

SUPPLEMENTAL MATERIAL

Table S1. Model results for BP medication use at 5YFU regressed on the interaction of 3-level sleep duration and shift work and their main effects (N=9,200).

<i>Variable</i>	<i>OR#</i>	<i>95% CI</i>	<i>P-value</i>
Shift Work			
Shift Work	0.78	0.51-1.18	0.24
No Shift Work	REF	REF	REF
Sleep Duration			
Short	0.98	0.79-1.22	0.88
Adequate	REF	REF	REF
Long	0.87	0.58-1.28	0.47
Sleep Duration x Shift Work			
Short Sleep – Shift Work	2.49	1.27-4.86	0.01**
Adequate Sleep – No Shift Work	REF	REF	REF
Long Sleep – Shift Work	0.74	0.09-6.03	0.78
Age (years)	1.06	1.04-1.08	<0.001**
Sex			
Female	REF	REF	
Male	1.93	1.61-2.31	<0.001**
Race/Ethnicity			
Mixed/Other	1.13	0.40-3.18	0.82
Asian	1.36	0.57-3.24	0.49
Black	2.69	0.91-7.89	0.07
White	REF	REF	
Education			
Attended College	0.82	0.69-0.97	0.02*
No College	REF	REF	
Employment Status			
Employed	0.99	0.63-1.53	0.95
Retired	0.92	0.58-1.46	0.72
Not Employed/Not Retired	REF	REF	
Residence			
Urban	REF	REF	
Rural	0.90	0.70-1.15	0.39
Family History of CVD			
Yes	1.28	1.08-1.52	0.005**
No	REF	REF	
Do not know/Prefer not to answer	1.75	0.59-5.25	0.32
Depression Status			
Yes	1.62	1.03-2.55	0.04*
No	REF	REF	
Unknown	1.46	1.12-1.92	0.006**
Alcohol Frequency Intake			
Daily or almost daily	0.82	0.62-1.10	0.19
Three or four times a week	0.77	0.58-1.02	0.07
Once or twice a week	0.64	0.48-0.86	0.003**
One to three times a month	0.69	0.48-0.99	0.04*
Special occasions only/Never	REF	REF	
Physical Activity			
Ideal	0.71	0.08-5.98	0.75
Intermediate	0.82	0.10-6.94	0.86
Poor	REF	REF	
Do not know/Prefer not to answer	0.61	0.07-5.53	0.66
Diet			
Ideal	2.00	0.24-16.48	0.52

	Intermediate	1.01	0.85-1.20	0.91
	Poor	REF	REF	
Tobacco Use				
	Ideal	0.79	0.56-1.12	0.18
	Intermediate	0.86	0.60-1.23	0.40
	Poor	REF	REF	
	Do not know/Prefer not to answer	0.73	0.09-6.14	0.78
Body Mass Index (BMI)				
	Ideal	0.29	0.22-0.39	<0.001**
	Intermediate	0.51	0.42-0.61	<0.001**
	Poor	REF	REF	

‡ Model was adjusted for baseline age, sex, race/ethnicity, education, employment status, urban/rural residence, family history of CVD, depression status, alcohol frequency intake, physical activity, diet, tobacco use, and body mass index.

BP=blood pressure, REF=reference category, OR=odds ratio, CI=confidence interval

* $p < 0.05$, ** $p < 0.01$

Table S2. Model results for BP medication use at 5YFU regressed on the interaction of circadian preference and shift work and their main effects (N=9,200).

<i>Variable</i>	<i>OR#</i>	<i>95% CI</i>	<i>P-value</i>
Shift Work			
Shift Work	0.80	0.51-1.25	0.32
No Shift Work	REF	REF	REF
Circadian Preference			
Morning	0.97	0.79-1.19	0.74
Intermediate	REF	REF	REF
Evening	1.05	0.77-1.44	0.75
Circadian Preference x Shift Work			
Morning – Shift Work	2.05	1.02-4.13	0.04*
Intermediate – No Shift Work	REF	REF	REF
Evening – Shift Work	1.26	0.47-3.40	0.65
Age (years)	1.06	1.04-1.08	<0.001**
Sex			
Female	REF	REF	
Male	1.92	1.61-2.29	<0.001**
Race/Ethnicity			
Mixed/Other	1.10	0.39-3.08	0.86
Asian	1.43	0.60-3.41	0.42
Black	2.90	0.99-8.48	0.05
White	REF		
Education			
Attended College	0.81	0.68-0.97	0.02*
No College	REF	REF	
Employment Status			
Employed	1.00	0.65-1.55	0.99
Retired	0.93	0.58-1.47	0.75
Not Employed/Not Retired	REF	REF	
Residence			
Urban	REF	REF	
Rural	0.90	0.71-1.16	0.42
Family History of CVD			
Yes	1.28	1.08-1.52	0.005**
No	REF	REF	
Do not know/Prefer not to answer	1.83	0.61-5.47	0.28
Depression Status			
Yes	1.62	1.03-2.54	0.04*
No	REF	REF	
Unknown	1.46	1.12-1.92	0.006**
Alcohol Frequency Intake			
Daily or almost daily	0.83	0.62-1.11	0.21
Three or four times a week	0.77	0.59-1.02	0.07
Once or twice a week	0.65	0.48-0.86	0.003**
One to three times a month	0.70	0.49-0.99	0.046*
Special occasions only/Never	REF	REF	
Physical Activity			
Ideal	0.70	0.08-5.89	0.74
Intermediate	0.81	0.10-6.82	0.85
Poor	REF	REF	
Do not know/Prefer not to answer	0.60	0.07-5.44	0.65
Diet			
Ideal	2.02	0.25-16.68	0.51

Table S3. Relationship between shift work and the odds of new BP medication use at 5YFU among short sleepers (N=1,899).

<i>Variable</i>	<i>OR#</i>	<i>95% CI</i>	<i>P-value</i>
Shift Work			
Shift Work	2.08	1.21-3.58	0.008*
No Shift Work	REF	REF	REF
Age (years)	1.05	1.02-1.08	0.003**
Sex			
Female	REF	REF	
Male	1.85	1.28-2.67	0.001**
Race/Ethnicity			
Mixed/Other	2.34	0.58-9.42	0.23
Asian	0.99	0.25-4.01	0.99
Black	1.66	0.26-10.63	0.59
White	REF	REF	
Education			
Attended College	1.10	0.77-1.59	0.59
No College	REF	REF	
Employment Status			
Employed	0.97	0.42-2.28	0.95
Retired	0.90	0.36-2.27	0.83
Not Employed/Not Retired	REF	REF	
Residence			
Urban	REF	REF	
Rural	0.70	0.39-1.25	0.23
Family History of CVD			
Yes	1.15	0.81-1.64	0.45
No	REF	REF	
Do not know/Prefer not to answer	1.48	0.23-9.51	0.68
Depression Status			
Yes	1.43	0.57-3.57	0.44
No	REF	REF	
Unknown	1.25	0.73-2.15	0.41
Alcohol Frequency Intake			
Daily or almost daily	0.75	0.43-1.33	0.33
Three or four times a week	0.57	0.33-1.00	0.05
Once or twice a week	0.49	0.27-0.87	0.01*
One to three times a month	0.38	0.18-0.83	0.01*
Special occasions only/Never	REF	REF	
Physical Activity			
Ideal	0.26	0.03-2.48	0.24
Intermediate	0.31	0.03-2.98	0.31
Poor	REF	REF	
Do not know/Prefer not to answer	0.29	0.03-3.33	0.32
Diet			
Ideal	1.98	0.05-85.14	0.72
Intermediate	1.03	0.72-1.46	0.87
Poor	REF	REF	
Tobacco Use			
Ideal	0.83	0.41-1.65	0.59
Intermediate	0.69	0.33-1.42	0.31
Poor	REF	REF	
Do not know/Prefer not to answer	2.78	0.26-29.68	0.40
Body Mass Index (BMI)			

Ideal	0.18	0.09-0.37	<0.001**
Intermediate	0.47	0.32-0.68	<0.001**
Poor	REF	REF	

Model was adjusted for baseline age, sex, race/ethnicity, education, employment status, urban/rural residence, family history of CVD, depression status, alcohol frequency intake, physical activity, diet, tobacco use, and body mass index.

BP=blood pressure, REF=reference category, OR=odds ratio, CI=confidence interval

* $p < 0.05$, ** $p < 0.01$

Table S4. Relationship between shift work and the odds of new BP medication use at 5YFU among adequate sleepers (N=6,777).

<i>Variable</i>	<i>OR[‡]</i>	<i>95% CI</i>	<i>P-value</i>
Shift Work			
Shift Work	0.82	0.54-1.25	0.35
No Shift Work	REF	REF	REF
Age (years)	1.06	1.04-1.08	<0.001**
Sex			
Female	REF	REF	
Male	1.99	1.61-2.45	<0.001**
Race/Ethnicity			
Mixed/Other	1.02	0.27-3.85	0.98
Asian	1.91	0.69-5.27	0.21
Black	4.34	1.30-14.46	0.02*
White	REF	REF	
Education			
Attended College	0.79	0.64-0.96	0.02*
No College	REF	REF	
Employment Status			
Employed	0.96	0.56-1.64	0.88
Retired	0.97	0.55-1.69	0.91
Not Employed/Not Retired	REF	REF	
Residence			
Urban	REF	REF	
Rural	0.95	0.72-1.26	0.73
Family History of CVD			
Yes	1.38	1.13-1.69	0.002**
No	REF	REF	
Do not know/Prefer not to answer	2.58	0.72-9.20	0.14
Depression Status			
Yes	1.82	1.06-3.11	0.03*
No	REF	REF	
Unknown	1.62	1.18-2.24	0.003*
Alcohol Frequency Intake			
Daily or almost daily	0.84	0.59-1.18	0.32
Three or four times a week	0.88	0.63-1.22	0.44
Once or twice a week	0.74	0.52-1.04	0.08
One to three times a month	0.91	0.60-1.37	0.64
Special occasions only/Never	REF	REF	
Physical Activity			
Ideal	1.05	0.03-34.25	0.98
Intermediate	1.24	0.04-40.64	0.90
Poor	REF	REF	
Do not know/Prefer not to answer	1.00	0.03-35.13	0.99
Diet			
Ideal	4.11	0.59-28.59	0.15
Intermediate	0.99	0.82-1.21	0.94
Poor	REF	REF	
Tobacco Use			
Ideal	0.68	0.46-1.02	0.06
Intermediate	0.86	0.57-1.29	0.46
Poor	REF	REF	
Do not know/Prefer not to answer	0.42	0.02-9.95	0.59
Body Mass Index (BMI)			

Ideal	0.36	0.26-0.50	<0.001**
Intermediate	0.55	0.44-0.67	<0.001**
Poor	REF	REF	

Model was adjusted for baseline age, sex, race/ethnicity, education, employment status, urban/rural residence, family history of CVD, depression status, alcohol frequency intake, physical activity, diet, tobacco use, and body mass index.

BP=blood pressure, REF=reference category, OR=odds ratio, CI=confidence interval

* $p < 0.05$, ** $p < 0.01$

Table S5. Relationship between shift work and the odds of new BP medication use at 5YFU among long sleepers (N=524).

<i>Variable</i>	<i>OR[‡]</i>	<i>95% CI</i>	<i>P-value</i>
Shift Work			
Shift Work	0.64	0.11-3.54	0.60
No Shift Work	REF	REF	REF
Age (years)	1.08	1.00-1.15	0.04*
Sex			
Female	REF	REF	
Male	1.71	0.80-3.66	0.17
Race/Ethnicity			
Mixed/Other	2.53	0.11-59.29	0.56
Asian	1.64	0.04-72.18	0.80
White	REF	REF	
Education			
Attended College	0.36	0.16-0.81	0.01*
No College	REF	REF	
Employment Status			
Employed	1.20	0.35-4.11	0.78
Retired	0.46	0.12-1.81	0.27
Not Employed/Not Retired	REF	REF	
Residence			
Urban	REF	REF	
Rural	1.62	0.65-4.07	0.30
Family History of CVD			
Yes	0.77	0.38-1.56	0.46
No	REF	REF	
Depression Status			
Yes	1.13	0.26-4.86	0.87
No	REF	REF	
Unknown	0.85	0.31-2.34	0.75
Alcohol Frequency Intake			
Daily or almost daily	0.87	0.29-2.60	0.81
Three or four times a week	0.50	0.16-1.55	0.23
Once or twice a week	0.52	0.17-1.55	0.24
One to three times a month	0.41	0.10-1.71	0.22
Special occasions only/Never	REF	REF	
Physical Activity			
Ideal	1.40	0.65-3.03	0.39
Intermediate	REF	REF	
Do not know/Prefer not to answer	0.52	0.03-10.70	0.67
Diet			
Intermediate	1.38	0.67-2.85	0.39
Poor	REF	REF	
Tobacco Use			
Ideal	2.20	0.43-11.30	0.34
Intermediate	0.77	0.13-4.55	0.77
Poor	REF	REF	
Do not know/Prefer not to answer			
Body Mass Index (BMI)			
Ideal	0.09	0.02-0.41	0.002**
Intermediate	0.24	0.11-0.55	0.001**
Poor	REF	REF	

[‡] Model was adjusted for baseline age, sex, race/ethnicity, education, employment status, urban/rural residence, family history of CVD, depression status, alcohol frequency intake, physical activity, diet, tobacco use, and body mass index. BP=blood pressure, REF=reference category, OR=odds ratio, CI=confidence interval * $p < 0.05$, ** $p < 0.01$

Table S6. Relationship between shift work and the odds of new BP medication use at 5YFU among morning types (N=2,359).

<i>Variable</i>		<i>OR[†]</i>	<i>95% CI</i>	<i>P-value</i>
Shift Work				
	Shift Work	1.53	0.88-2.67	0.14
	No Shift Work	REF	REF	
Age (years)		1.04	1.01-1.07	0.02*
Sex				
	Female	REF	REF	
	Male	1.80	1.28-2.53	0.001**
Race/Ethnicity				
	Mixed/Other	0.77	0.04-13.63	0.86
	Asian	1.85	0.47-7.33	0.69
	Black	2.47	0.12-53.26	0.55
	White	REF	REF	
Education				
	Attended College	0.59	0.42-0.83	0.002**
	No College	REF	REF	
Employment Status				
	Employed	2.13	0.73-6.24	0.25
	Retired	2.24	0.74-6.75	0.15
	Not Employed/Not Retired	REF	REF	
Residence				
	Urban	REF	REF	
	Rural	1.10	0.70-1.71	0.69
Family History of CVD				
	Yes	2.03	1.44-2.88	<0.001**
	No	REF	REF	
	Do not know/Prefer not to answer	0.57	0.03-11.61	0.55
Depression Status				
	Yes	1.95	0.89-4.28	0.10
	No	REF	REF	
	Unknown	1.35	0.81-2.26	0.88
Alcohol Frequency Intake				
	Daily or almost daily	0.87	0.52-1.47	0.53
	Three or four times a week	0.89	0.54-1.46	0.32
	Once or twice a week	0.46	0.26-0.80	0.008**
	One to three times a month	0.85	0.45-1.61	0.61
	Special occasions only/Never	REF	REF	
Physical Activity				
	Ideal	1.63	0.03-79.38	0.87
	Intermediate	1.91	0.04-93.35	0.75
	Poor	REF	REF	
	Do not know/Prefer not to answer	1.19	0.02-66.74	0.81
Diet				
	Ideal	4.11	0.43-39.34	0.21
	Intermediate	0.97	0.70-1.34	0.84
	Poor	REF	REF	
Tobacco Use				
	Ideal	1.01	0.44-2.31	0.48
	Intermediate	1.43	0.62-3.33	0.40
	Poor	REF	REF	
	Do not know/Prefer not to answer	6.75	0.44-104.42	0.18
Body Mass Index (BMI)				

Ideal	0.43	0.26-0.71	0.01*
Intermediate	0.61	0.43-0.87	0.006**
Poor	REF	REF	

‡ Model was adjusted for baseline age, sex, race/ethnicity, education, employment status, urban/rural residence, family history of CVD, depression status, alcohol frequency intake, physical activity, diet, tobacco use, and body mass index.

BP=blood pressure, REF=reference category, OR=odds ratio, CI=confidence interval

* $p < 0.05$, ** $p < 0.01$

Table S7. Relationship between shift work and the odds of new BP medication use at 5YFU among intermediate types (N=6,004).

<i>Variable</i>	<i>OR#</i>	<i>95% CI</i>	<i>P-value</i>
Shift Work			
Shift Work	0.83	0.53-1.29	0.40
No Shift Work	REF	REF	REF
Age (years)	1.07	1.05-1.09	<0.001**
Sex			
Female	REF	REF	
Male	1.97	1.58-2.46	<0.001**
Race/Ethnicity			
Mixed/Other	1.69	0.61-4.66	0.31
Asian	1.52	0.49-4.76	0.47
Black	4.00	1.34-11.91	0.01*
White	REF	REF	
Education			
Attended College	0.89	0.72-1.10	0.29
No College	REF	REF	
Employment Status			
Employed	0.78	0.47-1.32	0.36
Retired	0.68	0.40-1.18	0.17
Not Employed/Not Retired	REF	REF	
Residence			
Urban	REF	REF	
Rural	0.85	0.62-1.16	0.30
Family History of CVD			
Yes	1.16	0.94-1.44	0.17
No	REF	REF	
Do not know/Prefer not to answer	4.18	1.27-13.71	0.02*
Depression Status			
Yes	1.66	0.94-2.94	0.08
No	REF	REF	
Unknown	1.60	1.14-2.24	0.006**
Alcohol Frequency Intake			
Daily or almost daily	0.80	0.55-1.16	0.23
Three or four times a week	0.71	0.49-1.02	0.06
Once or twice a week	0.73	0.51-1.05	0.09
One to three times a month	0.58	0.36-0.92	0.02*
Special occasions only/Never	REF	REF	
Physical Activity			
Ideal	0.20	0.03-1.59	0.13
Intermediate	0.23	0.03-1.84	0.17
Poor	REF	REF	
Do not know/Prefer not to answer	0.19	0.02-1.73	0.14
Diet			
Ideal	3.52	0.12-100.50	0.46
Intermediate	1.03	0.84-1.27	0.78
Poor	REF	REF	
Tobacco Use			
Ideal	0.67	0.44-1.02	0.06
Intermediate	0.72	0.46-1.11	0.14
Poor	REF	REF	
Do not know/Prefer not to answer	0.47	0.02-10.34	0.63
Body Mass Index (BMI)			

Ideal	0.30	0.21-0.43	<0.001**
Intermediate	0.50	0.40-0.63	<0.001**
Poor	REF	REF	

Model was adjusted for baseline age, sex, race/ethnicity, education, employment status, urban/rural residence, family history of CVD, depression status, alcohol frequency intake, physical activity, diet, tobacco use, and body mass index.

BP=blood pressure, REF=reference category, OR=odds ratio, CI=confidence interval

* $p < 0.05$, ** $p < 0.01$

Table S8. Relationship between shift work and the odds of new BP medication use at 5YFU among evening types (N=837).

<i>Variable</i>		<i>OR[‡]</i>	<i>95% CI</i>	<i>P-value</i>
Shift Work				
	Shift Work	1.21	0.49-2.96	0.68
	No Shift Work	REF	REF	REF
Age (years)		1.06	1.01-1.11	0.01*
Sex				
	Female	REF	REF	
	Male	1.85	1.06-3.24	0.03*
Race/Ethnicity				
	Mixed/Other	0.83	0.04-19.58	0.91
	Asian	1.83	0.23-14.57	0.57
	Black	1.95	0.03-125.23	0.75
	White	REF	REF	
Education				
	Attended College	1.10	0.64-1.90	0.73
	No College	REF	REF	
Employment Status				
	Employed	0.74	0.26-2.11	0.57
	Retired	0.69	0.20-2.31	0.54
	Not Employed/Not Retired	REF	REF	
Residence				
	Urban	REF	REF	
	Rural	0.81	0.36-1.80	0.60
Family History of CVD				
	Yes	0.69	0.41-1.18	0.18
	No	REF	REF	
	Do not know/Prefer not to answer	1.02	0.02-60.94	0.99
Depression Status				
	Yes	1.08	0.24-4.91	0.92
	No	REF	REF	
	Unknown	1.22	0.53-2.80	0.64
Alcohol Frequency Intake				
	Daily or almost daily	0.95	0.39-2.32	0.92
	Three or four times a week	0.74	0.31-1.77	0.50
	Once or twice a week	0.60	0.24-1.52	0.28
	One to three times a month	1.30	0.50-3.39	0.59
	Special occasions only/Never	REF	REF	
Physical Activity				
	Ideal	0.84	0.49-1.44	0.52
	Poor	REF	REF	
	Do not know/Prefer not to answer	1.44	0.33-6.25	0.63
Diet				
	Ideal	1.27	0.03-63.27	0.91
	Intermediate	0.96	0.57-1.64	0.89
	Poor	REF	REF	
Tobacco Use				
	Ideal	1.22	0.52-2.89	0.64
	Intermediate	0.64	0.26-1.60	0.34
	Poor	REF	REF	
Body Mass Index (BMI)				
	Ideal	0.03	0.002-0.35	0.005**
	Intermediate	0.36	0.21-0.64	<0.001**
	Poor	REF	REF	

Model was adjusted for baseline age, sex, race/ethnicity, education, employment status, urban/rural residence, family history of CVD, depression status, alcohol frequency intake, physical activity, diet, tobacco use, and body mass index.
BP=blood pressure, REF=reference category, OR=odds ratio, CI=confidence interval
* $p < 0.05$, ** $p < 0.01$