## High carbohydrate intake from starchy foods is positively associated with metabolic disorders: a Cohort Study from a Chinese population

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Table S1. The risk ratios (RRs) of metabolic disorders for high or medium and low GI starchy food.

Cases/n         Model 1         Model 2         Model 3         Model 4           High GF Food           Hyperlipidemia         Value 100/562         1.00         1.00         1.00         1.00           Q2         110/564         1.12(0.79,1.61)         1.01(0.70,1.46)         0.96(0.65,1.42)         1.01(0.67,1.50)           Q3         104/564         1.01(0.71,1.45)         0.94(0.65,1.36)         0.91(0.61,1.35)         0.99(0.65,1.51)           Q4         124/562         1.37(1.09,2.24)         1.30(1.02,1.88)         1.37(1.08,2.24)         1.32(1.03,2.17)           Mets         Value 1         1.00         1.00         1.00         1.00           Q2         89/684         1.23(0.86,1.75)         1.14(0.79,1.65)         1.05(0.72,1.55)         1.06(0.71,1.57)           Q3         91/682         1.24(0.87,1.76)         1.19(0.82,1.71)         1.14(0.77,1.67)         1.16(0.78,1.75)           Q4         105/686         1.51(1.07,2.14)         1.46(1.02,2.09)         1.47(1.02,2.11)         1.57(1.01,2.42)           Medium and low GI Food           Hyperlipidemia           Q1         117/562         1.00         1.00         1.00         1.00	starchy food.						
Hyperlipidemia		Cases/n	Model 1	Model 2	Model 3	Model 4	
Q1         100/562         1.00         1.00         1.00         1.00           Q2         110/564         1.12(0.79,1.61)         1.01(0.70,1.46)         0.96(0.65,1.42)         1.01(0.67,1.50)           Q3         104/564         1.01(0.71,1.45)         0.94(0.65,1.36)         0.91(0.61,1.35)         0.99(0.65,1.51)           Q4         124/562         1.37(1.09,2.24)         1.30(1.02,1.88)         1.37(1.08,2.24)         1.32(1.03,2.17)           Mets           Q1         77/682         1.00         1.00         1.00         1.00           Q2         89/684         1.23(0.86,1.75)         1.14(0.79,1.65)         1.05(0.72,1.55)         1.06(0.71,1.57)           Q3         91/682         1.24(0.87,1.76)         1.19(0.82,1.71)         1.14(0.77,1.67)         1.16(0.78,1.75)           Q4         105/686         1.51(1.07,2.14)         1.46(1.02,2.09)         1.47(1.02,2.11)         1.57(1.01,2.42)           Metium and low GI Foot           Hyperlipidemia           Q1         117/562         1.00         1.00         1.00         1.00           Q2         95/564         0.74(0.52,1.06)         0.70(0.48,1.06)         0.69(0.47,1.03)         0.71(0.49,1.09)	High GI Food						
Q2         110/564         1.12(0.79,1.61)         1.01(0.70,1.46)         0.96(0.65,1.42)         1.01(0.67,1.50)           Q3         104/564         1.01(0.71,1.45)         0.94(0.65,1.36)         0.91(0.61,1.35)         0.99(0.65,1.51)           Q4         124/562         1.37(1.09,2.24)         1.30(1.02,1.88)         1.37(1.08,2.24)         1.32(1.03,2.17)           Mets           Q1         77/682         1.00         1.00         1.00         1.06(0.71,1.57)           Q3         91/682         1.23(0.86,1.75)         1.14(0.79,1.65)         1.05(0.72,1.55)         1.06(0.71,1.57)           Q3         91/682         1.24(0.87,1.76)         1.19(0.82,1.71)         1.14(0.77,1.67)         1.16(0.78,1.75)           Q4         105/686         1.51(1.07,2.14)         1.46(1.02,2.09)         1.47(1.02,2.11)         1.57(1.01,2.42)           Medium and low GI Food           Hyperlipidemia           Q1         117/562         1.00         1.00         1.00         1.00           Q2         95/564         0.74(0.52,1.06)         0.70(0.48,1.06)         0.69(0.47,1.03)         0.71(0.49,1.09)           Q3         114/564         1.03(0.72,1.46)         0.94(0.65,1.35)         0.89(0.61,1.31)         0.93(0.63	Hyperlipidemia						
Q3         104/564         1.01(0.71,1.45)         0.94(0.65,1.36)         0.91(0.61,1.35)         0.99(0.65,1.51)           Q4         124/562         1.37(1.09,2.24)         1.30(1.02,1.88)         1.37(1.08,2.24)         1.32(1.03,2.17)           Mets           Q1         77/682         1.00         1.00         1.00         1.06(0.71,1.57)           Q3         91/682         1.24(0.87,1.76)         1.19(0.82,1.71)         1.14(0.77,1.67)         1.16(0.78,1.75)           Q4         105/686         1.51(1.07,2.14)         1.46(1.02,2.09)         1.47(1.02,2.11)         1.57(1.01,2.42)           Medium and low GI Food           Hyperlipidemia           Q1         117/562         1.00         1.00         1.00         1.00           Q2         95/564         0.74(0.52,1.06)         0.70(0.48,1.06)         0.69(0.47,1.03)         0.71(0.49,1.09)           Q3         114/564         1.03(0.72,1.46)         0.94(0.65,1.35)         0.87(0.59,1.28)         0.89(0.60,1.31)           Q4         112/562         1.02(0.71,1.45)         0.94(0.65,1.35)         0.89(0.61,1.31)         0.93(0.63,1.37)           MetS           Q1         103/682         1.00         1.00         0.00	Q1	100/562	1.00	1.00	1.00	1.00	
Q4         124/562         1.37(1.09,2.24)         1.30(1.02,1.88)         1.37(1.08,2.24)         1.32(1.03,2.17)           MetS         Q1         77/682         1.00         1.00         1.00         1.00           Q2         89/684         1.23(0.86,1.75)         1.14(0.79,1.65)         1.05(0.72,1.55)         1.06(0.71,1.57)           Q3         91/682         1.24(0.87,1.76)         1.19(0.82,1.71)         1.14(0.77,1.67)         1.16(0.78,1.75)           Q4         105/686         1.51(1.07,2.14)         1.46(1.02,2.09)         1.47(1.02,2.11)         1.57(1.01,2.42)           Medium and low GI Food           Hyperlipidemia           Q1         117/562         1.00         1.00         1.00         1.00           Q2         95/564         0.74(0.52,1.06)         0.70(0.48,1.06)         0.69(0.47,1.03)         0.71(0.49,1.09)           Q3         114/564         1.03(0.72,1.46)         0.94(0.65,1.35)         0.87(0.59,1.28)         0.89(0.60,1.31)           Q4         112/562         1.02(0.71,1.45)         0.94(0.65,1.35)         0.89(0.61,1.31)         0.93(0.63,1.37)           MetS           Q1         103/682         1.00         1.00         0.00         0.69(0.49,1.02) <t< td=""><td>Q2</td><td>110/564</td><td>1.12(0.79,1.61)</td><td>1.01(0.70,1.46)</td><td>0.96(0.65,1.42)</td><td>1.01(0.67,1.50)</td></t<>	Q2	110/564	1.12(0.79,1.61)	1.01(0.70,1.46)	0.96(0.65,1.42)	1.01(0.67,1.50)	
Mets           Q1         77/682         1.00         1.00         1.00         1.00           Q2         89/684         1.23(0.86,1.75)         1.14(0.79,1.65)         1.05(0.72,1.55)         1.06(0.71,1.57)           Q3         91/682         1.24(0.87,1.76)         1.19(0.82,1.71)         1.14(0.77,1.67)         1.16(0.78,1.75)           Q4         105/686         1.51(1.07,2.14)         1.46(1.02,2.09)         1.47(1.02,2.11)         1.57(1.01,2.42)           Medium and low El Foot           Hyperlipidemia           Q1         117/562         1.00         1.00         1.00         1.00           Q2         95/564         0.74(0.52,1.06)         0.70(0.48,1.06)         0.69(0.47,1.03)         0.71(0.49,1.09)           Q3         114/564         1.03(0.72,1.46)         0.94(0.65,1.35)         0.87(0.59,1.28)         0.89(0.60,1.31)           Q4         112/562         1.02(0.71,1.45)         0.94(0.65,1.35)         0.89(0.61,1.31)         0.93(0.63,1.37)           MetS         Q1         103/682         1.00         1.00         1.00         1.00           Q2         86/684         0.80(0.57,1.13)         0.73(0.51,1.04)         0.71(0.50,1.06)         0.69(0.45,1.02) <td>Q3</td> <td>104/564</td> <td>1.01(0.71,1.45)</td> <td>0.94(0.65,1.36)</td> <td>0.91(0.61,1.35)</td> <td>0.99(0.65,1.51)</td>	Q3	104/564	1.01(0.71,1.45)	0.94(0.65,1.36)	0.91(0.61,1.35)	0.99(0.65,1.51)	
Q1       77/682       1.00       1.00       1.00       1.00         Q2       89/684       1.23(0.86,1.75)       1.14(0.79,1.65)       1.05(0.72,1.55)       1.06(0.71,1.57)         Q3       91/682       1.24(0.87,1.76)       1.19(0.82,1.71)       1.14(0.77,1.67)       1.16(0.78,1.75)         Q4       105/686       1.51(1.07,2.14)       1.46(1.02,2.09)       1.47(1.02,2.11)       1.57(1.01,2.42)         Medium and low GI Food         Hyperlipidemia         Q1       117/562       1.00       1.00       1.00       1.00         Q2       95/564       0.74(0.52,1.06)       0.70(0.48,1.06)       0.69(0.47,1.03)       0.71(0.49,1.09)         Q3       114/564       1.03(0.72,1.46)       0.94(0.65,1.35)       0.87(0.59,1.28)       0.89(0.60,1.31)         Q4       112/562       1.02(0.71,1.45)       0.94(0.65,1.35)       0.89(0.61,1.31)       0.93(0.63,1.37)         MetS         Q1       103/682       1.00       1.00       1.00       1.00         Q2       86/684       0.80(0.57,1.13)       0.73(0.51,1.04)       0.71(0.50,1.06)       0.69(0.45,1.02)         Q3       80/682       0.75(0.54,1.10)       0.70(0.50,1.03)       0.69(0.49,1.02) </td <td>Q4</td> <td>124/562</td> <td>1.37(1.09,2.24)</td> <td>1.30(1.02,1.88)</td> <td>1.37(1.08,2.24)</td> <td>1.32(1.03,2.17)</td>	Q4	124/562	1.37(1.09,2.24)	1.30(1.02,1.88)	1.37(1.08,2.24)	1.32(1.03,2.17)	
Q2         89/684         1.23(0.86,1.75)         1.14(0.79,1.65)         1.05(0.72,1.55)         1.06(0.71,1.57)           Q3         91/682         1.24(0.87,1.76)         1.19(0.82,1.71)         1.14(0.77,1.67)         1.16(0.78,1.75)           Q4         105/686         1.51(1.07,2.14)         1.46(1.02,2.09)         1.47(1.02,2.11)         1.57(1.01,2.42)           Medium and low El Food           Hyperlipidemia           Q1         117/562         1.00         1.00         1.00         1.00           Q2         95/564         0.74(0.52,1.06)         0.70(0.48,1.06)         0.69(0.47,1.03)         0.71(0.49,1.09)           Q3         114/564         1.03(0.72,1.46)         0.94(0.65,1.35)         0.87(0.59,1.28)         0.89(0.60,1.31)           Q4         112/562         1.02(0.71,1.45)         0.94(0.65,1.35)         0.89(0.61,1.31)         0.93(0.63,1.37)           MetS         Q1         103/682         1.00         1.00         1.00         1.00           Q2         86/684         0.80(0.57,1.13)         0.73(0.51,1.04)         0.71(0.50,1.06)         0.69(0.45,1.02)           Q3         80/682         0.75(0.54,1.10)         0.70(0.50,1.03)         0.69(0.49,1.02)         0.70(0.49,1.03)	MetS						
Q3         91/682         1.24(0.87,1.76)         1.19(0.82,1.71)         1.14(0.77,1.67)         1.16(0.78,1.75)           Q4         105/686         1.51(1.07,2.14)         1.46(1.02,2.09)         1.47(1.02,2.11)         1.57(1.01,2.42)           Medium and low GI Food           Hyperlipidemia           Q1         117/562         1.00         1.00         1.00         1.00           Q2         95/564         0.74(0.52,1.06)         0.70(0.48,1.06)         0.69(0.47,1.03)         0.71(0.49,1.09)           Q3         114/564         1.03(0.72,1.46)         0.94(0.65,1.35)         0.87(0.59,1.28)         0.89(0.60,1.31)           Q4         112/562         1.02(0.71,1.45)         0.94(0.65,1.35)         0.89(0.61,1.31)         0.93(0.63,1.37)           MetS           Q1         103/682         1.00         1.00         1.00         1.00           Q2         86/684         0.80(0.57,1.13)         0.73(0.51,1.04)         0.71(0.50,1.06)         0.69(0.45,1.02)           Q3         80/682         0.75(0.54,1.10)         0.70(0.50,1.03)         0.69(0.49,1.02)         0.70(0.49,1.03)	Q1	77/682	1.00	1.00	1.00	1.00	
Q4       105/686       1.51(1.07,2.14)       1.46(1.02,2.09)       1.47(1.02,2.11)       1.57(1.01,2.42)         Medium and low GI Food         Hyperlipidemia         Q1       117/562       1.00       1.00       1.00       1.00         Q2       95/564       0.74(0.52,1.06)       0.70(0.48,1.06)       0.69(0.47,1.03)       0.71(0.49,1.09)         Q3       114/564       1.03(0.72,1.46)       0.94(0.65,1.35)       0.87(0.59,1.28)       0.89(0.60,1.31)         Q4       112/562       1.02(0.71,1.45)       0.94(0.65,1.35)       0.89(0.61,1.31)       0.93(0.63,1.37)         MetS       Q1       103/682       1.00       1.00       1.00       1.00       1.00         Q2       86/684       0.80(0.57,1.13)       0.73(0.51,1.04)       0.71(0.50,1.06)       0.69(0.45,1.02)         Q3       80/682       0.75(0.54,1.10)       0.70(0.50,1.03)       0.69(0.49,1.02)       0.70(0.49,1.03)	Q2	89/684	1.23(0.86,1.75)	1.14(0.79,1.65)	1.05(0.72,1.55)	1.06(0.71,1.57)	
Medium and low GI Food         Hyperlipidemia         Q1       117/562       1.00       1.00       1.00       1.00         Q2       95/564       0.74(0.52,1.06)       0.70(0.48,1.06)       0.69(0.47,1.03)       0.71(0.49,1.09)         Q3       114/564       1.03(0.72,1.46)       0.94(0.65,1.35)       0.87(0.59,1.28)       0.89(0.60,1.31)         Q4       112/562       1.02(0.71,1.45)       0.94(0.65,1.35)       0.89(0.61,1.31)       0.93(0.63,1.37)         MetS       Q1       103/682       1.00       1.00       1.00       1.00         Q2       86/684       0.80(0.57,1.13)       0.73(0.51,1.04)       0.71(0.50,1.06)       0.69(0.45,1.02)         Q3       80/682       0.75(0.54,1.10)       0.70(0.50,1.03)       0.69(0.49,1.02)       0.70(0.49,1.03)	Q3	91/682	1.24(0.87,1.76)	1.19(0.82,1.71)	1.14(0.77,1.67)	1.16(0.78,1.75)	
Hyperlipidemia         Q1       117/562       1.00       1.00       1.00       1.00         Q2       95/564       0.74(0.52,1.06)       0.70(0.48,1.06)       0.69(0.47,1.03)       0.71(0.49,1.09)         Q3       114/564       1.03(0.72,1.46)       0.94(0.65,1.35)       0.87(0.59,1.28)       0.89(0.60,1.31)         Q4       112/562       1.02(0.71,1.45)       0.94(0.65,1.35)       0.89(0.61,1.31)       0.93(0.63,1.37)         MetS         Q1       103/682       1.00       1.00       1.00       1.00         Q2       86/684       0.80(0.57,1.13)       0.73(0.51,1.04)       0.71(0.50,1.06)       0.69(0.45,1.02)         Q3       80/682       0.75(0.54,1.10)       0.70(0.50,1.03)       0.69(0.49,1.02)       0.70(0.49,1.03)	Q4	105/686	1.51(1.07,2.14)	1.46(1.02,2.09)	1.47(1.02,2.11)	1.57(1.01,2.42)	
Q1 117/562 1.00 1.00 1.00 1.00 1.00 Q2 95/564 0.74(0.52,1.06) 0.70(0.48,1.06) 0.69(0.47,1.03) 0.71(0.49,1.09) Q3 114/564 1.03(0.72,1.46) 0.94(0.65,1.35) 0.87(0.59,1.28) 0.89(0.60,1.31) Q4 112/562 1.02(0.71,1.45) 0.94(0.65,1.35) 0.89(0.61,1.31) 0.93(0.63,1.37) MetS Q1 103/682 1.00 1.00 1.00 1.00 Q2 86/684 0.80(0.57,1.13) 0.73(0.51,1.04) 0.71(0.50,1.06) 0.69(0.45,1.02) Q3 80/682 0.75(0.54,1.10) 0.70(0.50,1.03) 0.69(0.49,1.02) 0.70(0.49,1.03)	Medium and low GI Food						
Q2       95/564       0.74(0.52,1.06)       0.70(0.48,1.06)       0.69(0.47,1.03)       0.71(0.49,1.09)         Q3       114/564       1.03(0.72,1.46)       0.94(0.65,1.35)       0.87(0.59,1.28)       0.89(0.60,1.31)         Q4       112/562       1.02(0.71,1.45)       0.94(0.65,1.35)       0.89(0.61,1.31)       0.93(0.63,1.37)         MetS         Q1       103/682       1.00       1.00       1.00       1.00         Q2       86/684       0.80(0.57,1.13)       0.73(0.51,1.04)       0.71(0.50,1.06)       0.69(0.45,1.02)         Q3       80/682       0.75(0.54,1.10)       0.70(0.50,1.03)       0.69(0.49,1.02)       0.70(0.49,1.03)	Hyperlipidemia						
Q3       114/564       1.03(0.72,1.46)       0.94(0.65,1.35)       0.87(0.59,1.28)       0.89(0.60,1.31)         Q4       112/562       1.02(0.71,1.45)       0.94(0.65,1.35)       0.89(0.61,1.31)       0.93(0.63,1.37)         MetS         Q1       103/682       1.00       1.00       1.00       1.00         Q2       86/684       0.80(0.57,1.13)       0.73(0.51,1.04)       0.71(0.50,1.06)       0.69(0.45,1.02)         Q3       80/682       0.75(0.54,1.10)       0.70(0.50,1.03)       0.69(0.49,1.02)       0.70(0.49,1.03)	Q1	117/562	1.00	1.00	1.00	1.00	
Q4       112/562       1.02(0.71,1.45)       0.94(0.65,1.35)       0.89(0.61,1.31)       0.93(0.63,1.37)         MetS         Q1       103/682       1.00       1.00       1.00       1.00         Q2       86/684       0.80(0.57,1.13)       0.73(0.51,1.04)       0.71(0.50,1.06)       0.69(0.45,1.02)         Q3       80/682       0.75(0.54,1.10)       0.70(0.50,1.03)       0.69(0.49,1.02)       0.70(0.49,1.03)	Q2	95/564	0.74(0.52,1.06)	0.70(0.48,1.06)	0.69(0.47,1.03)	0.71(0.49,1.09)	
MetS         Q1       103/682       1.00       1.00       1.00       1.00         Q2       86/684       0.80(0.57,1.13)       0.73(0.51,1.04)       0.71(0.50,1.06)       0.69(0.45,1.02)         Q3       80/682       0.75(0.54,1.10)       0.70(0.50,1.03)       0.69(0.49,1.02)       0.70(0.49,1.03)	Q3	114/564	1.03(0.72,1.46)	0.94(0.65,1.35)	0.87(0.59,1.28)	0.89(0.60,1.31)	
Q1       103/682       1.00       1.00       1.00       1.00         Q2       86/684       0.80(0.57,1.13)       0.73(0.51,1.04)       0.71(0.50,1.06)       0.69(0.45,1.02)         Q3       80/682       0.75(0.54,1.10)       0.70(0.50,1.03)       0.69(0.49,1.02)       0.70(0.49,1.03)	Q4	112/562	1.02(0.71,1.45)	0.94(0.65,1.35)	0.89(0.61,1.31)	0.93(0.63,1.37)	
Q2 86/684 0.80(0.57,1.13) 0.73(0.51,1.04) 0.71(0.50,1.06) 0.69(0.45,1.02) Q3 80/682 0.75(0.54,1.10) 0.70(0.50,1.03) 0.69(0.49,1.02) 0.70(0.49,1.03)	MetS						
Q3 80/682 0.75(0.54,1.10) 0.70(0.50,1.03) 0.69(0.49,1.02) 0.70(0.49,1.03)	Q1	103/682	1.00	1.00	1.00	1.00	
	Q2	86/684	0.80(0.57,1.13)	0.73(0.51,1.04)	0.71(0.50,1.06)	0.69(0.45,1.02)	
04 00/000 0 00/0 (2 1 20) 0 00/0 57 1 14) 0 75/0 50 1 00) 0 75/0 50 1 11)	Q3	80/682	0.75(0.54,1.10)	0.70(0.50,1.03)	0.69(0.49,1.02)	0.70(0.49,1.03)	
Q4 93/686 0.88(0.63,1.23) 0.80(0.57,1.14) 0.75(0.52,1.08) 0.76(0.53,1.11)	Q4	93/686	0.88(0.63,1.23)	0.80(0.57,1.14)	0.75(0.52,1.08)	0.76(0.53,1.11)	

Model 1 has not been adjusted by any potential factors; Model 2 has been adjusted by age, sex, BMI; Model 3 has been adjusted by age, sex, BMI, smoke, drink, physical activities, total energy, fat and fiber; Model 4 has been adjusted by all factors in Model 3 and SBP, TC and TG.

Table S2 Food items in current study.

Food Groups	Food Items			
Starchy foods				
Rice	Rice, milet, corn			
Wheaten foods	Cookie, cake, steamed buns, noodle, bread			
Potato and its	White potato, sweet potato, vermicelli			
products				
Other foods				
Beans	Beans, beancurd, soybean milk, uncongealed beancurd			
Vegetables	Turnip, carrot, spinage, bean sprout, eggplant, tomato, green bean,			
	pepper, winter melon, cucumber, pumkin, garlic, shallot, onion, onion			
	chives, cabbage, sauerkraut, agaric, cauliflower, celery, lettuce,			
	mushroom, kelp			
Fruits	Apple, jujude, persimmon, pear, orange, peach, grape, pomegranate,			
	strawberry, kiwi fruit, pineapple, litchi, mango, pawpaw, watermelon,			
	honey melon, mushmelon			
Livestock	Pork, beef, mutton, sausage, liver and internal organs			
Poultry	Chicken, duck, goose			
Dairy	Milk, yoghourt, milk power			
Eggs	Eggs			
Fish	Fish, shellfish, mollusc			
Snack	Preserved, biscuit, chocolate, peanut, melon seed, nuts			
Beverage	Carbonated beverage, fruit juice, tea, coffee			
Ice cream	Ice cream			