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Tab. 1.

Controlled Variables			Neck Circumferences
Age, Sex, Total Cholesterol, TG, Systolic Pressure, Diastolic Pressure, Waist Circumferences, Energy Intake, Carbohydrate, Fat, Protein intake	HOMA IR Index	Corr.	.222
		P	.018
	Fasting Plasma Glucose	Corr.	.176
		P	.061
	Glycated Hemoglobin	Corr.	.176
		P	.062
	Insulin	Corr.	.221
		P	.0018
	HDL-Cholesterol	Corr.	-.227
		P	.015
	BMI	Corr.	.490
		P	.000
	LDL-Cholesterol	Corr.	.049
		P	.603
		df	112

Association between metabolic variables and neck circumferences after Controlled Variables.

GC2.042

BMI Trajectories and the Influence of Missing Data

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Introduction: Body Mass Index (BMI) trajectories have been estimated in various ways. These estimates are important to understand how BMI develops over time and for use in cost-effectiveness analysis. However, missing data is often stated as a limitation in studies that analyse BMI over time and there is little research into how missing data can influence these BMI trajectories. The aim of this study is to determine how much influence missing data can have when estimating BMI trajectories and to explore the effects this has on subsequent analysis.
Methods: This study uses data from the English Longitudinal Study of Aging (ELSA). First, a growth mixture model (GMM) is used to estimate distinct BMI trajectories in adults over the age of 50. Next, methods that assume data is missing at random (MAR) are used: complete case analysis and multiple imputation. Finally, methods that assume data is missing not at random (MNAR) are implemented: Diggle Kenward and Roy methods. Estimated trajectories from each method are then used to predict the risk of developing type 2 diabetes (T2DM) using discrete-time survival analysis.
Results: The same four distinct trajectories are identified using each of the methods to account for missing data: stable overweight, elevated BMI, increasing BMI, and decreasing BMI. However, the likelihoods of individuals following the different trajectories differs between the different methods.
Results show that the influence of BMI trajectory on T2DM is reduced after accounting for missing data. More work is needed to understand which methods for missing data are most appropriate and give the most reliable results.
Conclusion: Missing data can significantly influence estimations of BMI trajectories. Therefore, when using BMI trajectories to inform cost-effectiveness analysis or policymaking, missing data should be considered. More research is needed to examine the extent to which accounting for missing data might influence the cost-effectiveness of policies, for example, weight management interventions.

GC2.043

Impact of on cardiovascular risk in single-person households among Korean middle-aged adults: A nationwide cohort study (2009-2015)

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Objective: To examine impact of cardiovascular incidence in living alone and using a representative population data in Seoul Korea
Methods: The study population aged 40-69 years who enrolled in the national health checkup program between 2009 and 2015 and who didn't had MI or stroke at baseline using the Korean National Health Insurance Service database and resident registration data. Hazard ratios (HRs) were estimated from Cox proportional hazard models.
Results: Among 1,679,942 individuals of single-person household, total of 12,855 cases of incident MI and 16,919 case of incident stroke during the mean follow-up period of 5.21 years. After adjustment for age, gender, smoking, alcohol intake, physical activity, income level and chronic metabolic disease such as hypertension, diabetes mellitus, dyslipidemia, the risk of developing CVD for those who lived alone at baseline compared with multiple person household 2.15(95% confidence interval (CI), 2.09-2.21) in MI, 1.81(95% confidence interval (CI), 1.77-,1.85) in stroke.
Conclusions: Single person household was positively associated with incident CVD risk.