



DOSSIER · SUBSTANCE

Taurine

Taurine is a sulfonic acid produced by the body itself; human studies show benefits for blood pressure, vascular function and blood sugar, but the data on endurance performance are uncertain.

706

STUDIES IN
TOTAL

153

IN HUMANS

58

OF WHICH
CONTROLLED

259

IN ANIMALS

37

IN THE LAB

Figures from the IHR study database · Last updated 2026-10-15

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

Taurine at a Glance

A meta-analysis found small performance benefits after a single taurine dose, with low certainty of evidence ⁵. In two randomized controlled trials in humid heat, young adults with taurine lasted longer, but only at certain doses ⁵⁶⁵⁷.

Several meta-analyses found lower blood pressure with oral taurine, in healthy people as well as in people with pre-existing conditions ²³¹²¹³²².

Arterial stiffness improved in several controlled trials ⁴⁶⁶⁵⁶⁶.

For cognitive performance, a meta-analysis and two systematic reviews found no confirmed benefit of taurine ¹⁴⁶.

We evaluated 153 human studies on Taurine, including 51 randomised controlled trials and 21 meta-analyses or systematic reviews; the controlled studies include 1,885 participants in total. As of 8 October 2026.

1. What Is Taurine? Occurrence, Origin and Forms

Taurine is a sulfur-containing compound that chemically belongs to the sulfonic acids and, unlike the proteinogenic amino acids, is not incorporated into proteins. The body produces it from cysteine and methionine itself and takes most of it in through animal foods. Taurine is known as an additive in energy drinks and infant formula, and as a dietary supplement it is offered in powder or capsule form.

Taurine occurs in animal tissues, especially abundantly in fish and seafood, and also in meat and milk. In the human body it is found in many tissues, among others in cardiac and skeletal muscle, in the retina and in the brain, and it is present in breast milk.

For dietary supplements, taurine is produced industrially, mostly by chemical synthesis. Studies examine above all oral forms as a single substance, alongside taurine-containing drinks, eye drops, and taurine in parenteral nutrition solutions and in infant formula.

Forms and Preparations Studied

- Taurine as a single substance, taken as powder or capsules
- Taurine-containing soft drinks, usually together with caffeine, sugar and other additives (mixture)
- Taurine eye drops for application to the eye
- Taurine in parenteral nutrition solutions (infusion)
- Taurine in infant formula
- Taurine in dietary supplements with other substances (combination product)

Not covered on this page:

- Energy drinks as a beverage category, whose effect cannot be attributed to taurine alone
- Caffeine and other individual ingredients of energy drinks
- Homotaurine, known as the drug acamprosate, a different molecule
- Bile acid conjugates such as taurocholic acid, in which taurine is bound

2. What Does Taurine Do? Results by Area

AREA	RESULT IN CONTROLLED STUDIES	STRENGTH OF EVIDENCE	STUDIES	PARTICIPANTS
Physical performance	mixed	high	5 meta-analyses · 17 controlled · 10 other	277
Heart and circulation	mostly improved	high	3 meta-analyses · 12 controlled · 9 other	296
Blood sugar and metabolism	mostly improved	high	5 meta-analyses · 5 controlled · 9 other	251
Blood pressure	mostly improved	moderate	7 meta-analyses · 1 controlled · 3 other	0
Nerves and brain	mostly no difference	low	4 meta-analyses · 5 controlled · 21 other	128
Aging and longevity	mostly improved	low	0 meta-analyses · 1 controlled · 5 other	24
Eye and retina	reviews only	low	1 meta-analyses · 0 controlled · 5 other	0
Other investigations	mostly improved	high	9 meta-analyses · 38 controlled · 41 other	1,484

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

Taurine and Physical Performance: Human Studies

A meta-analysis found small performance benefits after a single taurine dose, especially for endurance and strength, with low certainty of evidence ⁵. In two randomized controlled trials in humid heat, young adults with taurine lasted longer, but only at certain doses ⁵⁶⁵⁷. Another meta-analysis found better jumping performance than with placebo ¹⁶, and a randomized controlled trial found more anaerobic performance in speed skaters ⁴³. After eccentric strength training, strength recovered better in two randomized controlled trials than with placebo ⁵¹⁶⁴. A meta-analysis found less lactate dehydrogenase after exertion, and a benefit for muscle pain only at a late time point ¹⁰; a randomized controlled trial also showed less muscle soreness ⁵¹. A small controlled trial in runners found lower AST and inflammation values, but no difference in creatine kinase ⁷⁶. These are contrasted by results with no difference: a meta-analysis found no benefit in maximal oxygen uptake ¹⁶, and two controlled trials found none in time to exhaustion ⁵⁵⁷⁴. The findings come predominantly from small, short studies in young, trained men; the intake duration ranged from an acute single dose to several weeks. In two randomized controlled trials, the combination of taurine and caffeine improved individual performance values, while taurine alone did not ⁴¹⁵⁴. In a third study, the combination brought no benefit in repeated sprints ⁵⁸. It remains open whether the effects persist in women, older people and over longer periods.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON
¹ Wang et al. 2026	systematic review · 1,030 participants	Taurine supplementation; optimal 3,000 mg daily; vs. Control in included trials
⁵ Deng et al. 2025	meta-analysis · 308 participants	Acute single taurine dose, capsule or beverage formulation; commonly used 1-6 g range; single ingestion, about 1 h bef
¹⁰ Dehghani et al. 2025	meta-analysis · 165 participants	Taurine supplementation (form/dose not reported); vs. Placebo or control group
¹⁶ Buzdağlı et al. 2022	meta-analysis	Taurine supplement; vs. Placebo group
²¹ Kurtz et al. 2021	systematic review	Taurine as sole ingredient, oral intake; <1 g to 6 g, acute or chronic; acute 10-15 min to 2 h before exercise; chronic 7 da
⁴¹ Köse et al. 2026	randomised controlled · 32 participants	Taurine 10 mg/kg oral, alone and with caffeine 2 mg/kg; Taurine 10 mg/kg; caffeine 2 mg/kg; acute single dose; vs. plac
⁴³ Buzdağlı et al. 2023	randomised controlled · 30 participants	oral taurine; single 6 g dose; 60 minutes before testing, 72-hour washout; vs. placebo 6 g
⁴⁸ De et al. 2021	randomised controlled · 24 participants	Taurine supplementation or placebo; 3 g taurine; 8 weeks; vs. Tau alone, Ex alone, TauEx, placebo

Further studies in this area: [51](#) [52](#) [54](#) [55](#) [56](#) [57](#) [58](#) [60](#) [63](#) [64](#) [74](#) [76](#) [77](#) [78](#) [81](#) [97](#) [118](#) [120](#) [122](#) [123](#) [124](#) [129](#) [143](#) [144](#)

Taurine, Heart and Circulation: Human Studies

In three randomized controlled trials, vascular function or arterial stiffness improved more than with placebo, including in people with diabetes ⁴⁶⁶⁵⁶⁶. One meta-analysis found a lower heart rate and, in heart failure, a higher ejection fraction and a better NYHA class ³. A systematic review, by contrast, found no confirmed difference in ejection fraction and stroke volume in heart failure ¹⁸. The findings come predominantly from small, short studies; the optimal dose and long-term effect remain open. A controlled trial with a mixture of caffeine and taurine found no difference in skin blood flow ⁷⁵.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON
³ Tzang et al. 2024	meta-analysis · 808 participants	Taurine (form not specified); not reported, meta-regression by total dose; not reported; vs. control group
¹³ Nie et al. 2026	meta-analysis	Oral taurine supplementation; 1.5-3.0 g daily most effective; ≥8 weeks for glucose/lipid metabolism, <8 weeks for blc

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON
¹⁸ McGurk et al. 2022	systematic review	Taurine supplementation; formulations: tablet, capsule, drink, powder; 500 mg to 6 g per day; 2 to 48 weeks; vs. no taurine
²⁵ Moludi et al. 2022	randomised controlled · 120 participants	Taurine 1 g versus placebo, plus low-calorie diet; 1 g taurine three times per day; eight weeks; vs. placebo plus low-calorie diet
³⁶ Samadpour et al. 2021	randomised controlled · 40 participants	oral taurine supplementation; 8 weeks; vs. TRX+placebo, taurine alone, control
⁴⁵ Ra et al. 2019	randomised controlled · 29 participants	taurine supplement vs. placebo; 6 g/day; 2 weeks before and 3 days after exercise; vs. placebo group
⁴⁶ Ra et al. 2016	randomised controlled · 29 participants	oral taurine, placebo; 2.0 g taurine or placebo, 3 times per day; 14 days before, on day of, and 3 days after exercise;
⁵⁴ Karayigit et al. 2021	randomised controlled · 17 participants	Taurine alone, caffeine alone, caffeine+taurine, placebo; 1 g taurine; 6 mg/kg caffeine; ingested 60 min before 30-s 1

Further studies in this area: [56](#) [60](#) [65](#) [66](#) [70](#) [74](#) [77](#) [79](#) [97](#) [115](#) [119](#) [120](#) [139](#) [142](#) [145](#) [146](#)

Taurine, Blood Sugar and Metabolism: Human Studies

Several meta-analyses found lower fasting blood sugar with oral taurine, and in people with diabetes also lower long-term blood sugar and less insulin resistance ¹²⁸¹³. In two randomized controlled trials in type 2 diabetes, fasting blood sugar, insulin and insulin resistance decreased more than with placebo ³¹³². A third study found a benefit only for insulin and insulin resistance, not for blood sugar ²⁵. For blood lipids, two meta-analyses found lower triglycerides ²²² and a randomized controlled trial found lower total and LDL cholesterol ³¹. A meta-analysis in diabetes and another randomized controlled trial found no difference in blood lipids ⁸²⁵. For inflammatory markers, oxidative stress and CAT activity, a randomized controlled trial found improvements, while it remained without difference for IL-6 and TAC ²⁹. Taurine had no independent influence on resting metabolic rate in two randomized controlled trials with training in obese women ⁴⁸⁴⁹.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON
¹ Wang et al. 2026	systematic review · 1,030 participants	Taurine supplementation; optimal 3,000 mg daily; vs. Control in included trials
² Tzang et al. 2024	meta-analysis · 1,024 participants	Taurine supplementation (powder/capsule); 0.5 to 6 g per day; 5 to 365 days; vs. Control group
⁸ Tao et al. 2022	meta-analysis · 209 participants	Taurine supplement; vs. Control group
¹³ Nie et al. 2026	meta-analysis	Oral taurine supplementation; 1.5-3.0 g daily most effective; ≥8 weeks for glucose/lipid metabolism, <8 weeks for blood
²² Guan et al. 2020	meta-analysis	Taurine supplementation (oral intake); 0.5 to 6 g/day; 15 days to 6 months; vs. Control group (placebo)
²⁵ Moludi et al. 2022	randomised controlled · 120 participants	Taurine 1 g versus placebo, plus low-calorie diet; 1 g taurine three times per day; eight weeks; vs. placebo plus low-cal
³¹ Esmaeili et al. 2021	randomised controlled · 46 participants	taurine supplement vs. placebo; 3,000 mg/day; 8 weeks; vs. placebo, double-blind randomized
³² Maleki et al. 2020	randomised controlled · 45 participants	taurine supplementation; 3000 mg daily; 8 weeks; vs. placebo (crystalline microcellulose)

Further studies in this area: [36](#) [69](#) [112](#) [118](#) [120](#) [130](#) [135](#) [136](#) [137](#) [142](#) [146](#)

Taurine and Blood Pressure: Human Studies

Several meta-analyses found lower systolic and diastolic blood pressure with orally ingested taurine, in healthy individuals as well as in people with metabolic, liver or heart diseases ²³¹²¹³²². A randomized controlled trial in type 2 diabetes also found lower systolic blood pressure than with placebo ⁶⁶. A meta-analysis in people with diabetes mellitus, by contrast, found no difference in blood pressure ⁸. The strength of evidence is moderate; the studies differ in dose, intake duration and number of participants.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON
¹ Wang et al. 2026	systematic review · 1,030 participants	Taurine supplementation; optimal 3,000 mg daily; vs. Control in included trials
² Tzang et al. 2024	meta-analysis · 1,024 participants	Taurine supplementation (powder/capsule); 0.5 to 6 g per day; 5 to 365 days; vs. Control group
³ Tzang et al. 2024	meta-analysis · 808 participants	Taurine (form not specified); not reported, meta-regression by total dose; not reported; vs. control group
⁸ Tao et al. 2022	meta-analysis · 209 participants	Taurine supplement; vs. Control group
¹² Waldron et al. 2018	meta-analysis · 103 participants	orally administered isolated taurine; 1 to 6 g/day; 1 day to 12 weeks; vs. control (not further described)
¹³ Nie et al. 2026	meta-analysis	Oral taurine supplementation; 1.5-3.0 g daily most effective; ≥8 weeks for glucose/lipid metabolism, <8 weeks for blood pressure
²² Guan et al. 2020	meta-analysis	Taurine supplementation (oral intake); 0.5 to 6 g/day; 15 days to 6 months; vs. Control group (placebo)
⁶⁶ Li et al. 2025	randomised controlled	Taurine (oral); 2.4 g/day; 12 weeks; vs. Placebo

Further studies in this area: ^{112 137 145}

Taurine, Nerves and Brain: Human Studies

For cognitive performance, a meta-analysis and two systematic reviews found no confirmed advantage of taurine ¹⁴⁶. A randomized controlled trial found in traumatic brain injury with taurine in addition to tube feeding a better level of consciousness than without taurine ⁴². After liver transplantation, delirium occurred less frequently with taurine in a randomized controlled trial than with placebo ⁶⁸. Combination products with vitamins or caffeine do not allow statements about taurine alone ³³⁴⁰. Populations, doses and intake durations are very different, and for healthy adults null findings predominate.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON
¹ Wang et al. 2026	systematic review · 1,030 participants	Taurine supplementation; optimal 3,000 mg daily; vs. Control in included trials
⁴ Cao et al. 2025	meta-analysis · 402 participants	taurine, alone or combined with exercise training or therapeutic drugs; vs. exercise training alone, therapeutic drugs alone
⁶ Moore et al. 2026	systematic review · 244 participants	oral taurine, acute single dose; sometimes combined with caffeine; typically 1-3 g, up to ~50 mg/kg; acute single dose
⁹ Verner et al. 2007	systematic review · 189 participants	Taurine supplementation, mostly enteral with formula milk, one trial parenteral; Neonatal period until 3-4 months chronic
¹¹ Pedregosa et al. 2026	review · 130 participants	taurine (single agent, oral intake); vs. no taurine control arm in this review
⁴¹ Köse et al. 2026	randomised controlled · 32 participants	Taurine 10 mg/kg oral, alone and with caffeine 2 mg/kg; Taurine 10 mg/kg; caffeine 2 mg/kg; acute single dose; vs. placebo
⁴² Vahdat et al. 2021	randomised controlled · 32 participants	taurine added to standard enteral meal vs. standard enteral meal alone; 30 mg/kg/day taurine; 14 days; vs. taurine plus placebo
⁵⁸ Liu et al. 2025	randomised controlled · 16 participants	Taurine 50 mg/kg, caffeine 5 mg/kg, taurine+caffeine, placebo (maltodextrin 5 mg/kg); Taurine 50 mg/kg; caffeine 5 mg/kg

Further studies in this area: [68](#) [72](#) [86](#) [94](#) [96](#) [97](#) [100](#) [103](#) [104](#) [107](#) [108](#) [110](#) [112](#) [113](#) [116](#) [120](#) [121](#) [125](#) [128](#) [131](#) [139](#) [142](#)

Taurine, Aging and Longevity: Human Studies

A randomized controlled trial with older women found higher levels of the antioxidant enzyme SOD with taurine than with placebo ⁴⁷. The oxidative marker malondialdehyde rose only in the placebo group ⁴⁷. The strength of evidence is low, since only one controlled trial with a small number of participants is available. One review sees a benefit of taurine supplementation for healthy aging ¹¹⁸, another for protection against mitochondrial defects ¹³⁹. A further review suggests that a mixture of taurine and glutamine together with training could counteract muscle loss in old age ¹²¹.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON
⁴⁷ Abud et al. 2022	randomised controlled · 24 participants	Taurine or placebo (1.5 g starch); 1.5 g daily; 16 weeks; vs. Placebo group (1.5 g starch)
⁸¹ Marcangeli et al. 2025	cross-sectional study · 137 participants	no preparation; measurement of circulating taurine; vs. no comparison; cross-sectional analysis by age and activity
⁹⁹ Frascatani et al. 2026	cohort study	Taurine (serum levels, no administration); median 45 months follow-up; vs. IBD patients vs. healthy controls
¹¹⁸ Beine et al. 2026	review	Taurine supplementation; 1-6 g per day; vs. no comparator arm reported
¹²¹ Chen et al. 2026	review	taurine and glutamine supplementation, partly with exercise regimens
¹³⁹ Jong et al. 2021	review	Taurine supplementation

Taurine, Eye and Retina: Human Studies

A review suggests that taurine as a dietary supplement could alleviate visual fatigue; controlled studies with taurine alone on the eye are still pending ¹⁵. A randomized controlled trial with 43 healthy participants found with a combination product of taurine with vitamin C, vitamin E, zinc, lutein/zeaxanthin, selenium, aronia extract and omega-3 fatty acids more favorable values for retinal artery diameter, erythrocyte velocity in retinal vessels and retinal blood flow ³⁵; since no arm here received taurine alone, the effect cannot be attributed to the taurine. The strength of evidence is low, because no controlled study has tested taurine alone on the eye. It remains open whether taurine alone acts on the eye.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON
¹⁵ Duan et al. 2023	systematic review	Taurine (endogenous sources, diet, supplements)
⁸⁷ Hiller et al. 2025	case-control study · 23 participants	No taurine administration; vitreous metabolite measurement; vs. DR groups versus controls
⁹⁵ Horvath et al. 2016	case series · 2 participants	L-taurine supplementation, oral; vs. Before-after under vigabatrin therapy
¹⁰¹ Ullah et al. 2026	case series	No taurine administration; SLC6A6 variants and plasma taurine assessed; vs. Heterozygous carriers and healthy controls
¹³³ García-Ayuso et al. 2024	review	Taurine (review, no primary study)
¹³⁸ Castelli et al. 2021	review	Taurine (supplementation)

Taurine: Further Outcomes in Studies

Inflammatory markers decreased more strongly than with placebo in two randomized controlled trials ²⁷⁶¹, markers of oxidative stress in two others ³⁸⁴⁶. Total and LDL cholesterol decreased more strongly than in the comparison group in two randomized controlled trials ³²⁶⁹, liver values in two others ²⁴³⁸. For clinical endpoints, several controlled studies found advantages, for example for muscle cramps in chronic liver disease ³⁰, in ventilated children ²⁷ and after liver transplantation ²⁴. These are contrasted by results without difference, for example for anthropometry and body weight ⁴⁸⁵⁹⁶⁹ as well as for several inflammatory and oxidation markers ⁴⁴⁵¹⁷⁶. Combination products with N-acetylcysteine ²⁶²⁸, with caffeine ⁵⁴ or with numerous other substances ⁶⁷ do not allow conclusions about taurine alone.

STUDY	DESIGN · PARTICIPANTS	PREPARATION · DOSE · DURATION · COMPARISON
¹ Wang et al. 2026	systematic review · 1,030 participants	Taurine supplementation; optimal 3,000 mg daily; vs. Control in included trials
⁷ Cao et al. 2018	meta-analysis · 216 participants	Taurine supplementation (form not reported); vs. control without taurine
⁸ Tao et al. 2022	meta-analysis · 209 participants	Taurine supplement; vs. Control group
⁹ Verner et al. 2007	systematic review · 189 participants	Taurine supplementation, mostly enteral with formula milk, one trial parenteral; Neonatal period until 3–4 months chronologic
¹³ Nie et al. 2026	meta-analysis	Oral taurine supplementation; 1.5-3.0 g daily most effective; ≥8 weeks for glucose/lipid metabolism, <8 weeks for blood pressure
¹⁴ Roberts et al. 2025	systematic review	Taurine supplementation; vs. Placebo
¹⁷ Faghfour et al. 2022	meta-analysis	Taurine supplementation; various doses (dose-response analysis); various durations, 56 days more beneficial; vs. Control
¹⁹ Mirjalili et al. 2022	systematic review	Taurine among 22 other compounds; vs. Control without nephroprotective agent, not reported

Further studies in this area: [20](#) [22](#) [23](#) [24](#) [25](#) [26](#) [27](#) [28](#) [29](#) [30](#) [31](#) [32](#) [33](#) [34](#) [36](#) [37](#) [38](#) [39](#) [42](#) [44](#) [46](#) [48](#) [49](#) [50](#) [51](#) [53](#) [54](#) [56](#) [57](#) [59](#) [61](#) [62](#) [63](#) [64](#) [67](#) [69](#) [71](#) [73](#) [74](#) [76](#) [78](#) [80](#) [82](#) [83](#) [84](#) [85](#) [88](#) [89](#) [90](#) [91](#) [92](#) [93](#) [94](#) [96](#) [98](#) [99](#) [101](#) [102](#) [105](#) [106](#) [108](#) [109](#) [110](#) [111](#) [114](#) [115](#) [117](#) [118](#) [120](#) [121](#) [123](#) [126](#) [127](#) [132](#) [134](#) [135](#) [140](#) [141](#) [142](#) [143](#) [144](#)

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

The studies predominantly used oral taurine as a single substance in powder or capsule form, sometimes as an acute single dose, sometimes over several weeks. Individual investigations used combination products with caffeine, vitamins or other substances. The doses and intake durations are shown in the table.

PREPARATION OR FORM	DOSE	DURATION	STUDY
Oral L-taurine plus standard care	1000 mg per day	12 weeks	²³
Oral taurine supplementation vs. placebo	2 g/day	Transplant day to day 30	²⁴
Taurine 1 g versus placebo, plus low-calorie diet	1 g taurine three times per day	eight weeks	²⁵
Nefrosave®: NAC 150 mg + taurine 500 mg	twice daily	180 days	²⁶
taurine or placebo capsules plus standard care	30 mg/kg/day in divided doses	from PICU admission until PICU discharge	²⁷
NT arm: 500 mg taurine + 150 mg NAC; NP arm: 300 mg NAC + 50 mg pyridoxamine	twice daily, 500 mg taurine + 150 mg NAC per intake	6 months, monthly assessment	²⁸
Taurine capsule (1000 mg) vs. placebo (crystalline microcellulose)	1000 mg taurine three times daily	8 weeks	²⁹
Oral taurine supplementation	2 g taurine per day	4 weeks per arm, crossover	³⁰
taurine supplement vs. placebo	3,000 mg/day	8 weeks	³¹

PREPARATION OR FORM	DOSE	DURATION	STUDY
taurine supplementation	3000 mg daily	8 weeks	32
blend of taurine, vitamins B6, B9 and B12	—	four-week supplementation	33
Oral taurine supplementation	3 g/day	12 weeks	34
Dietary supplement containing taurine and other ingredients	—	14 days daily	35
oral taurine supplementation	—	8 weeks	36
oral taurine vs. placebo, double-blind randomized	2 g per day in two doses, 6 h after chemotherapy	6 months	37

5. Is Taurine Safe? Side Effects in Studies

The included studies predominantly report no or only mild side effects, such as gastrointestinal complaints [232350](#). In a randomized controlled trial, mild adverse events occurred in some of the participants [23](#). In mice with a predisposition to lupus, supplemental taurine increased autoantibodies and kidney inflammation; whether this applies to people with lupus is open [111](#).

STUDY	REPORTED SIDE EFFECTS
2 Tzang et al. 2024	No significant adverse effects versus control
3 Tzang et al. 2024	no significant adverse effects versus controls
11 Pedregosa et al. 2026	no serious adverse events in included human studies
12 Waldron et al. 2018	no adverse events reported
14 Roberts et al. 2025	Only pregabalin had significant side effects; no data for taurine
15 Duan et al. 2023	Safety of consumption is reviewed
18 McGurk et al. 2022	no significant safety concerns reported
23 Sasidharan et al. 2026	11.8% with taurine, all mild
26 Bhalla et al. 2026	mild adverse events in five participants in the test arm
30 Vidot et al. 2018	No adverse side effects associated with taurine supplementation
37 Islambulchilar et al. 2015	adverse effects assessed by questionnaire; none specific reported
39 Islambulchilar et al. 2015	side effects assessed by questionnaire, no numbers reported

6. What Remains Open: Limits of the Evidence

- Most studies are small and short; women, older people and long-term endpoints are underrepresented.
- For taurine eye drops, infusion solutions and infant formula, hardly any controlled findings are available.
- Combination preparations with caffeine or other substances do not allow conclusions about taurine alone.
- The optimal dose and intake duration are open for most endpoints.
- For clinical endpoints such as heart failure or cognitive performance, the results are inconsistent.

7. Bottom Line: What Is Established About Taurine

Taurine is a sulfur-containing compound that the body produces itself and takes in through animal foods. Human studies show benefits for blood pressure, vascular function and blood sugar for oral taurine as a single substance; for physical performance they are small and uncertain. The findings come predominantly from small, short studies in young, trained men or in people with metabolic disorders. For healthy adults, null findings predominate in cognitive tests. For taurine eye drops, infusion solutions and infant formula, the data are thin. Combination preparations with caffeine or other substances do not allow any statement about taurine alone.

Frequently Asked Questions

How well has Taurine been studied in humans?

We evaluated 153 human studies on Taurine, including 51 randomised controlled trials and 21 meta-analyses or systematic reviews; the controlled studies include 1,885 participants in total. As of 8 October 2026.

Does Taurine help with physical performance? What the studies show

We evaluated 5 meta-analyses or systematic reviews, 17 controlled studies and 10 further studies; the controlled studies include 277 participants in total. Result of the controlled studies: mixed. Strength of evidence under our published rules: high. Sources: ¹⁵¹⁰¹⁶

Does Taurine help with heart and circulation? What the studies show

We evaluated 3 meta-analyses or systematic reviews, 12 controlled studies and 9 further studies; the controlled studies include 296 participants in total. Result of the controlled studies: mostly improved. Strength of evidence under our published rules: high. Sources: ³¹³¹⁸²⁵

Does Taurine help with blood sugar and metabolism? What the studies show

We evaluated 5 meta-analyses or systematic reviews, 5 controlled studies and 9 further studies; the controlled studies include 251 participants in total. Result of the controlled studies: mostly improved. Strength of evidence under our published rules: high. Sources: ¹²⁸¹³

Does Taurine help with blood pressure? What the studies show

We evaluated 7 meta-analyses or systematic reviews, one controlled study and 3 further studies. Result of the controlled studies: mostly improved. Strength of evidence under our published rules: moderate. Sources: ¹²³⁸

Does Taurine help with nerves and brain? What the studies show

We evaluated 4 meta-analyses or systematic reviews, 5 controlled studies and 21 further studies; the controlled studies include 128 participants in total. Result of the controlled studies: mostly no difference. Strength of evidence under our published rules: low. Sources: ¹⁴⁶⁹

Does Taurine help with aging and longevity? What the studies show

We evaluated one controlled study and 5 further studies; the controlled studies include 24 participants in total. Result of the controlled studies: mostly improved. Strength of evidence under our published rules: low. Sources: ⁴⁷⁸¹⁹⁹¹¹⁸

Does taurine improve athletic performance?

A meta-analysis found small performance benefits after a single taurine dose, with low certainty of evidence ⁵. Other studies found no difference in maximal oxygen uptake or time to exhaustion ¹⁶⁵⁵⁷⁴. The findings come predominantly from small, short studies in young, trained men.

How does taurine affect blood pressure?

Several meta-analyses found lower systolic and diastolic blood pressure with orally ingested taurine, in healthy people as well as in people with metabolic, liver or heart disease ²³¹²¹³²². A randomized controlled trial in type 2 diabetes also found lower systolic blood pressure than with placebo ⁶⁶. A meta-analysis in people with diabetes mellitus, by contrast, found no difference in blood pressure ⁸. The strength of evidence is moderate.

Are there studies on taurine eye drops?

A review suggests that taurine as a dietary supplement could alleviate visual fatigue; controlled studies with taurine alone on the eye are still pending ¹⁵. A randomized controlled trial with a combination product of taurine and other substances found more favorable retinal values, but does not allow conclusions about taurine alone ³⁵. It remains open whether taurine alone acts on the eye.

What side effects are known?

The included studies predominantly report no or only mild side effects, such as gastrointestinal complaints ²³²³⁵⁰. In a randomized controlled trial, mild adverse events occurred in some of the participants ²³. Long-term safety is still insufficiently studied.

Can taurine improve blood sugar?

Several meta-analyses found lower fasting blood sugar with oral taurine, and in people with diabetes also lower long-term blood sugar and less insulin resistance ¹²⁸¹³. In two randomized controlled trials in type 2 diabetes, fasting blood sugar, insulin and insulin resistance decreased more than with placebo ³¹³². A third study found a benefit only for insulin and insulin resistance, not for blood sugar ²⁵. The findings come predominantly from powder or capsule administration in patients with metabolic disorders.

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