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Metabolic tug-of-war: deciphering the role of glucagon and insulin in regulating postprandial glucose metabolism.

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Glucagon and insulin are the major hormones responsible for the regulation of blood glucose levels, with the two hormones generally exerting opposing effects. Dysregulated insulin and glucagon secretion and action are central to the development of diabetes, with inadequate insulin and excessive glucagon secretion being a central driver of hyperglycaemia. Therefore, understanding the interaction of these two hormones *in vivo* under physiological conditions in humans is paramount, particularly in the light of the fact that both glucagon receptor inactivation and somewhat ironically activation are emerging as strategies for the treatment of diabetes and obesity. Here, I will discuss recent findings from a series of studies which have employed advanced metabolic methodologies and unique feeding approaches to decipher how insulin and glucagon compete across different organ systems and to identify which hormone exerts the dominant effects on glucose metabolism. The findings from these studies provide important insights into glucagon and insulin biology in humans.