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Visual methods in the study of eating behaviors

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Traditional methods to study eating behaviors include quantitative methods such as 24-hours diet recalls or food frequency questionnaires. Qualitative methods are used less frequently in this field but could present advantages in relation to traditional methods. Studies using qualitative methods include mainly interviews and focus groups. Now a days, visual methods such as photoelicitation (PE) are recognized as a useful tool to study and understand eating behaviors. A study using semi-structured interviews and PE was conducted in 31 Chilean women from low socio-economic status. Women were asked to take pictures of what was important to them in relation to food. The pictures were used as a base in interviews. From what was elicited from the pictures, it was obtained information about specific eating habits, factors that influence these eating habits including price of food, family, availability of food, preferences, etc. Evaluations of their own diet and the importance or meaning of food (or certain kinds of food) to them. Pictures by themselves were also a source of information. PE assignment was evaluated as an entertaining activity and something that women used to do; therefore completing it was not difficult for them. PE allowed researchers to obtain rich information about eating behaviors and can be a useful method in working with underserved populations. Data collected by this study through PE should be used to create or improve interventions to promote a healthy eating in this group of population.

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Gut microbes regulate host lipid absorption

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It is widely accepted that the gut microbiota plays a role in the development of obesity, exemplified by the finding that germ free (GF) mice are resistant to high fat (HF) diet-induced obesity (DIO). Herein, we aimed to determine the mechanisms underlying this phenomenon. Results from our studies suggest that GF mice have impaired fat digestion and absorption. For instance, GF mice gavaged with radio-labeled tri-olein show less accumulation in the blood over time compared to conventional (Conv.) mice. Additionally, GF mice fed a HF diet for four weeks display elevated triglycerides in their stool and have enlarged gallbladders compared to Conv. mice, suggesting a potential impairment in bile secretion. Thus, mRNA expression of entero-endocrine hormones that regulate gallbladder contraction (i.e., cholescystokinin; CCK) and pancreatic secretion of lipases (i.e., secretin) were measured in the small intestine. Interestingly, gene expression levels of cck and secretin were reduced in the small intestine of GF mice compared to Conv. mice and were restored in conventionalized (Conv. D) GF mice. Additionally, GF mice given a lipid challenge had less pancreatic lipase and amylase in the small intestine compared to Conv. mice. Taken together, these data suggest that due to impaired secretin and CCK signaling, less bile and pancreatic enzymes are released to properly emulsify and digest fats, respectively. This may lead to impaired lipid absorption and thus resistance to DIO in GF mice.

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