



January 2019 - December 2022

Three institutional patient databases

Hospital electronic medical records

Search strategy
Keyword: 'Ashwagandha'

Total hits: 23 patients

EXCLUDED

N=6
Active alcohol use

N=3
Co-medication: NSAID

N=2
Reactivation of HBV

N=4
Co-medication: multiherbal

FINAL INCLUSION

N=8
Acute liver injury due to Ashwagandha alone

Clinical features

Investigations

Liver histology

Retrieved formulations analyses

Clinical outcome

ASHWAGANDHA & LIVER TOXICITY

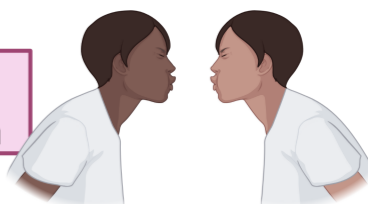
Sleep disorders
Insomnia



Exercise tolerance
Muscle growth
Aerobic capacity



Fatigue
Sexual health



Testosterone booster
Immunity-booster

Anxiety
Stress disorder



PROMOTED INDICATIONS

LEVEL OF EVIDENCE

LEVEL I: At least one large RCT, low potential for bias or meta-analysis of well conducted-RCTs without heterogeneity

LEVEL II: Small RCT or large RCT with low methodological quality, high potential for bias or meta-analyses of such with heterogeneity

LEVEL III: Prospective cohort studies

LEVEL IV: Retrospective cohort studies or case control studies

LEVEL V: Studies without controls, case reports or expert opinions

LEVEL II

LEVEL II

LEVEL IV

LEVEL V

LEVEL V

PUBLISHED REPORTS ON LIVER TOXICITY

14 reports
2016 - 2023

Country



Iceland x 3
USA x 2
Japan x 1
Germany x 1
Poland x 1

Patients



Gender: Predominantly males
Common indication: Stress, anxiety
Formulation: Commercial product
Used: Mostly single ingredient
Advised by: Mostly self prescribed, OTC
Duration: 14 days to 365 days

Presentation & Outcomes



Acute hepatitis with cholestasis most common
Peak jaundice and pruritus weeks after stopping herb
Almost always self limiting
Time to recovery: 20 days to 150 days
UDCA initiation helped with symptom control
No chronic herb-induced liver injury
Very rarely, acute liver failure (one case)

CURRENT STUDY

8 patients

Patients

Gender: Predominantly males
Common indication: Stress, anxiety
Formulation: Supplements, food products
Used: Only single ingredient used
Advised by: Ayurveda practitioner
Duration: 14 days to 540 days

Unique Findings

Acute hepatitis with cholestasis most common
Self limiting in those without CLD
Presentation with ACLF
High rate of death in those with CLD
One case of chronic HILI with autoimmune features
Time to recovery: 45 days to 95 days