

Supplementary methods. Literature search strategy that was used for the narrative review.

Search strategy

With respect to the human pharmacokinetic and clinical data of this review, we searched text words and Medical Subject Heading (MeSH) terms in PubMed between April and June 2023. The final comprehensive search was performed 27.06.2023. The reference lists of relevant original articles and review articles were hand-searched for further relevant publications.

Search terms

Pubmed

((nephritis OR nephropathy OR "kidney injury" OR "kidney" OR "renal dysfunction" OR dialysis OR „renal dialysis“ OR hemodialysis OR haemodialysis OR "renal replacement therapy" OR „kidney replacement therapy“ OR CAPD OR APD OR CCPD OR "renal insufficiency" OR „kidney insufficiency“ OR uremia OR uraemia OR uremic OR CKD OR CKF OR CRD OR CRF OR „kidney disease“ OR „kidney diseases“ OR „kidney failure“ OR „renal failure“ OR „chronic renal insufficiency“ OR „chronic kidney insufficiency“ OR ESRD OR ESKD OR ESRF OR ESKF OR „end stage kidney disease“ OR „end-stage kidney disease“ OR „end stage renal disease“ OR „end-stage renal disease“ OR „chronic kidney failure“ OR „chronic renal failure“ OR „end stage kidney failure“ OR „end-stage kidney failure“ OR „end stage renal failure“ OR „end-stage renal failure“ OR „chronic kidney disease“)) AND ("acetylcysteine" OR acetylcysteine[MeSH Terms] OR "Acetadote" OR "Fluimucil" OR "Mucomyst" OR "N-acetylcysteine" OR "N-acetyl-L-cysteine" OR "NALC" OR "NAC")) NOT (animals[MH] NOT humans[MH])

Eligibility criteria

Studies were included if they had investigated NAC in any kind of kidney disease or kidney disease-related pathology in humans. There was neither a language restriction nor an age limit for publication date for included studies. There were 1918 entries in Pubmed that were screened for eligibility.

Search strategy for NAC – effects in cellular and animal models of kidney disease

A search was conducted in the PubMed database for articles published from January 20, 2005, to January 30, 2023. The filter was carried out with the keywords "N-acetylcysteine AND chronic kidney damage," with which 35 items were retrieved. The search was followed by a meticulous selection of studies, where only original articles that met the search criteria were included: "models of chronic kidney damage in vivo models" and "models of kidney damage in kidney cells." In addition, only articles that were in the English language were considered. It was decided to exclude articles that did not fall into these categories, including studies in which the evaluations were carried out in organs other than the kidney. Once the relevant publications were located, data extraction from 24 articles was performed.