



DOSSIER · SUBSTANCE

Pumpkin Seeds

Pumpkin seeds are the seeds of the pumpkin; human studies mainly investigate prostate and urinary tract complaints, mostly as a combination preparation.

271

STUDIES IN
TOTAL

11

IN HUMANS

5

OF WHICH
CONTROLLED

48

IN ANIMALS

12

IN THE LAB

Figures from the IHR study database · Last updated 2026-10-23

How to Read This Dossier

ESTABLISHED

measured in humans, with a comparison group

PLAUSIBLE

supported by mechanism, animal studies or observation

HYPOTHESIS

a likely connection that still needs to be tested

Pumpkin Seeds at a Glance

A randomized controlled trial found a better subjective assessment in men with benign prostatic enlargement taking a preparation of pumpkin seeds and Sabal serrulata than taking placebo ¹.

The same randomized controlled trial reports an improvement in urinary flow, micturition time, residual urine and micturition frequency with this combination preparation ¹.

In tapeworm infestation, pumpkin seeds together with areca nut extract worked faster in a non-randomized study than either of the two agents alone ³.

A small non-randomized study found that baked pumpkin seeds accelerated the recovery of plaque pH after a sugar rinse ⁴.

We evaluated 15 human studies on Pumpkin Seeds, including 2 randomised controlled trials and 0 meta-analyses or systematic reviews; the controlled studies include 189 participants in total. As of 23 October 2026.

1. What Is Pumpkin Seeds? Occurrence, Origin and Forms

Pumpkin seeds are the seeds of the pumpkin (genus Cucurbita) in the gourd family (Cucurbitaceae). They sit in the flesh of the ripe fruit and are eaten as food or pressed into oil. In folk medicine they were traditionally used for bladder and prostate complaints and against tapeworms.

The seeds grow inside the fruits of all Cucurbita species; dedicated oilseed varieties produce seeds without a woody hull, which press well. They are eaten as a snack and a baking ingredient, and they also serve as a culinary oil.

The seeds are taken from the ripe fruit, washed and dried, with or without the hull; this yields roasted seeds, cold-pressed oil as well as flour, powder and protein. Investigations use whole seeds, hulled seeds, roasted seeds, pumpkin seed oil as well as flour, powder and protein extract.

Forms and Preparations Studied

- Whole Seeds With Hull
- Hulled Seeds, the Kernel Without the Hull
- Roasted Seeds
- Pumpkin Seed Oil
- Pumpkin Seed Flour or Powder
- Pumpkin Seed Protein

Not covered on this page:

- Pumpkin flesh, pumpkin juice and other preparations made from the fruit rather than the seed
- Seeds of other cucurbits such as melon and watermelon seeds
- Saw palmetto (Serenoa repens), a different plant mentioned in the same context
- Finished products in which pumpkin seed extract is only one ingredient alongside other active substances

2. What Does Pumpkin Seeds Do? Results by Area

AREA	RESULT IN CONTROLLED STUDIES	STRENGTH OF EVIDENCE	STUDIES	PARTICIPANTS
Prostate and Benign Enlargement	mixed	unclear	0 meta-analyses · 1 controlled · 1 other	53
Bladder and Urinary Tract	mixed	unclear	0 meta-analyses · 1 controlled · 0 other	53
Blood Glucose	mixed	unclear	0 meta-analyses · 1 controlled · 0 other	15
Blood Pressure	reviews only	unclear	0 meta-analyses · 0 controlled · 1 other	0
Other investigations	mixed	low	0 meta-analyses · 3 controlled · 8 other	136

How to read the table: counted are human studies whose results concern the area. "High" means at least one meta-analysis and two controlled studies showing improvement, or at least three controlled studies of which three quarters show improvement, with at least 300 participants in total. "Moderate" means at least two controlled studies showing improvement, as a majority, or one meta-analysis alongside controlled studies. "Low" means one controlled study showing improvement. Where an area has no controlled study, the strength of evidence is at most "low" (result "reviews only" or "observational data only"). Everything else is "unclear". A study counts as showing improvement when at least half of its outcomes in this area improved. Reviews of combination products do not count as meta-analyses; results that only describe side effects or shares of users do not count as an effect. The same study is counted only once.

3. What the Studies Show in Detail

Pumpkin Seeds, Prostate and Benign Enlargement: Human Studies

A randomized controlled trial with 53 men with symptoms of benign prostatic enlargement found a better subjective assessment of the treatment effect with Curbicin, a preparation of pumpkin seeds and Sabal serrulata (dwarf palm/saw palmetto), compared with placebo ¹. An older review mentions more recent studies on pumpkin seeds with clinical effects but considers the role of such plant extracts in prostate complaints controversial ¹⁴. The evidence is unclear: only one controlled study is available, and it investigated a combination preparation. It remains open whether whole, hulled or roasted seeds, oil, flour, powder or protein alone work for this complaint.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON	RESULT
¹ Carbin et al. 1990	randomised controlled · 53 participants	Curbicin from pumpkin seeds and dwarf palm; 3 months; vs. placebo	subjective assessment of treatment effect: ur
¹⁴ Dreikorn et al. 2002	review	Plant extracts, including pumpkin seeds; vs. Placebo (in the cited trials)	Clinical effect in BPH: improved

Pumpkin Seeds, Bladder and Urinary Tract: Human Studies

A randomized controlled trial with 53 men with symptoms of prostatic hyperplasia found an improvement in urinary flow, micturition time, residual urine and micturition frequency with a preparation of pumpkin seeds (Cucurbita pepo) and Sabal serrulata (dwarf palm/saw palmetto) compared with placebo ¹. Since the investigated preparation additionally contained Sabal serrulata, the finding cannot be attributed to the pumpkin seeds alone ¹. The evidence for this area is unclear; only this one controlled study on a combination preparation is available, and it remains open whether pumpkin seeds alone influence the bladder and urinary tract complaints.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON	RESULT
¹ Carbin et al. 1990	randomised controlled · 53 participants	Curbicin from pumpkin seeds and dwarf palm; 3 months; vs. placebo	urinary flow: unclear (significantly improved); mic

Pumpkin Seeds and Blood Glucose: Human Studies

In this area, a randomized controlled trial was conducted in healthy adults that compared a protein mixture of pumpkin seed protein together with pea protein and brown rice protein against whey and water ². After whey, insulin rose more strongly shortly after intake than after the plant-based mixture; overall, the authors found comparable metabolic effects ². Since the preparation contained pea and brown rice protein in addition to pumpkin seed protein, this finding cannot be attributed to the pumpkin seeds alone ². The evidence is unclear: only this one small study with 15 participants is available, and pumpkin seed protein was investigated, not whole, hulled or roasted seeds, oil, flour or powder. Whether other forms of pumpkin seeds affect blood sugar or insulin therefore remains open.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON
² Petkova et al. 2026	randomised controlled · 15 participants	Plant protein blend of pea, brown rice, pumpkin seeds vs. whey; 20 g protein in water; 3 h postprandial; vs. whey, water c

Pumpkin Seeds and Blood Pressure: Human Studies

For blood pressure, there is only a general overview of dietary patterns that incidentally lists pumpkin seeds among blood-pressure-lowering foods and itself calls for further studies ¹³. Controlled human studies on blood pressure and a single pumpkin seed form are lacking to date, so the strength of evidence remains unclear.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON	RESULT
¹³ Singh et al. 2022	review	Indo-Mediterranean or Japanese diet including pumpkin seeds; vs. Western diet or DASH diet	blood pressure reduction by pumpkin se

Pumpkin Seeds: Further Outcomes in Studies

In this area, three controlled studies show findings on very different forms and questions that cannot be reduced to a common denominator. In tapeworm infestation, pumpkin seeds with areca nut extract expelled the worms most quickly; pumpkin seeds alone also worked, but markedly more slowly ³. In a small study, baked pumpkin seeds after a sugar rinse accelerated the recovery of plaque pH; eaten alone, they slightly lowered it ⁴. The strength of evidence

is low: the studies are small or not randomized, and no controlled human findings are available in this area for pumpkin seed oil, flour, or powder.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON
² Petkova et al. 2026	randomised controlled · 15 participants	Plant protein blend of pea, brown rice, pumpkin seeds vs. whey; 20 g protein in water; 3 h postprandial; vs. whey, water
³ Li et al. 2012	controlled · 115 participants	Pumpkin seeds alone, areca nut extract alone, or combination; vs. Pumpkin seeds alone or areca nut extract alone
⁴ Wang et al. 2016	controlled · 6 participants	Baked pumpkin seeds (180 °C, 5 minutes), 10 g; 10 g; single consumption, measurement over 40–60 minutes; vs. sucrose
⁵ Jones et al. 2026	case series · 81 participants	Pumpkin seeds grown in France; 3 May to 12 August 2026
⁶ Liu et al. 2025	case report · 1 participants	Traditional Chinese deworming therapy of pumpkin seeds and betel nuts
⁷ Gawryjolek et al. 2021	case report · 1 participants	Pumpkin seeds (consumed)
⁸ Feng et al. 2017	case report · 1 participants	Pumpkin seeds together with areca
⁹ Dhamija et al. 2025	case report	Seed cycling: ground flaxseeds and pumpkin seeds follicular, sunflower and sesame seeds luteal; 6 months; vs. no cycling

Further studies in this area: [10](#) [11](#) [12](#)

4. How Is Pumpkin Seeds Dosed? Preparation, Dose and Duration in Studies

The pumpkin seeds were often part of a mixture, for example with Sabal serrulata (dwarf palm/saw palmetto), with pea and brown rice protein or with areca nut extract ¹²³. For pumpkin seed oil, pumpkin seed flour and pumpkin seed powder, no controlled findings from the included human studies are available.

PREPARATION OR FORM	DOSE	DURATION	STUDY
Curbicin from pumpkin seeds and dwarf palm	—	3 months	¹
Plant protein blend of pea, brown rice, pumpkin seeds vs. whey	20 g protein in water	3 h postprandial	²
Baked pumpkin seeds (180 °C, 5 minutes), 10 g	10 g	single consumption, measurement over 40–60 minutes	⁴

5. Is Pumpkin Seeds Safe? Side Effects in Studies

In the randomized controlled trial on the combination preparation with Sabal serrulata, no adverse side effects were observed ¹. In the tapeworm study, temporary nausea and dizziness occurred in nearly half of the participants taking pumpkin seeds with areca nut extract ³. Individual reports also mention allergic reactions up to anaphylaxis as well as a Salmonella infection in connection with pumpkin seeds ⁵⁷¹¹.

STUDY	REPORTED SIDE EFFECTS
¹ Carbin et al. 1990	no untoward side effects noted
³ Li et al. 2012	Nausea and dizziness in about 46.3%, transient and well tolerated
⁵ Jones et al. 2026	Salmonella Enteritidis infection
⁷ Gawryjolek et al. 2021	generalized urticaria, swollen lips, increasing dyspnea (anaphylaxis)
¹⁰ Gentile et al. 2023	Abdominal pain, difficulty to void, rectal inflammation, hemorrhoid enlargement
¹¹ Chatain et al. 2017	Anaphylaxis to pumpkin seeds
¹² Šamec et al. 2022	Safety reviewed in general terms, no specific data
¹⁴ Dreikorn et al. 2002	good tolerability

6. What Remains Open: Limits of the Evidence

- For prostate and urinary tract complaints, only one controlled study is available, and it also investigated a combination preparation with Sabal serrulata ¹.
- The exact form of the pumpkin seeds in the combination preparation was not stated ¹.
- For pumpkin seed oil, pumpkin seed flour and pumpkin seed powder, controlled human studies are lacking.
- The study on blood sugar was small and tested a protein mixture of pea, brown rice and pumpkin seeds against whey, not pumpkin seeds alone ².

7. Bottom Line: What Is Established About Pumpkin Seeds

Pumpkin seeds are the seeds of the pumpkin and are eaten as a food or pressed into oil. The human studies are limited: the focus is on men with benign prostatic enlargement, in whom a preparation of pumpkin seeds and Sabal serrulata performed more favorably than placebo ¹. Since this preparation contains two components, the finding cannot be attributed to the pumpkin seeds alone ¹.

The evidence is low or unclear throughout: there are only a few small studies, mostly with combination preparations, and for oil, flour and powder, controlled human findings are lacking. Statements about one form cannot readily be transferred to another.

Frequently Asked Questions

How well has Pumpkin Seeds been studied in humans?

We evaluated 15 human studies on Pumpkin Seeds, including 2 randomised controlled trials and 0 meta-analyses or systematic reviews; the controlled studies include 189 participants in total. As of 23 October 2026.

Does Pumpkin Seeds help with prostate and Benign Enlargement? What the studies show

We evaluated one controlled study and one further study; the controlled studies include 53 participants in total. Result of the controlled studies: mixed. Strength of evidence under our published rules: unclear. Sources: ¹¹⁴

Does Pumpkin Seeds help with bladder and Urinary Tract? What the studies show

We evaluated one controlled study; the controlled studies include 53 participants in total. Result of the controlled studies: mixed. Strength of evidence under our published rules: unclear. Sources: ¹

Does Pumpkin Seeds help with blood Glucose? What the studies show

We evaluated one controlled study; the controlled studies include 15 participants in total. Result of the controlled studies: mixed. Strength of evidence under our published rules: unclear. Sources: ²

What are pumpkin seeds and what are they used for?

Pumpkin seeds are the seeds of the pumpkin from the Cucurbitaceae (gourd family). They sit in the fruit flesh of the ripe fruit and are eaten as a food or pressed into oil. In folk medicine, they were traditionally used for bladder and prostate complaints and against tapeworms.

Do human studies show an effect in benign prostatic enlargement?

A randomized controlled trial with men with symptoms of benign prostatic enlargement found a better subjective assessment of the treatment effect with a preparation of pumpkin seeds and Sabal serrulata than with placebo ¹. An older review mentions more recent studies on pumpkin seeds with clinical effects but considers the role of such plant extracts controversial ¹⁴. Since the preparation additionally contained Sabal serrulata, the finding cannot be attributed to the pumpkin seeds alone ¹.

Do pumpkin seeds affect the bladder and urinary tract?

In the same randomized controlled trial, the combination preparation of pumpkin seeds and Sabal serrulata improved urinary flow, micturition time, residual urine and micturition frequency compared with placebo ¹. It remains open whether and in which preparation pumpkin seeds alone influence these complaints.

Are there findings on blood sugar and blood pressure?

Only a protein mixture of pea, brown rice and pumpkin seeds against whey was investigated; the authors found overall comparable metabolic effects ². On blood pressure, there is only a general overview of dietary patterns that incidentally lists pumpkin seeds among blood-pressure-lowering foods ¹³.

How well are pumpkin seeds tolerated?

In the randomized controlled trial on the combination preparation with *Sabal serrulata*, no adverse side effects were observed ¹. In the tapeworm study, temporary nausea and dizziness occurred in nearly half of the participants taking pumpkin seeds with areca nut extract ³. Individual reports mention allergic reactions up to anaphylaxis as well as a *Salmonella* infection ⁵⁷¹¹.

Sources

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International Health Research

Research, put in context. Every statement leads to the original paper; the decision in the individual case rests with the treating professional.
ih-research.com/en/knowledge/pumpkin-seeds/ · Last updated 2026-10-23