

Choosing whole grains for kidney stone prevention

Information for patients and families

St. Michael's

Inspired Care.
Inspiring Science.

Oxalates are naturally-found compounds in some plant foods, such as grains, vegetables and fruit. Eating foods high in oxalate in your diet may lead to kidney stones. Dietitians recommend grains with low levels of oxalate to reduce the risk of kidney stones.

Quinoa is a type of whole grain that's often eaten because it's gluten-free and a source of complete protein. A **complete protein** has all 9 essential amino acids. But quinoa is higher in oxalate. Use the list below to choose grains that have similar benefits, but are low in oxalate.

Grain	Nutrition information	Use
Amaranth	<ul style="list-style-type: none">• Gluten-free• A source of complete protein• Has the same amount of fibre and protein as quinoa (6 grams for 1 cup cooked)• Helps to lower cholesterol	<ul style="list-style-type: none">• Has a crunchy texture and peppery taste• Can be popped, used as a breakfast cereal or porridge, and mixed with other grains like brown rice
Einkorn	<ul style="list-style-type: none">• A type of wheat• Easier to digest for those with gluten intolerance• Higher in protein and other nutrients than regular wheat	<ul style="list-style-type: none">• Can be used in baking• Can be used for risotto instead of rice• Whole grain einkorn crackers can be a healthy midday snack
Faro	<ul style="list-style-type: none">• A type of wheat grain• Has more fibre and protein than quinoa	<ul style="list-style-type: none">• Very similar to barley and can be used in the same dishes• Use instead of rice or add to soups

This information is not intended as a substitute for professional medical care. Ask your healthcare provider about this information if you have questions.

Grain	Nutrition information	Use
Kamut	<ul style="list-style-type: none"> • Has more protein than quinoa • Higher in Vitamin E than regular wheat • Gives 14% of daily magnesium needs 	<ul style="list-style-type: none"> • Has a rich, buttery flavor • Use in pilaf recipes, soups and salads
Oats	<ul style="list-style-type: none"> • Can be gluten-free. Look for certified gluten-free oats • Gives 16% of daily magnesium needs • Has almost the same amount of protein as quinoa • Contains more fibre than quinoa 	<ul style="list-style-type: none"> • Available in different forms: steel cut, rolled, or instant • When substituting for quinoa, use old fashioned rolled oats (they have a similar texture)
Sorghum	<ul style="list-style-type: none"> • Gluten-free • A source of protein • Can lower cholesterol levels 	<ul style="list-style-type: none"> • Use sorghum flour in baked goods • Sorghum-based noodles can be used in pasta recipes
Spelt	<ul style="list-style-type: none"> • A type of wheat grain • Has more protein and fibre than both quinoa and amaranth 	<ul style="list-style-type: none"> • Use instead of quinoa in most recipes - tastes great as a base for salads or when added to soups • You can even make spelt burger patties
Teff	<ul style="list-style-type: none"> • A type of millet grain • Gluten-free • Has more fibre than quinoa • Has about 3 times more calcium than other grains • Has a type of fibre that helps improve bowel health, control blood sugar control and manage weight 	<ul style="list-style-type: none"> • Traditionally made into fermented Ethiopian flatbread called Injera, with a distinct sour flavor • Use Injera as a substitute for bread or savoury pancakes. Teff wraps are also sold in grocery stores • Unfermented Teff has a sweet, molasses taste. Can be used in baked goods, made into polenta or eaten as porridge for breakfast

Go to www.wholegraincouncil.org for more recipe ideas.