

Aesculus hippocastanum- clinical Trials Compiled by: ©Mimi Hernandez for European Scientific Cooperative on Phytotherapy (**ESCO**P), 2005

Thermometric investigations about the efficacy of beta-escin to reduce postoperative edema	Intravenous administration of escin produced fast reduction in postoperative inflammation and oedema in a placebo-controlled trial in hand surgery patients. [Mills & Bone]	Wilhelm K
An Open Study to Assess the Safety and Efficacy of <i>Aesculus hippocastanum</i> Tablets (Aesculaforce® 50mg) in the Treatment of Chronic Venous Insufficiency	An open study finds two 50 mg Aesculaforce tablets effective for reducing the symptoms of stage I and II chronic venous insufficiency demonstrating a decrease of lower leg circumference.	Dickson S
Treatment of benign intracranial hypertension	Of 11 patients with pseudotumour cerebri injected intravenously with escin, seven saw a normalizing hypotensive effect. Thereafter, 20-30 days of oral escin therapy led to fundus normalization and complete remission. Authors hypothesize that escin acts as a membrane stabilizer, improving the blood brain barrier function.	Mingrino S
Beta-aescin in the treatment of chronic venous insufficiency	Capillary filtration decreased on average to 66% of the original value after three weeks of beta aescin administration. Beta aescin treatment seemed to be more effective in the resolution of clinical symptoms in those patients with primary venous insufficiency rather than secondary venous insufficiency associated with thrombosis of the deep venous system.	Gerova Z
Effect of horse chestnut extracts on venous tone	In a double blind, placebo controlled trial on 20 healthy volunteers, 100 mg of horsechestnut extract containing 16 or 70% escin demonstrated similar venotonic activity on peripheral venous pressure volume curves as placebo. The lack of a positive effect may be due to inadequate dosage.	Lochs H
The prevention and treatment of post-operative and post-traumatic oedema. Chemical laboratory tests on the renal tolerance of beta-aescin (reparil)	Intravenous administration of beta-aescin (Reparil) of 10mg twice a day for 6 days in postoperative patients showed no adverse effects related to renal function.	Wilhelm K
Efficacy of Aescin on the Capillary Fragility in Men	Compared to placebo, escin administered orally resulted in remarkably lower petachiae values (a measure of capillary resistance) after only seven days and a carry over effect was observed.	Wienert, V
Advances in the conservative treatment of acute traumatic cerebral edema. Controlled clinical trial with follow-up examination	Escin by injection reduced the dangerous rise in intracranial pressure when given to treat road accident victims with severe head injury. [Mills & Bone]	Put TR

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Treatment of upper limb lymphedema after mastectomy with escine and levo-thyroxine	A topical preparation of escin was used in combination with l-thyroxine for the treatment of lymphoedema after mastectomy with satisfactory results.	Dini D
Three treatments for chronic venous insufficiency: escin, hydroxyethylrutoside, and Daflon.	A review of treatments for chronic venous insufficiency highlights escin's activity of inhibiting hyaluronidase and possible role in increasing venous tone.	Frick RW.
Report of the results of a double-blind, randomized, single-dose trial of a topical 2% escin gel versus placebo in the acute treatment of experimentally-induced hematoma in volunteers.	Topically applied 2% escin gel was compared to a placebo in experimentally induced haematoma in a randomized, double blind trial. Efficacy was measured over 9 hours after a single application of gel. The escin gel significantly reduced tenderness to pressure within 1 hour and then at all other times during the trial.	Calabrese C
Medical edema protection--clinical benefit in patients with chronic deep vein incompetence. A placebo controlled double blind study	In a double blind, placebo controlled trial, 40 patients with leg oedema caused by deep venous incompetence received either standardized horsechestnut extract or placebo over 7 weeks. Significant reduction in average leg volume was observed for the treated group compared to placebo, both before and after an oedema provocation test ($p < 0.01$). Leg pressure at rest was decreased (indicating better venous tone) and pronounced alleviation of symptoms occurred in the treated group. [Mills & Bone]	Diehm C
Effects of horse-chestnut seed extract on transcapillary filtration in chronic venous insufficiency	The efficacy of standardized horsechestnut extract was investigated in a randomized, double blind, placebo-controlled trial on 22 patients with proven chronic venous insufficiency. Three hours after taking 600mg of horsechestnut extract (containing 100mg escin), a significant decrease in the capillary filtration coefficient (22%) was observed in the treated group. [Mills & Bone]	Bisler H
Comparison of leg compression stocking and oral horse-chestnut seed extract therapy in patients with chronic venous insufficiency.	240 patients with chronic venous insufficiency took part in a comparison of the efficacy of compression stockings classII and standardized horsechestnut extract (600mg a day containing 100mg escin) over 12 weeks. Lower leg volume decreased by a similar amount for both horsechestnut and compression therapy compared to placebo. A significant reduction in oedema was observed for horsechestnut and compression compared to placebo and the two therapies were shown to be equivalent. Compression achieved high oedema reductions at the beginning of the study, while horsechestnut gradually decreased oedema volume reaching a maximum by the end of the trial. Compliance was better for the herbal therapy. [Mills & Bone]	Diehm C
Horse chestnut:a multidisciplinary clinical review.	This clinical review identifies, evaluates, and presents 14 randomized controlled clinical trials on horse chestnut seed extract's treatment of chronic venous	Ulbricht C

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	insufficiency.	
Aescin: pharmacology, pharmacokinetics and therapeutic profile.	Many clinical trials highlighted in this review point towards Horse chestnut's therapeutic benefits for chronic venous insufficiency, hemorrhoids, and post-operative oedema.	Sirtori CR
Horse chestnut seed extract--an effective therapy principle in general practice. Drug therapy of chronic venous insufficiency	Over 5000 patients with chronic venous insufficiency were treated with a standardized horsechestnut extract. A marked improvement or complete alleviation was seen in all of the symptoms- pain, tiredness, tension, leg swelling, itching, and tendency to oedema.	Greeske K
Bioavailability of beta-aescin from horse chestnut seed extract: comparative clinical studies of two Galenic formulations.	2 Randomized crossover clinical trials demonstrate no significant difference in the bioavailabilty of beta-aescin between a nonretarded test medication and a retarded reference formulation. Absorption rates were diminished during the night compared with daytime rates for both formulations.	Bassler D
Rational therapy of chronic venous insufficiency--chances and limits of the therapeutic use of horse-chestnut seeds extract.	A review of two clinical trials, study #1 in which horse chestnut seed extract was given to patients with early chronic venous insufficiency, and study #2 where it was given to patients with advanced chronic venous insufficiency hypothesizes that the reason why study 2 could not prove the equivalence of horse chestnut seed extract and compression therapy was due to this difference in study populations. The author's interpretation is that the endothelium and the small vessels are more involved in early stages as opposed to the valves' and large vessels' involvement in more advanced stages.	Ottillinger B
Efficacy, routine effectiveness, and safety of horsechestnut seed extract in the treatment of chronic venous insufficiency. A meta-analysis of randomized controlled trials and large observational studies.	Meta-analysis of 13 randomized controlled trials and 3 observational studies on the efficacy of horse chestnut seed extract(HCSE) shows that HCSE reduced leg volume when compared to a placebo and increased the likelihood of leg pain improvement. Improvement was also seen in edema and in itching. The randomized controlled trial evidence was insufficient to demonstrate HCSE's effectiveness on leg fatigue, heaviness, and calf cramps. Observational studies did show a significant effectiveness dealing with pain, edema, and leg fatigue and heaviness.	Siebert U
Horse-chestnut seed extract for chronic venous insufficiency. A criteria-based systematic review.	A criteria based systematic review of double-blind randomized controlled trials of oral Horse chestnut seed extract for patients with chronic venous insufficiency points to data demonstrating horse chestnut seed extract's superiority over placebo and equality to reference medications in alleviating the subjective and objective symptoms of chronic venous insufficiency.	Pittler MH

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<p>Comparative study of Venostasin and Pycnogenol in chronic venous insufficiency.</p>	<p>An open, controlled comparative study results in Pycnogenol being more significantly effective than Venostasin (horse chestnut seed extract) in decreasing lower limb circumference, improving subjective symptoms of Chronic venous insufficiency, and decreasing LDL values in the blood over a 4 week period. Venostasin only moderately but not significantly reduced the circumference of the lower limbs. The duration of the disease in the majority of the patients in this study was over one year.</p>	<p>Koch R</p>
<p>Comparative clinical efficacy and tolerability of oxerutins and horse chestnut extract in patients with chronic venous insufficiency.</p>	<p>In a double-blind, randomized trial with 137 female, postmenopausal patients with chronic venous insufficiency, Horse chestnut extract was shown to be as effective in reducing leg edema and symptoms as oxerutins.</p>	<p>Rehn D</p>
<p>Comparison of the bioavailability of beta-aescin after single oral administration of two different drug formulations containing an extract of horse-chestnut seeds.</p>	<p>Escin is not well absorbed orally and undergoes a first pass effect with a half life of 10-20 hours.</p>	<p>Schrader E</p>
<p>Hemorrhoids and varicose veins: a review of treatment options</p>	<p>This study reviews the treatment options for hemorrhoids and varicose veins citing Horse chestnut's venotonic, vascular protective, anti-inflammatory, and free radical scavenging evidence. Also suggested as possible treatments are <i>Ruscus aculeatus</i>, <i>Centella asiatica</i>, <i>Hamamelis virginiana</i>, and bioflavonoids.</p>	<p>MacKay D</p>
<p>A prospective study on the occurrence of postoperative thrombosis of leg-veins and the possible influence of aescin in its prevention</p>	<p>Aescin (Reparil) was deemed more effective than placebo in preventing postoperative thrombosis.</p>	<p>Prexl HJ</p>
<p>Early detection of postoperative deep-vein thrombosis in gynaecological patients by the 125I-Fibrinogen test</p>	<p>The early use of Horse chestnut seed extract is recommended as a preventative agent against postoperative thrombosis in women following gynaecological surgical procedures.</p>	<p>Endl J</p>
<p>Thermometric investigations about the efficacy of beta-escin to reduce postoperative edema</p>	<p>Intravenous administration of escin produced fast reduction in postoperative inflammation and oedema in a placebo-controlled trial in hand surgery patients. [Mills & Bone]</p>	<p>Wilhelm K</p>
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