

We consider cardio metabolic risks, the risks linked to the development of cardiac or metabolism diseases.

The factors are various and often linked to basic occasional behaviours which repeated chronically become problematic.

For instance, unhealthy eating « junk food » is very well known for being related to the risk of developing hypertension, hyperglycemia and excess of cholesterol.

The medical studies demonstrate a strong correlation between the behaviour which consists of « eating quickly » and the cardio metabolic risks.

Eating rate and metabolic risks

	<p>ALT activity is positively associated with faster eating, but is dependent on BMI in middle-aged, apparently healthy Japanese women.</p>	<p>900 apparently healthy women ages 40 to 64 y</p>
2014	Nutrition. 2014 Jan;30(1):69-74. doi: 10.1016/j.nut.2013.07.016.	
	<p>In multiple logistic regression models, eating rate was significantly and positively associated with metabolic syndrome. The multivariable-adjusted ORs (95% CI) for slow, normal and fast were 0.70 (0.62 to 0.79), 1.00 (reference) and 1.61 (1.53 to 1.70), respectively, in men (p for trend &lt;0.001), and 0.74 (0.60 to 0.91), 1.00 (reference) and 1.27 (1.13 to 1.43), respectively, in women (p for trend &lt;0.001). Of metabolic syndrome components, abdominal obesity showed the strongest association with eating rate. The associations of eating rate and metabolic syndrome and its components were largely attenuated after further adjustment for body mass index; however, the association of slow eating with lower odds of high blood pressure (men and women) and hyperglycaemia (men) and that of fast eating with higher odds of lipid abnormality (men) remained statistically significant.</p>	<p>56,865 participants (41,820 male and 15,045 female) who attended a health checkup in 2011 and reported no history of coronary heart disease or stroke.</p>
2014	BMJ Open. Sep 5;4(9):e005241.	Nagahama S, Mizoue T.



Compared with the slow eating rate group (>15 min), the fastest eating rate group (<5 min) had significantly increased odds ratios for cardiometabolic risk factors such as high glucose and low HDL-cholesterol levels		8755 Korean adults	 
2013	Nutrition Metabolism Cardiovascular Diseases: NMCD. Jul;23(7):635-41	Lee KS, Cho KH.	



Eating quickly had a significantly greater association with-risk of metabolic syndrome (risk of abdominal obesity combined with a risk of hypertension, diabetes, or hypercholesterolemia), for both sexes, than eating slowly or at a normal pace  <i>This studies also showed that skipping breakfast, eating quickly, and having a late-night supper were independently associated with risk.</i>		4912 adults (30-39y)	 
2013	Nihon Kosshu Eisei Zasshi. Japanese Journal of Public Health Feb;60(2):98-t106	Soga Y, Shirai C, Ijichi A.	



Blood pressure and lipid levels tended to increase in association with eating rate. HbA(1c) rose significantly as eating rate increased in diabetic patients on insulin therapy, whereas fasting plasma glucose did not increase significantly.		7275 aged ≥40 years who had normal fasting glucose levels, impaired fasting glucose or diabetes	
2013	Diabetologia. Jan;56(1):70-7	Ohkuma T, Kitazono T.	



Both eating until feeling full and eating rapidly increase metabolic risk factors (overweight, hypertension, hyperglycaemia, hypertriglycerolaemia, low HDL cholesterol, hyperuricaemia and fatty liver).		13195	
2011	Public Health Nutrition Jul;14(7):1266-9	Hsieh SD, Arase Y.	

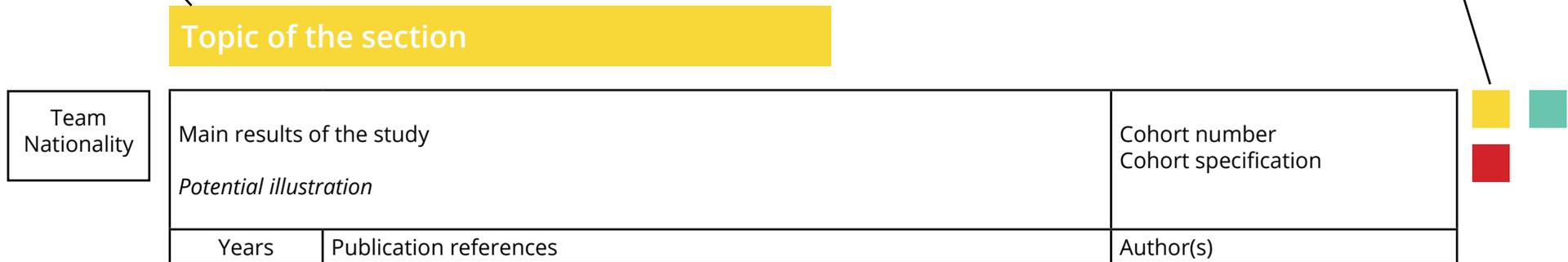


<p>The group with metabolic syndrome (obesity, high blood pressure, low high-density lipoprotein cholesterol level, high triglyceride level, and high fasting blood glucose level) was more likely to eat quickly (OR 2.23 for fast vs slow) and to overeat frequently (OR 2.37 for more than 4 times a week vs less than once a week).</p> <p><i>Illustration : According to this odds ratio, if in a control group of 100 healthy people, 16 are fast eaters, in an equivalent group of 100 people but with metabolic syndrom 30 will be fast eater. If in the control group 16 overeat frequently, they are 31 of them in the other group.</i></p>		7081 men aged ≥30	  
2009	Journal of the American dietetic Association Apr;109(4):633-40	Shin A, Kim J.	

# Presentation of the studies

Color of the section

Color of the related topic the study treats



## Color by section :

- |   |                 |  |              |   |                   |
|---|-----------------|--|--------------|---|-------------------|
|    | Satiety         |    | Diabetes     |    | Portion Size      |
|   | Food Intake     |   | GERD         |   | Mindful eating    |
|  | Obesity         |  | Food quality |  | Gastric surgery   |
|  | Metabolic Risks |  | Chewing      |  | Scientific Method |