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## Which parameters determine optimal protein metabolism in the old?

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**Title:** What determines/Which parameters determine optimal protein metabolism in the old?

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**Abstract 1 (300 words):**

There seems to be a consensus that the need for protein is increased in the elderly to maintain optimal all the body functions. In several countries, the RDA for proteins has recently been increased to 1g/kg/d for adults over 65 years of age with dietary proteins of good quality and this even if they are considered in "good health". Apart from the quantity to be ingested, which can still remain a problem to reach for this population, the quality of the proteins ingested is essential and involves much more than just the amino acids composition of the dietary protein. The lower the quality of these proteins, the more the quantity to be ingested to meet the AA requirement will be important and therefore difficult to achieve in a population characterized by a lower appetite or food intake, and by a palatability for dietary protein which is decreased. The quality of a dietary protein is related to its amino acids composition ( AA) but also to other determinants including the speed of digestion, the presence of specific AAs, the food matrix in which the dietary proteins are included and the processes involved in the production of food products (gelation, cooking temperature). We can also mention the interaction with other macro or micro-nutrients associated to the meal that could interfere with the dietary proteins. This include the plant bioactives such as the polyphenols and the anti-nutritional factors found in the plant proteins sources. The search for alternative protein sources and transitioning towards more sustainable, plant-based nutrition has received much attention in the past decade. But, is this transition compatible with optimal protein nutrition in the elderly?

