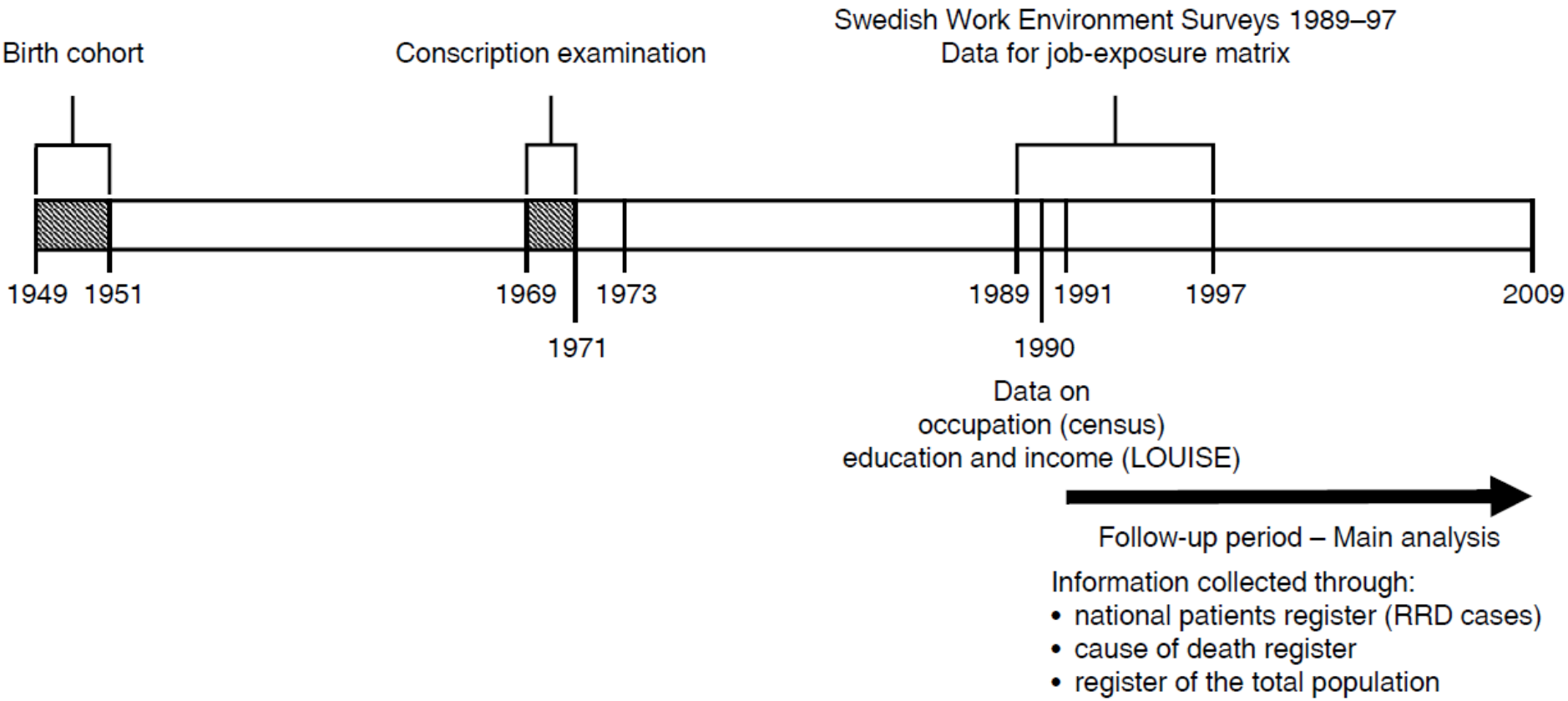
[c] Hemmingsson T, Melin B, Allebeck P, et al. The association between cognitive ability measured at ages 18–20 and mortality during 30 years of follow-up–a prospective observational study among Swedish males born 1949–51 Int J Epidemiol 2006;35:665–70.

Supplementary Table 2. Incidence rate differences (per 1,000 person-years) of rhegmatogenous retinal detachment by lifting index categories. Average marginal effect from the fixed part of a Poisson regression model including lifting index, myopia degree, educational level, income, and age (40–49 years vs 50–59 years) and with random intercept on occupational groups (NYK-83, 3-digit level).

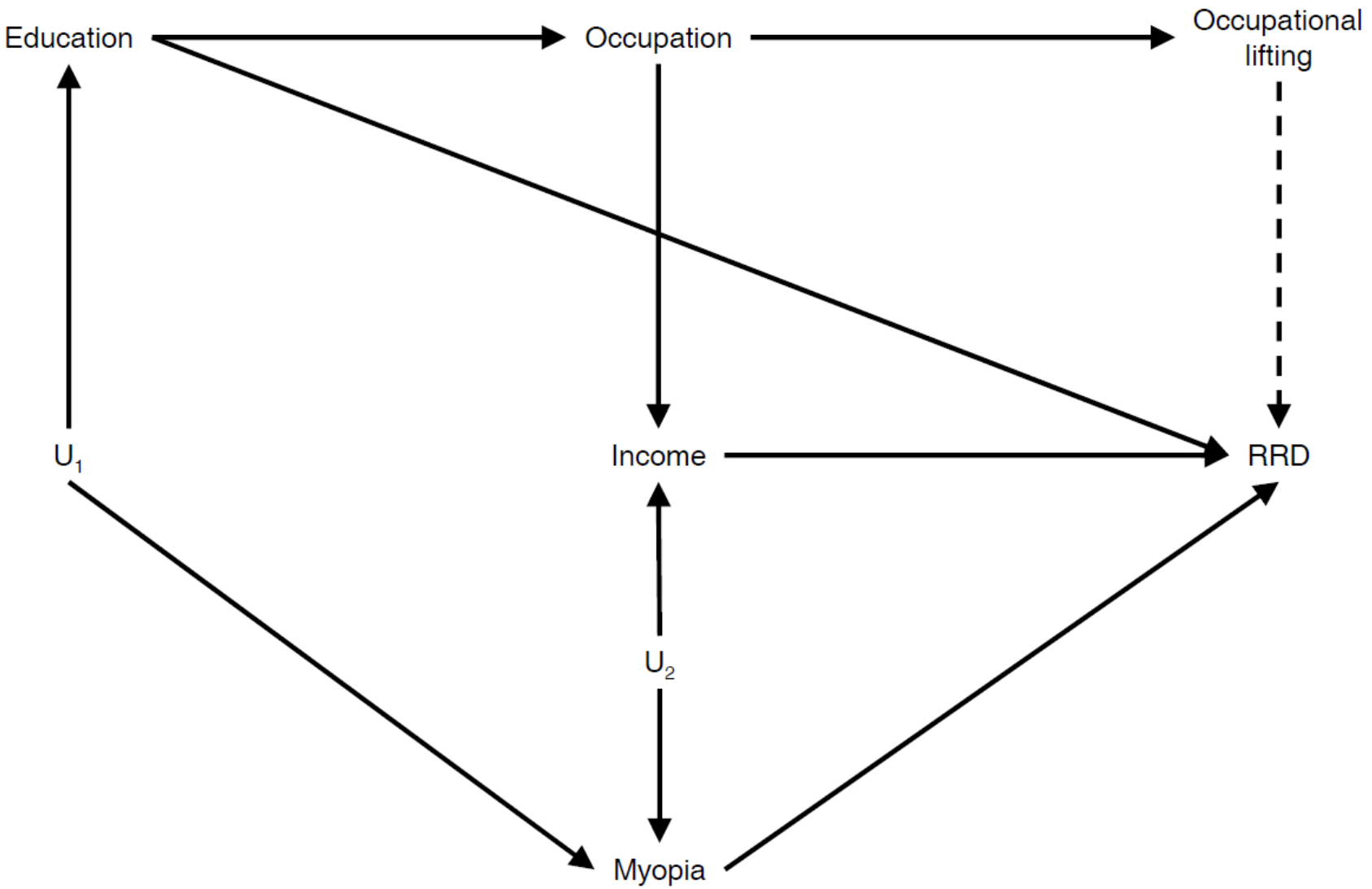
	Age							
	40–49 years				50-59 years			
	Myopia (diopters)				Myopia (diopters)			
Lifting index	Absent	Mild (>-3.00)	Moderate (-3.00 to -5.75)	Severe (<-6.00)	Absent	Mild (>-3.00)	Moderate (-3.00 to -5.75)	Severe (<-6.00)
<2	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
2/3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7	0.0	+0.2	+0.3	+0.6	+0.1	+0.4	+0.9	+1.7
≥8	+0.1	+0.4	+0.9	+1.6	+0.3	+1.2	+2.6	+4.6

Abbreviation: Ref, reference category

Supplementary Figure 1. The timeline of the study.



Supplementary Figure 2. The putative roles of education level and income as confounders of the association between RRD and occupational lifting



Supplementary Figure 3. The relationship between myopia and occupational lifting index.