COOKING PULSES FROM DRY SEEDS

THE GLOBAL BEAN PROJECT

WHY COOK WITH PULSES AND COOK THEM YOURSELF?

Beans, peas, chickpeas and lentils come in a **huge diversity of colours, shapes and sizes, textures and flavours**.
Cooking dry pulses is easy and provides a **nutritious basis for a healthy meal**. Since they are high in protein and dietary fibre, low in fat and contain vitamins and minerals, they can be a good alternative to animal products in your diet.

To prepare a quick meal using pulses, you can buy common cooked pulses ready to use in tins, in glass jars and other containers. We then recommend you buy local organic pulses in glass when available, since they are usually better for you and the environment.

However, **cooking pulses yourself provides several advantages**:

Lower cost	>	Pulses are a cheap alternative to animal products. Cook them yourself to make them even cheaper: ca. half the cost of cans.
Increase diversity range	>	Not all varieties are available cooked.
Remove fermentable sugars	>	These sugars can cause flatulence.
Reduce waste	>	You select the amount you want to use. You can cook them in bulk: one cooking operation gives several meals.
Improve taste	>	Some people prefer the taste of home-cooked pulses.
Add other ingredients	>	Give your pulses a personal touch during cooking.
Save on storage space	>	Dry pulses take up less space than tins and jars.
Lower carbon footprint	>	Weight of transporting dried seeds is less than tins and jars.
Pleasure of cooking from scratch	>	Be in control of all steps from the raw ingredients to the final dish.

With a little bit of planning and following our tips,
you will be able to cook these delicious and versatile seeds yourself!

CHOOSING, PREPARING, SOAKING AND COOKING PULSES

1. Choosing and storing your dry pulses

You can choose between all different kinds of beans, and the whole or split version of lentils, peas, chickpeas and faba beans. **Split** pulses are **dehulled**, which means:

- reduced cooking time
- easier digestion, especially useful when starting to eat more pulses
- quickly turn into purée during cooking

Pulses cook faster and taste better when they have been **harvested in the last two years**. Furthermore, it is important to **store** dry pulses in cool, dry conditions and consistent temperature.

Consider cooking more pulses than you need for one recipe. You can store the excess in the fridge (3 days) or frozen for later use (6 months), they'll taste as good as freshly cooked!

2. Preparing your dry pulses

Wash the seeds with running water in a sieve or in a big bowl. Be aware that in rare cases there can also be stones, so do your best to remove them as well.

3. Soaking (not indispensable, but highly recommended)

Soaking pulses in water for 1 to 24 hours "wakes up" the living seeds and starts their **germination** process, which reduces the cooking time, releases several anti-nutritional compounds in the water, facilitating digestion. See soaking times per pulse type in the summary table. Place the pulses in a big salad bowl or a saucepan and add water to cover them. The seeds will increase to double or triple their size: make sure they are covered with water during the whole process. In hard water, rehydration is better if you use around 1 gram of bicarbonate for 100 g dry pulses. Rinse the pulses after soaking, before cooking, and never use the soaking water for cooking!

4. Cooking

The most important: always cook pulses until they are soft!
Except if you plan to add them to a soup or a stew where they will keep cooking, cooked pulses should be soft enough to be mashed when pushed between two fingers and not be 'al dente' when you taste them. Undercooked pulses are always more difficult to digest than well-cooked ones. Allowing the pulses to rest in the warm cooking water after cooking gives additional hydration and softness.

"Traditional" cooking:

1. Place the pulses in a big saucepan which has a lid, and cover with cold water (except chickpeas). See cooking water volume in the summary table.
2. Allow the pulses to boil without a lid. When it starts to boil, reduce the heat, cover with a lid, and let **simmer gently**.
3. During the first 10 minutes, check and remove the foam (or froth) that sometimes forms, using a skimmer.
4. Check **softness** and remove from the heat when done. See indicative cooking times per pulse type in the summary table.

Pressure cooking:

Thanks to the higher temperature when using a pressure cooker (120C° versus 100°C), **cooking time can be reduced approximately by half**. Once the water is boiling, reduce the heat to the minimum required to maintain the high pressure. Be careful: never fill the cooker to more than two thirds and always check that the pressure has gone down before opening! If you're not sure, follow the manufacturer's instructions.

Optional ingredients:

Addition of carminative herbs and spices, for example, dill, fennel, aniseed, savory, cumin, cardamom, coriander, star anise, ginger, to the cooking water reduces flatulence and increases digestibility. Adding a piece of kombu (a seaweed) in the cooking water also improves digestibility.
Use of salt: Salt does not (or only minimally) lengthen the cooking process, and gives you tastier pulses that tend to better remain whole. You can **cook pulses** with other ingredients like **vegetables or cereals**.

5. After cooking

Cooked pulses weight two to three times more than their dry weight. If you want to use the cooked pulses directly, drain the cooking water. Otherwise, let them cool in their cooking liquid, **store** them in the fridge in their cooking liquid for up to 4 days, or **freeze** them with their cooking liquid in airtight bags or containers. Defreeze them slowly, that is to say, start by leaving them a few hours in the fridge at first.

Ready to enjoy!
You can use your home-cooked pulses in all kinds of recipes: stews and soups, burger patties, dips and fresh salads, not forgetting sweet treats like spreads, cakes and cookies!

SUMMARY: SOAKING AND COOKING TIMES

"Traditional" cooking refers to pulses that have been soaked with a pinch of bicarbonate and that are cooked by simmering in a normal saucepan. If starting from dry, non-soaked pulses, the cooking time will be 1.2 to 2 times longer.

Pulse	**Soaking time** (hours)	**Amount of water for cooking** (volume of soaked pulses : volume of water)	**Cooking time** (minutes, once the water is boiling)	
			"Traditional" method	**Pressure cooking**
Beans	10 – 20	1:2.5	40 – 120	15 – 25
Faba beans	10 – 20	1:3	60 – 90	20 – 30
Chickpeas	10 – 20	1:6	50 – 120	20 – 30
Whole peas	1 – 10	1:4	50 – 100	10 – 25
Split peas	0.5 – 2	1:3 for a thick puree	30 – 80	10 – 20
Whole lentils	0.5 – 2	1:3	20 – 30	10 – 20
	none		25 – 45	10 – 20
Split lentils	none	1:2 for a thick puree	15 – 25	not recommended

PER SPECIES INFORMATION

Beans (*Phaseolus communis* and *Phaseolus coccineus*)

- Cooking time is highly variable. There is a huge diversity within dry beans. It is possible to roughly group them in three overlapping categories of cooking properties and texture: “stew beans”, ”puree beans”, “soup beans”.

Faba beans / fava beans / broad beans (*Vicia faba*)

- There is a large range of seed size: bigger beans generally have a thicker skin and longer cooking time. We are talking about dry faba beans, fresh broad beans are cooked in a very different way!

Chickpeas (*Cicer arietinum*)

- To cook properly, chickpeas require a heat shock: put them in when the water is boiling.
- There are varietal differences in cooking time, taste and texture.

Peas (*Pisum sativum*)

- There is a lot of diversity within peas, from big yellow peas to wrinkled green peas that turn mushy, to big and small grey peas which may or may not stay whole when cooked.
- We are talking about dry peas, fresh green peas are cooked in a very different way!

Lentils (*Lens culinaris*)

- Soaking is not required but whole lentils soaked for up to two hours cook faster.
- Lentil varieties have different cooking times and textures. In general, the small relatively round lentils (e.g. green ‘Puy-type’, black “Beluga”) tend to hold their shape better than the flat beige lentils, which often tend to get mushy, like red or yellow split lentils.

References:

Indications based on our own experience and following books, websites and articles:

➔ Book “La cocina de las legumbres” by Fundación Alícia (2016)
➔ Book “Savez-vous goûter… les légumes secs” by Bruno Couderc, Gilles Daveau, Danièle Mischlich and Caroline Rio (2014)
➔ https://legumechef.com/cooking-with-pulses/cooking-tips-pulses/
➔ About the environmental impact: https://doi.org/10.1016/j.spc.2021.01.017

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THE GLOBAL BEAN PROJECT

The Global Bean Project is a European network to promote and expand the use and cultivation of legumes in our kitchens, gardens and fields.

See further information, authors and references online:

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