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World Pasta Day: Checking the science behind current food trends Wide range of noodle types as a new opportunity for slow carb

Graz, October 21, 2021 - An important element of Asian and Mediterranean diets as well as the Austrian culinary tradition, pasta is a basic foodstuff that is interesting and healthy. A favorite basic food of students and singles, a practical and quick dinner for the entire family, an ingredient in the world's best 5-star restaurants: Pasta is appreciated by a wide audience. This popular food is also found in current food trends and popular diets: low-carb, high protein, gluten-free, vegan and many more. Sandra Holasek from the Otto Loewi Research Center at Med Uni Graz takes a look at the nutrition and health science behind different types of pasta that have conquered the shelves.

Health awareness

If you want to live healthy, you also have to eat healthy. In the past few decades, awareness of nutrition and the ingredients in our food has greatly increased. In the nineties, this led to a wave of "light" products: reduced fat products that were supposed to be healthier than their commercially available counterparts. Over the course of time, the focus has shifted: Instead of fat, carbohydrates have been identified as the reason for the extra kilos most people have. The "low-carb" wave has been set into motion. Vegan and gluten-free pasta have also flooded the food market in recent years.

Low-carb noodles

Carbohydrates are an important supplier of energy and necessary for its continuous supply. Especially important are complex carbohydrates, those from foods and meals that allow our blood sugar level to rise slowly and thus are a lesser burden and stabilize our performance sustainably. The connection between glycemic index/glycemic load and health has been scientifically proven and is recognized as an important parameter for evaluating how healthy a food is. Pasta created from cereals and/or legumes (peas, beans, lentils) has a nutritional profile with a higher share of plant protein and fiber. The positive effects of this are better satisfaction of hunger thanks to a more full stomach and a positive change in intestinal flora. This also supports the intestinal barrier and thus our immune defense system. These new products are often referred to as low-carb noodles, but in fact they are also slow-carb noodles that significantly slow down the insulin response.

Low carb is currently being replaced by slow-carb diets, which have been evaluated as suitable for longer-term consumption. The main explanation for this is the quality of the protein sources. In slow carb, protein mostly comes from plants, eliminating the danger of too high a consumption of animal protein sources, which normally contain too much saturated fat and lack fiber. Low-carb pasta finds a replacement flour—and thus starch—during production. In most cases, "low carb" is combined with "high protein" in low-



carbohydrate noodles. They are often made of legumes such as chickpeas or red lentils, which increases their protein content. Equally popular are konjac noodles, which are made of konjac root. These noodles have hardly any calories (8 kcal/100 g). They are fat-free and gluten-free and provide a lot of fiber, which is important for a healthy digestion.

Vegan noodles

Egg is often added to noodle dough, which is why commercially available noodles are not suitable for vegans. The rice noodles often used in East Asian dishes and Japanese ramen are nearly always egg-free, but egg is nearly always an ingredient of "classic" pasta. Chickpea or lentil noodles are an excellent substitute for pasta made with eggs.

Gluten-free pasta

For a long time, pasta was taboo for celiac patients. The flour used to make many types of noodles and above all classic pasta causes pain, inflammation and sometimes severe discomfort. The basis for gluten-free noodles is provided by white and yellow corn and rice.

In line with current nutritional recommendations, the development of a broad range of different pasta is very welcome since it has the positive effect of increasing the share of plants in our diet and also promoting the planetary health diet, a healthy way of eating for us and for the planet. Have fun trying them out—enjoy your meal!

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Profile: Sandra Holasek

Sandra Holasek directs the Nutrition and Metabolism research unit at the Otto Loewi Research Center. She works on nutritional assessment and methods for standardizing nutritional interventions, measurement of body composition, nutrient uptake and anaysis of relavent metabolites (emphasis on adipocyte biology). Another focus is the influence of food quality and the gut microbiome on the immune system in connection with eating disorders, lifestyle, body fat and age.