

NKR - 02 for Udredning og behandling af diabetiske fodsår

Review information

Authors

Sundhedsstyrelsen¹¹[Empty affiliation]

Citation example: S. NKR - 02 for Udredning og behandling af diabetiske fodsår. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

Characteristics of studies

Characteristics of included studies

Armstrong 2001

Methods	Study design: Study grouping:
Participants	<p>Baseline Characteristics</p> <p>Intervention 1 (RCW)</p> <ul style="list-style-type: none"> ● Female, N (%): 2 ● Distal blood pressure (mmHg), mean (SD): 62.0 (16.3) ● Wound area (cm²), mean (SD): 1.4 (1.4) ● Peripheral neuropathy, N (%): 100% <p>Intervention 2 (Half-Shoe)</p> <ul style="list-style-type: none"> ● Female, N (%): 4 ● Distal blood pressure (mmHg), mean (SD): 58.6 (10.4) ● Wound area (cm²), mean (SD): 1.3 (1.2) ● Peripheral neuropathy, N (%): 100% <p>Kontrol 1 (TCC)</p> <ul style="list-style-type: none"> ● Female, N (%): 5 ● Distal blood pressure (mmHg), mean (SD): 60.7 (9.0) ● Wound area (cm²), mean (SD): 1.3 (0.8) ● Peripheral neuropathy, N (%): 100% <p>Included criteria: The diag-nosis of diabetes had been made before enrollment and was confirmed either by communication with primary care providers or by reviewing medical records. All patients had clinically significant loss of protective sensation (.25 V) as measured with a biothesiometer (BiomedicalInstrument, Newbury, OH) (18,19), at least one palpable foot pulse or a transcutaneous oximetry (TcPO₂) measurement higher than 40 mmHg at the level of the dorsum of the forefoot, and a neuropathic plantar diabetic foot ulcer corresponding to grade 1A (superficial, not extending totendon, capsule, or bone using the University of Texas Diabetic Foot Wound Classification System) (20). Neuropathy was defined as the inability to sense the 10-g Semmes-Weinstein monofilament and a vibration perception threshold.25 V (18,19,21). If patients had more than one plantar wound, the largest wound was used as the index ulcerfor inclusion in this study.</p> <p>Excluded criteria: Patients who had ac-tive infection, were unable to walk with-out wheelchair assistance, had wounds in locations on the heel, rear foot, or area other than the plantar aspect of the foot,or had severe peripheral vascular disease (diagnosed by the criteria listed above) were excluded from the study.</p>
Interventions	<p>Intervention Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Description: RCWs and half-shoes were applied using the directions dispensed with the original packaging. All patients were in-structed to use the devices at all times during ambulation ● Duration: 12 w ● Dose: All patients were followed on a weekly basis for device inspection,wound care, and wound debridement. <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Description: TCCs were applied using amodification of the technique described by Kominsky (22). The modification to this technique included the use of a castboot in lieu of the rubber cast walker and plywood platform. TCCs were changed on a weekly basis or as clinically necessary. ● Duration: 12 w ● Dose: All patients were followed on a weekly basis for device inspection, wound care, and wound debridement.
Outcomes	<p><i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported ● Direction: Lower is better ● Data value: Længste follow-up <p><i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <p><i>Sårhelning (total sårlukning (ja/nej)), efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (12 weeks) <p><i>Sårareal, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <p><i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported ● Direction: Lower is better

	<ul style="list-style-type: none"> ● Data value: Endpoint <p><i>Tryksår, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (12 weeks) <p><i>Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported ● Direction: Higher is better ● Data value: Endpoint <p><i>Venetrombose, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported ● Direction: Lower is better ● Data value: Endpoint <p><i>Recidiv af sår, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported ● Direction: Lower is better ● Data value: Længste follow-up <p><i>Frafald, alle årsager, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint
Identification	<p>Sponsorship source: This study was funded by the U.S. Department of Veterans Affairs' Rehabilitation R&D Merit Award Grant A2150RC and the Aircast Research Foundation.</p> <p>Country: USA</p> <p>Setting: 63 patients with superficial noninfected, nonischemic diabetic plantar foot ulcers were randomized to one of three off-loading modalities: TCC, half-shoe, or RCW</p> <p>Authors name: David G. Armstrong</p> <p>Institution: Department of Surgery, Southern Arizona Veterans Affairs Medical Center</p> <p>Email: armstrong@usa.net</p> <p>Address: Department of Surgery, Southern Arizona Veterans Affairs Medical Center, 3601 South Sixth Ave., Tucson, AZ 85723.</p>
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "are listed in Table 1. No significant differences were observed in any of the characteristics evaluated, including age, sex, duration of diabetes, size or location of wounds, or duration of plantar wounds. With the numbers available," Quote: "Patients were randomized through a computerized randomization schedule. Randomization was performed after the initial screening."
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: Not feasible to blind however, no information about blinding of participants.
Blinding of outcome assessment (detection bias)	Unclear risk	Judgement Comment: No information however, only objectively measured outcomes of interest.
Incomplete outcome data (attrition bias)	Unclear risk	Quote: "Of an initial enrollment pool of 75 patients, 12 failed to complete the course of study. Reasons for this included discomfort (four TCC, three RCW), instability (one half-shoe), or failure to return for follow-up appointments and data-collection visits (two TCC, two RCW)." Judgement Comment: Low attrition rate however, not balanced drop outs (n=6 TCC and 1 from half-shoe group). Per protocol analysis.
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol available. Limited reporting of relevant outcomes.
Other bias	Low risk	Quote: "This study was funded by the U.S. Department of Veterans Affairs' Rehabilitation R&D Merit Award Grant A2150RC and the Aircast Research Foundation." Judgement Comment: No description of the roles of the funding parties. Likely limited to funding.

Armstrong 2005

Methods	<p>Study design: Randomized controlled trial</p> <p>Study grouping: Parallel group</p>
Participants	<p>Baseline Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Age, mean (SD): 64.6 (9.8) ● Female, N (%): 3 (88.9) ● BMI, mean (SD): 33.5 (6.2) ● HBA1C, mean (SD): 8.0 (1.4) ● Wound area (cm²), mean (SD): 2.0 (1.1) ● Peripheral neuropathy, N (%): 27 <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Age, mean (SD): 66.9 (10.1)

	<ul style="list-style-type: none"> ● Female, N (%): 3 (87) ● BMI, mean (SD): 33.3 (6.8) ● HBA1C, mean (SD): 8.5 (1.5) ● Wound area (cm2), mean (SD): 2.7 (1.3) ● Peripheral neuropathy, N (%): 23 <p>Overall</p> <ul style="list-style-type: none"> ● Age, mean (SD): 65.6 (9.9) ● BMI, mean (SD): 33.4 (6.4) ● HBA1C, mean (SD): 8.2 (1.4) ● Wound area (cm2), mean (SD): 2.3 (1.2) ● Peripheral neuropathy, N (%): 50 <p>Included criteria: All patients had experienced the loss of protective sensation (25 V) as measured with a vibration perception threshold meter (Xilas, SanAntonio, TX) (12,13), at least one palpable foot pulse, and a neuropathic plantar diabetic foot ulcer corresponding to grade 1A (superficial, not extending to tendon,capsule, or bone, according to the Univer-sity of Texas Diabetic Foot Wound Classification System) (14,15). Wound size was evaluated by measuring the maximum length by the maximum width. If patients had more than one plantar wound, the largest wound was used as the index ulcer for inclusion in this study.</p> <p>Excluded criteria: Patients with active infection; unable towalk without a wheelchair; with wounds in locations on the heel, rearfoot, or a location other than the plantar aspect of thefoot; or with severe peripheral vascular disease (diagnosed by the criteria listed above based on the absence of both footpulses on the affected extremity) were excluded.</p> <p>Pretreatment: wound size was nearly greater in the iTCC group (2.71.3 vs.2.01.1 cm2,P0.07)</p>
<p>Interventions</p>	<p>Intervention Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Description: an RCW (Ac-tive Offloading Walker; Royce Medical,Camarillo, CA) ● Duration: 12 w ● Dose: followed on weekly basis <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Description: an RCW (Ac-tive Offloading Walker; Royce Medical,Camarillo, CA) or the same devicewrapped entirely in a cohesive bandage(iTCC). ● Duration: 12 w ● Dose: followed on weekly basis
<p>Outcomes</p>	<p><i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <p><i>Sårheling (total sårlukning (ja/nej)), efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (12 weeks) <p><i>Sårareal, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <p><i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported ● Direction: Lower is better ● Data value: Endpoint <p><i>Tryksår, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (12 weeks) <p><i>Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <p><i>Venetrombose, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Recidiv af sår, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Frafald, alle årsager, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported
<p>Identification</p>	<p>Sponsorship source: This work was sup-ported by U.S. Department of Veterans Affairs,Health Services Research and DevelopmentAward IIR 20-059 and the Rehabilitation Re-search and Development Merit AwardA2150RC.</p> <p>Country: USA</p> <p>Setting: randomly assigned 50 patients withUniversity of Texas grade 1A diabetic foot ulcerations into one of two off-loading treatmentgroups: an RCW or the same RCW wrapped with a cohesive bandage (iTCC)</p> <p>Authors name: DAVID G. ARMSTRONG</p> <p>Institution: Center for Lower Extremity Ambulatory Research, the Dr. William M. Scholl College of PodiatricMedicine at Rosalind Franklin University of Medicine, Chicago, Illinois</p> <p>Email: E-mail: armstrong@usa.net</p> <p>Address: Scholl College of Podiatric Medicine at Rosalind Franklin University of Medicine and Science, 3333 GreenBay Rd., North</p>

	Chicago, IL 60064
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Patients were randomly assigned through a computerized randomization schedule. Randomization was performed after the initial screening."
Allocation concealment (selection bias)	Low risk	Quote: "Randomization was performed after the initial screening, with allocation provided to the treating clinician by a single study coordinator via telephone."
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No blinding
Blinding of outcome assessment (detection bias)	Unclear risk	Judgement Comment: No information about blinding. Outcomes of interest are objectively measured.
Incomplete outcome data (attrition bias)	Low risk	Quote: "Of an initial enrollment pool of 50 patients, 4 failed to complete the course of study. Reasons for this included discomfort/ weight of the device (one RCW, one iTCC) or failure to return for follow-up appointments or data collection visits (two RCW). These patients were considered treatment failures (nonhealers) for the purpose of the intent-to-treat analysis."
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol.
Other bias	Low risk	Judgement Comment: No reasons to suspect other sources of bias.

Caravaggi 2000

Methods	<p>Study design: Randomized controlled trial</p> <p>Study grouping: Parallel group</p>
Participants	<p>Baseline Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Age, mean (SD): 59.2 (9.9) ● Female, N (%): 8 ● BMI, mean (SD): 27.3 (2.5) ● Current smoker, N (%): 10 ● Distal blood pressure (mmHg), mean (SD): 1.03 (0.8) ● Wound area (cm²), mean (SD): 431.7 ● Peripheral neuropathy, N (%): 25 <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Age, mean (SD): 60.5 (10.7) ● Female, N (%): 8 ● BMI, mean (SD): 27 (1.6) ● Current smoker, N (%): 5 ● Distal blood pressure (mmHg), mean (SD): 1.00 (0.7) ● Wound area (cm²), mean (SD): 587.3 ● Peripheral neuropathy, N (%): 25 <p>Included criteria: diabetic patients with neuropathic plantar ulcers. All the subjects were insensitive to Semmes-Weinstein 5.07 monofilament and had a vibration perception threshold of 25 V, measured on the malleolus with a biothesiometer (Neurothesiometer; S.L.S., Nottingham, U.K.).</p> <p>Excluded criteria: The exclusion criteria were the clinical presence of deep or superficial tissue infection or underlying osteomyelitis (bone exposure or X-ray of the foot), transcutaneous PO₂ (30 mmHg and/or ankle-brachial index [ABI] of 0.6), severe problems in maintaining equilibrium, severe visual deficit, skin lesions of the foot (other than the ulcer under study) or leg, amputation of a limb, or plantar bilateral ulcerations.</p>
Interventions	<p>Intervention Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Description: In this study, we used a cloth therapeutic shoe with a rocker-bottom sole and a rolling point that is situated beside the metatarsal arch during walking. The shoe is predisposed (extra depth) for lodging an 8-mm-thick cushioned elastic insole made of plastazote (alkaform) on which an area of unloading is prepared in the area of the plantar ulcer. The unloading area must be 5–8 mm larger than the perimeter of the ulcer. The shoe is opened dorsally with velcro straps that permit the dressing to stay in place (Fig. 3). All patients used the same type of shoe, with a plantar insole but no area of unloading, for the unaffected foot. ● Duration: 30 days ● Dose: change every 2. day <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Description: Two types of fiberglass bandages were used for the construction of the pressure-relief apparatus. The first type of bandage (Softcast 3M; 3M Health Care, St. Paul, MN) was composed of fiberglass imbued with polyurethane resin with characteristics of flexibility and resistance. The other bandage (Scotchcast 3M; 3M Health Care) was composed of fiberglass imbued with polyurethane resin of two different concentrations that confers high resistance to loading. Before using both types of bandages, a tubular stocking was placed onto the lower limb, which was first covered with Germacotton to protect the skin adequately, especially on bony protrusions. To further protect bony protrusions, such as the malleolus and tibial crest, some pieces of protective rubber foam (Microfoam 3M; 3M Health Care) were also applied. The plaster bandages were applied so that the boot conformed to the shape of the leg as much as possible. The first two layers were applied using the Softcast bandage. The structure was then reinforced with a stick made with a Scotchcast bandage placed in the middle of the two malleoli, extending beyond them for at least 20 cm, giving rigidity to the cast. The same material was used to build a rigid plantar sole. The number of layers applied to construct the sole depended on the weight of the patient (range 3–8 layers). The final structure was reinforced with more Softcast bandages. An aluminum stirrup or rubber heel was anchored to the structure as a support to allow walking (Fig. 1). The side supports were secured with an outer layer of Softcast. The choice of using the stirrup or the rubber heel as a support for walking depends on the position of the ulcer. The stirrup is used if the ulcer is localized in the midfoot region. This support leaves the entire plantar surface of the boot free from pressure and permits the construction of an opening precisely in the ulcerated region. Therefore, examination and changes of dressing to the ulcer can be performed as frequently as needed. A rubber heel is used when lesions are located on the forefoot, the plantar surface of the toes, or the heel because it allows an open window directly above the ulcer (Fig. 2). The rubber heel is positioned in the center of the plantar surface to allow comfortable walking. In all subjects, the sole of the unaffected foot's shoe was elevated to ease walking.

	<ul style="list-style-type: none"> ● Duration: 30 days
Outcomes	<p><i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported ● Direction: Lower is better ● Data value: Længste follow-up <p><i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Fully reported ● Direction: Higher is better ● Data value: End point (30 days.) ● Scale: Subject satisfaction (VAS 0-100). <p><i>Sårhelning (total sårlukning (ja/nej)), efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (30 days weeks) <p><i>Sårareal, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <p><i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (30 days) <p><i>Tryksår, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (30 days) <p><i>Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <p><i>Venetrombose, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Recidiv af sår, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Frafald, alle årsager, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (30 days)
Identification	<p>Sponsorship source: no funding</p> <p>Country: Italy</p> <p>Setting: Fifty diabetic patients with neuropathic/plantar ulcers were consecutively enrolled and randomized to one of two treatment groups. Of the 50 patients, 24 were treated with a specialized cloth shoe with a rigid sole and an unload-ing alkaform insole (shoe group), and 26 patients were treated with a nonremovable off-bear-ing fiberglass cast (cast group)</p> <p>Authors name: Carlo Caravaggi,</p> <p>Institution: the Center for the Study and Treatment of Diabetic Foot Pathology, Ospedale di Abbiategrasso (C.C.,R.D.G., E.S., C.P.); Internal Medicine Unit (E.F., M.M., A.Q., M.G.), Policlinico Multimedita, Sesto S. Gio-vanni (Milan); and the Institute of Medical Stat</p> <p>Email: cara@mail3.telnetwork.it</p> <p>Address: Centro per la Cura e lo Studio delPiede Diabetico, Pz Mussi 1, Abbiategrasso (Milano) 20080, Italy.</p>
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "The randomization required that a patient was assigned to the shoe or cast group by calling the Biometrics Institute, University of Milan, Milan, Italy, where a table of ran- dom numbers was consulted." Quote: "No noteworthy differences were found between the two groups with respect to clinical characteristics (Table 1). There was no statistical difference in ulcer area at enrollment between the two study groups (431.7 [391.7 mm 2] in the shoe group and 587.3 [587.7 mm 2] in the cast group, P = 0.415)."
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: concealed by a phone call of the patients to an office in italy with a random table of numbers for allocation
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information and blinding not feasible.
Blinding of outcome assessment (detection bias)	High risk	Judgement Comment: No information about blinding. Outcomes of interest are objectively measured except patient acceptance.
Incomplete outcome data (attrition bias)	Low risk	Judgement Comment: Likely no attrition

Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol.
Other bias	Low risk	Judgement Comment: No reasons to suspect other sources of bias.

Caravaggi 2007

Methods	Study design: Randomized controlled trial Study grouping: Parallel group
Participants	Baseline Characteristics Intervention 1 <ul style="list-style-type: none"> ● <i>Peripheral neuropathy, N (%)</i>: 29 Kontrol 1 <ul style="list-style-type: none"> ● <i>Peripheral neuropathy, N (%)</i>: 29 Included criteria: All participants had peripheral neuropathy, as highlighted by insensitivity to 10 g monofilament and vibration perception threshold measured by biothesiometer at malleolus of at least 25 volts, and presented with a neuropathic ulcer on the whole part of the plantar surface of the foot, including ulcers correlated with Charcot neuroarthropathy deformities Excluded criteria: We excluded patients with superficial tissue infection, osteomyelitis, TcPO ₂ (transcutaneous PO ₂) < 30 mmHg, ankle brachial index < 0.6, severe visual deficit, severe problems of equilibrium, amputation of the contralateral limb, and bilateral plantar ulcers.
Interventions	Intervention Characteristics Intervention 1 <ul style="list-style-type: none"> ● Description: The Aircast Pneumatic Walker (XP Diabetic Walker) is an off-loading device. Its key elements include a semi-rigid plastic shell surrounding the limb, a removable front panel allowing easy access to the injured site, four individual internal air cells inflated with manometer at 20–30 mmHg to hold the limb, a specifically designed rocker sole for improved off-loading, and a dual-density insole. A hole was made on the insole at the ulcer site in order to off-load the ulcer ● Duration: 90 days Kontrol 1 <ul style="list-style-type: none"> ● Description: Fiberglass off-loading cast. In previous literature, we describe two types of fiberglass bandages of different rigidity that were used in the construction of a pressure-relief device (7). Before using both types of bandages, a tubular stockinet was placed onto the lower limb, which was first covered with German cotton to adequately protect the skin, especially bony protrusions. A walking stirrup was used for support when the ulcer was localized in the midfoot region, whereas a rubber heel was used when lesions were located on the forefoot, the plantar surface of the toes, or the heel. ● Duration: 90 days
Outcomes	<i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <i>Sårheling (total sårlukning (ja/nej)), efter endt behandling</i> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (90 days) <i>Sårareal, efter endt behandling</i> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (90 days) <i>Tryksår, i interventionsperioden</i> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <i>Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence</i> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Higher is better ● Data value: Endpoint (90 days) <i>Venetrombose, i interventionsperioden</i> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <i>Recidiv af sår, længste follow-up (op til 1 år)</i> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <i>Frafald, alle årsager, efter endt behandling</i> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (90 days)
Identification	Sponsorship source: no funding Country: Italy Setting: 60 consecutive diabetic patients with neuropathic plantar ulcers were seen and randomly assigned to two groups: group A, using an Aircast Pneumatic Walker (XP Diabetic Walker); and group B, using the fiberglass off-loading cast

	Authors name: CARLO CARAVAGGI Institution: Department of Diabetic Foot Pathology, Ospedale di Abbiategrasso, Milan, Italy Email: carlo.caravaggi@fastwebnet.it. Address: Ospedale di Abbiategrasso, DiabeticFoot Pathology, Pz Mussi 1, Abbiategrasso (Milano) 20080, Italy.
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	<p>Quote: "No statistical difference was seen between groups in the positioning of the ulcer on the plantar surface of the foot."</p> <p>Quote: "and bilat- eral plantar ulcers. Clinical characteristics (age, sex, type of diabetes, and duration of diabetes) of both groups were compara- ble. The mean area of the ulcer was 3.4 3.0 cm 2 in group A and 3.9 3.4 cm 2 in group B (NS). No statistical difference was seen"</p> <p>Quote: "January 2005 and October 2005, 60 consecutive dia- betic patients with neuropathic plantar ulcers were seen and randomly assigned to two groups: group A, using an Aircast Pneumatic"</p> <p>Judgement Comment: Unclear sequence generation</p>
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information about blinding, likely unblinded.
Blinding of outcome assessment (detection bias)	Unclear risk	Judgement Comment: No information about blinding however all outcomes of interest are objectively measured.
Incomplete outcome data (attrition bias)	Low risk	Quote: "One patient from each group was ex- cluded due to noncompliance."
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol available.
Other bias	Low risk	Judgement Comment: No reasons to suspect other sources of bias.

Chakraborty 2015

Methods	Study design: Randomized controlled trial Study grouping: Parallel group
Participants	Baseline Characteristics Intervention 1 <ul style="list-style-type: none"> ● <i>Age, mean (SD):</i> 53 (13.19) ● <i>BMI, mean (SD):</i> 23.51 (4.18) ● <i>HBA1C, mean (SD):</i> 8.09 (1.16) ● <i>Wound area (cm2), mean (SD):</i> 7.85 (3.70) Kontrol 1 <ul style="list-style-type: none"> ● <i>Age, mean (SD):</i> 51.40 (12.84) ● <i>BMI, mean (SD):</i> 22.7 (4.34) ● <i>HBA1C, mean (SD):</i> 8.21 (1.08) ● <i>Wound area (cm2), mean (SD):</i> 10.02 (4.58) Included criteria: To be eligible for the study, participants should be ambulatory, have solitary neuropathic plantar ulcer grade 1A or 2A using the University of Texas scale, and unilateral foot involvement. The grade was based on clinical examina- tion and evaluation of a plain digital radiograph Excluded criteria: Patients unable to walk indoors, with significant comorbidities, infected ulcers and/or osteomyelitis, ankle brachial index (ABI) < 0.9, and Charcot osteoarthropathy were excluded.
Interventions	Intervention Characteristics Intervention 1 <ul style="list-style-type: none"> ● <i>Description:</i> Preparation of PRAFO was a bit complicated. At first cast was taken by maintaining the ankle at neutral position. Once the cast was set, it was removed from the extremity and filled with liq-uid POP. At that time modifications were done to get proper clearance of malleoli to avoid pressure over the malleoli. Further adjustments were made to keep the toe in hyperextension (for getting the toe rocker), keep the ankle at 90 degrees and make the arch in proper shape. A build-up of 3 mm thickness was made around the ulcerate area to offload the ulcer. Ankle joints were incorporated to provide ankle motion. Pelite sheet was molded over the planter aspect of the foot and a 3 mm polypro- pylene sheet was draped over the modified mold. Once it was completely set, it was gently removed with the necessary trim lines. Velcro closures were provided and the required trials were carried out over the patient. After the required trials, the brace was well padded off (Figure 2) ● <i>Duration:</i> 4 w Kontrol 1 <ul style="list-style-type: none"> ● <i>Description:</i> TCC was done by plaster of Paris (POP) cast and a simple rubber insole was incorporated between the sole of the patient and the POP cast (Figure 1). Before incorporating the insole, the area of the insole overlying the ulcer was removed from its plantar aspect (that is from that part of insole, which is in contact with the POP cast) to avoid pressure on the ulcer. The cast was allowed to dry and it became irremov- able. The patients were asked to come after 2 weeks. The gait parameters were taken and the TCC was removed. The limb was inspected, the wound was cleaned with normal saline, and a new TCC was put on for another 2 weeks ● <i>Duration:</i> 4w
Outcomes	<i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <i>Sårheling (total sårlukning (ja/nej)), efter endt behandling</i>

	<ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <p><i>Sårareal, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Fully reported ● Direction: Higher is better ● Data value: End point (4 weeks) ● Scale: Percentage surface area reduction 0-100 <p><i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <p><i>Tryksår, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <p><i>Venetrombose, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Recidiv af sår, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Frafald, alle årsager, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported
Identification	<p>Sponsorship source: no funding</p> <p>Country: india</p> <p>Setting: Thirty adult diabetic patients attending the foot clinic with neuropathic plantar ulcers irrespective of sex, age, duration and type of diabetes were randomly assigned to 1 of 2 off-loading modalities (TCC and PRAFO)</p> <p>Authors name: Partha Pratim Chakraborty</p> <p>Institution: Department of Endocrinology and Metabolism,</p> <p>Email: sayantan.ray30@gmail.com</p> <p>Address: Institute of Post Graduate Medical Education & Research (IPGMER) and SSKM Hospital, Kolkata, West Bengal, India</p>
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Quote: "The mean age, duration of diabetes, BMI, and glycemic status of the patients at study entry were statistically insignificant between the 2 groups. The mean surface areas of the plantar ulcers between the groups were also not significant at the baseline (Table 1)." Quote: "Patients were randomly allocated to 1 of 2 off-loading procedures using the randomization table."
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information about allocation concealment.
Blinding of participants and personnel (performance bias)	High risk	Quote: "Wound care and wound debridement was carried out by a single podiatrist blinded to treatment mode. Tissue" Judgement Comment: Patients not blinded, participants likely blinded.
Blinding of outcome assessment (detection bias)	Low risk	Quote: "The area of the wound was then calculated by counting the number of squares in the graph paper and was expressed as cm ² . Photographs were taken of each ulcer." Judgement Comment: No information about blinding of outcome assessors. Wound size was the only outcome of interest and were objectively measured.
Incomplete outcome data (attrition bias)	Low risk	Judgement Comment: likely no attrition
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol available.
Other bias	Low risk	Quote: "The author(s) received no financial support for the research, authorship, and/or publication of this article."

Faglia 2010

Methods	<p>Study design: Randomized controlled trial</p> <p>Study grouping: Parallel group</p>
Participants	<p>Baseline Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Age, mean (SD): 61.7 (10.4) ● Female, N (%): 7 ● BMI, mean (SD): 30.3 (1.1) ● HBA1C, mean (SD): 7.5 (1.1) ● Wound area (cm²), mean (SD): 2.2 (2.2) <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Age, mean (SD): 59.0 (8.5)

	<ul style="list-style-type: none"> ● <i>Female, N (%)</i>: 8 ● <i>BMI, mean (SD)</i>: 32.3 (4.5) ● <i>HBA1C, mean (SD)</i>: 9.1 (2.1) ● <i>Wound area (cm²), mean (SD)</i>: 1.4 (1.2) <p>Included criteria: Study inclusion criteria were the presence of a neuropathic plantar forefoot ulcer with an area graded IA according to the University of Texas Classification of Diabetic Wounds (11). Peripheral neuropathy was diagnosed based on insensitivity to a 10-g Semmes-Weinstein monofilament in more than six of nine areas of the foot and by a vibration perception threshold measured by biothesiometer (Neurothesiometer SLS, Nottingham, U.K.) at the malleolus of 25 V.</p> <p>Excluded criteria: Exclusion criteria were the presence of an ankle-brachial pressure index 0.9 and/or transcutaneous oxygen tension 50 mmHg tested on the dorsum of the foot and clinical signs of infection. Both the probe-to-bone maneuver and standard X-ray examination of the foot were required to be negative for osteomyelitis (12). Additional exclusion criteria included use of steroids or antimetabolic drugs, the presence of visual problems that could impair balance, an active ulcer on the contralateral foot, previous major amputation of the contralateral limb, previous or current deep venous thrombosis of the leg, or mental disorder interfering with patient compliance.</p>
Interventions	<p>Intervention Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Description: Stabil-D The Stabil-D device is composed of a specifically designed rigid, boat-shaped, and fully rocker bottom sole: its rounded extremities (at the heel and tip toe) facilitate gait, and its middle section improves the mid-stance phase. The insole height (24 mm) avoids excessive lifting of the contralateral limb during walk, thus lowering the barycenter and favoring more stable walking. The cover is made of Elastam (Lycra), a yarn composed of polyurethane segments and block copolymers that confer high transparency and stability to the system, mixed with polyethylene glycol segments with the characteristic of elasticity. At the ankle, the cast is provided with removable, lateral stabilizer inserts made of ABS, which ensure stability to the tibiotarsal joint and/or adequate support during gait. Moreover, a rigid brace made of a thermoformable polymer material properly supports the Achilles tendon and contributes to stability during rolling steps; such a brace can be adapted to the foot deformity using a hot air gun and malleolar forceps. The cast is closed dorsally with Velcro wrap placed over the forefoot to relieve skin pressure and Velcro straps with self-fitting rings placed against the instep to secure perfect fastening, provide foot stability, and ensure a perfect fit of the heel in the rigid brace. Finally, more Velcro straps are placed or secured with rings against the tibia to provide a secure fit. ● Duration: 90 days <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Description: TCC— Patients in the TCC group were casted according to the technique described previously by Caravaggi et al. (13). All casts were made by personnel with particular expertise in the use of this device (W.V. in Sesto San Giovanni and D.S. in Milan). Two types of fiberglass bandages were used for construction of the pressure-relief apparatus. The first type of bandage (Softcast 3M; 3M Health Care, St. Paul, MN) was composed of fiberglass imbued with a polyurethane resin with characteristics of flexibility and resistance. The other bandage (Scotchcast 3M; 3M Health Care) was composed of fiberglass imbued with apolyurethane resin of two different concentrations that confers high resistance to loading. A bandage with German cotton and tubular stockinet was placed on the limb. To further protect bony protrusions, such as the malleolus and tibial crest, pieces of protective rubber foam (Microfoam 3M; 3M Health Care) were also applied. The structure was then reinforced with a stick made of a Scotchcast bandage placed in the middle of the two malleoli, extending beyond them for at least 20 cm to give rigidity to the cast. The same material was used to build a rigid plantar sole. The number of layers applied to construct the sole depended on the weight of the patient (range 3–8 layers). An aluminum stirrup was anchored to the structure as a support to allow walking. The side supports were secured with another layer of Softcast 3M. After very brief training, all patients were able to walk properly without crutches ● Duration: 90 days
Outcomes	<p><i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <p><i>Sårhelning (total sårlukning (ja/nej)), efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (90 days) <p><i>Sårareal, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Fully reported ● Direction: Higher is better ● Data value: 4 weeks ● Scale: Cm² change from baseline <p><i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (90 days) <p><i>Tryksår, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <p><i>Venetrombose, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Recidiv af sår, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported

	<p><i>Frafald, alle årsager, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: End point (90 days)
Identification	<p>Sponsorship source: We acknowledge the contribution of Podartis, Montebelluna, Tre-viso, Italy, manufacturers of the Stabil-D walk-ers used in this study</p> <p>Country: italy</p> <p>Setting: Forty-five adult diabetic patients with non-ischemic, noninfected neuropathic plantar ulcer were randomly assigned for treatment with anonremovable fiberglass off-bearing cast (total contact cast [TCC] group) or walker cast (Stabil-Dgroup).</p> <p>Authors name: EZIO FAGLIA</p> <p>Institution: diabetic foot center, Milan</p> <p>Email: iacomo.clerici@multimedica.it.</p> <p>Address: Diabetic Foot Center, Istituto di Ricovero e Cura a Carattere Scientifico Multimedica, Sesto SanGiovanni, Milan, Italy</p>
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Patients were randomly assigned to one of the two treatment groups by opening randomization codebreak envelopes containing one of the two options. Separate randomization was performed for each center," Judgement Comment: Likely random however, unclear how randomisation was performed
Allocation concealment (selection bias)	Unclear risk	Quote: "Patients were randomly assigned to one of the two treatment groups by opening randomization codebreak envelopes containing one of the two options. Separate randomization was performed for each center, and a copy of all randomization envelopes was kept at the statistical department of the Multimedica center."
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No blinding.
Blinding of outcome assessment (detection bias)	Unclear risk	Judgement Comment: No blinding however, only objectively assessed outcomes.
Incomplete outcome data (attrition bias)	Low risk	Quote: "however, 2 patients in the TCC group and 1 patient in the Stabil-D group did not complete the study and were considered dropouts." Judgement Comment: <10% drop out. Per protocol analysis.
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol.
Other bias	Unclear risk	Quote: "to provide TCCs. Acknowledgments — We acknowledge the contribution of Podartis, Montebelluna, Tre-viso, Italy, manufacturers of the Stabil-D walk-ers used in this study. No other potential conflicts of interest relevant to this article were reported. References 1. Boulton AJ. The" Judgement Comment: No description of Padartis role in the study however, likely limited to funding only.

Ganguly 2008

Methods	<p>Study design: Randomized controlled trial</p> <p>Study grouping: Parallel group</p>
Participants	<p>Baseline Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● <i>Female, N (%)</i>: 9 <p>Kontrol 1</p> <ul style="list-style-type: none"> ● <i>Female, N (%)</i>: 9 <p>Included criteria: pt with DFU</p> <p>Excluded criteria: osteomyelitis and any other contraindication of total contact casting</p>
Interventions	<p>Intervention Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● <i>Description:</i> sharp debridement, dressing of normal saline and gauze ● <i>Duration:</i> complete healing or 6 months ● <i>Dose:</i> change every 2. day <p>Kontrol 1</p> <ul style="list-style-type: none"> ● <i>Description:</i> sharp debridement, dressing of normal saline and gauze and an applied TCC ● <i>Duration:</i> complete healing or 6 months
Outcomes	<p><i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Fully reported ● Direction: Lower is better ● Data value: 6 months <p><i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <p><i>Sårhelning (total sårlukning (ja/nej)), efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better

	<ul style="list-style-type: none"> ● Data value: Endpoint (6 months) <p><i>Sårareal, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <p><i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (6 months) <p><i>Tryksår, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <p><i>Venetrombose, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Recidiv af sår, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Frafald, alle årsager, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (6 months)
Identification	<p>Sponsorship source: no funding</p> <p>Country: india</p> <p>Setting: Total contact casting is one such method of offloading, and this study attempts to investigate the advantages of the above method as compared to conventional dressings in the physiatric management of the depth–ischaemia grades 1A, 1B, 2A, 2B neuropathic plantar ulcers in a diabetic patient.</p> <p>Authors name: Ganguly S</p> <p>Institution: Department of physical medicine and rehabilitation, institute of postgraduate medical education and research, kolkata</p> <p>Email: no email</p> <p>Address: Department of physical medicine and rehabilitation, institute of postgraduate medical education and research, kolkata, 700020</p>
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Judgement Comment: Unclear randomisation schedule. Annotation: "The selected patients were randomly allocated into category(...)"
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: Not feasible to blind participants. No information about blinding of personnel.
Blinding of outcome assessment (detection bias)	Unclear risk	Judgement Comment: No information about blinding of assessors however, only objectively measured outcomes.
Incomplete outcome data (attrition bias)	Unclear risk	Judgement Comment: 3 vs 0 drop outs from standard dressing and TCC respectively, without reported reasons. Per protocol analysis
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol available. Reporting of critical outcome (amputations and wound healing).
Other bias	Low risk	Judgement Comment: No reasons to suspect other sources of bias.

Lavery 2015

Methods	<p>Study design: Randomized controlled trial</p> <p>Study grouping: Parallel group</p>
Participants	<p>Baseline Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Female, N (%): 12 ● Type 2 diabetes, N (%): 25 (92.6) ● Distal blood pressure (mmHg), mean (SD): 1.11 (0.32) ● Wound area (cm²), mean (SD): 2.3 (4.1) <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Female, N (%): 7 ● Type 2 diabetes, N (%): 20 (87) ● Distal blood pressure (mmHg), mean (SD): 1.11 (0.19) ● Wound area (cm²), mean (SD): 2.2 (3.5) <p>Included criteria: Diabetic patients with grade UT1A or UT2A forefoot ulcers(the University of Texas Ulcer Classification System) (18) on the sole of the foot were enrolled. If more than one ulcer was present, the largest ulcer meeting all the eligibility criteria was selected as the index ulcer. Other ulcers were treated in the same manner as the study ulcer.</p> <p>Excluded criteria: Patients were excluded based on the following criteria: inability to care for their ulcer during the study period (e.g.</p>

	because of vacation, hospitalisation and disability), widespread malignancy, systematically immune-compromising disease, severe peripheral vascular disease (ABI < 0.60 or transcutaneous oxygen < 25 mm/Hg), alcohol substance abuse within 6 months, untreated osteomyelitis or Charcot arthropathy with residual deformity that was too severe to allow proper fit of the removable walking boot, and patients with postural stability that was not adequate to safely ambulate in a TCC or walking boot.
Interventions	<p>Intervention Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● <i>Description</i>: shear reducing walker ● <i>Duration</i>: 12 w <p>Kontrol 1</p> <ul style="list-style-type: none"> ● <i>Description</i>: TCC ● <i>Duration</i>: 12 w
Outcomes	<p><i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Fully reported ● Direction: Higher is better ● Data value: End point (12 weeks) ● Scale: Patient acceptance of treatment (VAS 0-10) <p><i>Sårheling (total sårlukning (ja/nej)), efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (12 weeks) <p><i>Sårareal, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (12 weeks) wound size (cm²) <p><i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (12 weeks) <p><i>Tryksår, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (12 weeks) <p><i>Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Higher is better ● Data value: Endpoint (12 weeks) <p><i>Venetrombose, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Recidiv af sår, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse event ● Reporting: Not reported <p><i>Frafald, alle årsager, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Direction: Lower is better ● Data value: Endpoint (12 weeks)
Identification	<p>Sponsorship source: a grant from the national institute of health</p> <p>Country: usa</p> <p>Setting: 12 week singleblinded rct consisting of 73 pt divided in three groups. TCC vs walker vs sandals</p> <p>Authors name: Lawrence a lavery</p> <p>Institution: Department of surgery, university of texas</p> <p>Email: larry.lavery@utsouthwestern.edu</p> <p>Address: University of texas southwestern medical center</p>
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Judgement Comment: A computer-generated list
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: Unclear concealment however, computer generated sequence generation.
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information, likely unblinded

Blinding of outcome assessment (detection bias)	High risk	Judgement Comment: Blinding not feasible likely influencing self-reported rating of ability to perform daily activities and compliance with device. Other outcomes of interest are "objective"
Incomplete outcome data (attrition bias)	Unclear risk	Judgement Comment: Patients completing study 78% and 56% in TCC and walker group respectively. Adequate ITT and per protocol analysis. Unbalanced drop outs.
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol.
Other bias	Low risk	Judgement Comment: No reasons to suspect other sources of bias.

Mueller 1989

Methods	<p>Study design: Randomized controlled trial</p> <p>Study grouping: Parallel group</p>
Participants	<p>Baseline Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Age, mean (SD): 55 (12) ● Female, N (%): 5 ● Type 2 diabetes, N (%): 13 ● Wound area (cm2), mean (SD): 2.8 (3.4) ● Peripheral neuropathy, N (%): 19 <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Age, mean (SD): 54 (10) ● Female, N (%): 8 ● Type 2 diabetes, N (%): 16 ● Wound area (cm2), mean (SD): 1.8 (2.5) ● Peripheral neuropathy, N (%): 21 <p>Included criteria: Criteria for inclusion in the study were that the patient had been diagnosed with diabetes mellitus and currently had a plantar ulcer</p> <p>Excluded criteria: No evidence of gross infection (no significant edema or drainage), osteomyelitis (determined by radiograph or radionuclide scans), or gangrene (visibly discolored or necrotic tissue).</p>
Interventions	<p>Intervention Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Description: All subjects had the option to discontinue treatment at any time. Subjects refusing to receive treatment from their assigned treatment group before complete wound closure were considered not healed. Ulcers that became grossly infected, increased in size, or showed no improvement after 6 wk were considered not healed. Ulcers were considered healed if they showed complete skin coverage and no drainage. ● Duration: 6w ● Dose: change 2-3 times each day <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Description: Casts were applied by a physical therapist on the initial visit as described elsewhere (7,8). Briefly, the ulcer was covered with one thin layer of gauze. Cotton was placed between the toes to prevent maceration, and a stockinette was applied to the lower leg with 7/8-inch felt pads applied to the malleoli and anterior tibia and a foam pad placed around the toes. A total contact plaster shell was then molded around the lower leg. The shell was reinforced with plaster splints, and a walking heel was attached to the plantar surface. A fiberglass roll was applied around the plaster for extra durability and to allow bearing weight sooner than would be allowed with plaster alone. Patients were given a written list of precautions and instructed to limit ambulation to 33% of their usual activity (7). Assistive devices (walkers or crutches) were provided to patients requiring them. Casts were removed after 5-7 days, and the ulcer and skin inspected. If there were no complications (i.e., additional skin breakdown, deterioration of the ulcer, or patient refusing additional casting), the cast was reapplied and changed every 2-3 wk until the ulcer was completely healed ● Duration: 6w ● Dose: changed every 2w
Outcomes	<p><i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Fully reported ● Unit of measure: n/N ● Direction: Lower is better ● Data value: Endpoint (6 weeks) <p><i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <p><i>Sårhelning (total sårlukning (ja/nej)), efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Unit of measure: n/N ● Direction: Higher is better ● Data value: Endpoint (6 weeks) <p><i>Sårareal, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <p><i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Scale: Wound infection ● Unit of measure: n/N ● Direction: Lower is better ● Data value: Endpoint (6 weeks) <p><i>Tryksår, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Fully reported

	<ul style="list-style-type: none"> ● Scale: Proportion of induced wounds ● Unit of measure: n/N ● Direction: Lower is better ● Data value: Endpoint (6 weeks) <p><i>Behandlings adherence/ kompliance, i interventionsperioden, proportion of adherence</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <p><i>Venetrombose, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Not reported <p><i>Recidiv af sår, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Not reported <p><i>Frafald, alle årsager, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Unit of measure: Drop outs, all causes ● Direction: Lower is better ● Data value: Endpoint (6 weeks)
Identification	<p>Sponsorship source: This study was supported by a grant from the Foun-dation for Physical Therapy.</p> <p>Country: USA</p> <p>Setting: Forty patients with diabetes mellitus and a plantar ulcer but with no gross infection, osteomyelitis, or gangrene were randomly assigned to the TCC group (n = 21) or TDT group (n = 19).</p> <p>Authors name: Michael J. Mueller</p> <p>Institution: Irene Walter Johnson Rehabilitation Institute, Program in Physical Ther-apy, and Division of Orthopedic Surgery, Department of Surgery, Washington University School of Medicine, St. Louis, Missouri</p> <p>Email: no email contact</p> <p>Address: Washington University School of Medicine, Box 8083, 660 South Euclid Avenue, St. Louis, MO 63110</p>
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Quote: "As shown in Table 1, there was no significant difference in distribution of subject characteristics between the two groups (P > .05)." Quote: "The study was approved by the human studies committee at Washington University School of Medicine, and all patients participating in the study were randomly assigned to either the TCC or TDT group." Judgement Comment: No information about specific sequence generation. Likely difference in ulcer size.
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information about concealment
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information about blinding, likely no blinding (not feasible)
Blinding of outcome assessment (detection bias)	Unclear risk	Judgement Comment: No information about blinding of outcome assessors. However "objectively" measured outcomes.
Incomplete outcome data (attrition bias)	Low risk	Quote: "Five of 19 (26%) patients in the TDT group showed serious foot infection that required admission to a hospital. Two of these patients required a forefoot am- putation." Judgement Comment: Likely all 40 patients contributed with outcome data thus no attrition reported.
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol.
Other bias	Low risk	Quote: "This study was supported by a grant from the Foun- dation for Physical Therapy." Judgement Comment: no competing interests or other bias' No reasons to suspect other sources of bias.

Najafi 2017

Methods	<p>Study design: Randomized controlled trial</p> <p>Study grouping: Parallel group</p>
Participants	<p>Baseline Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● <i>Age, mean (SD):</i> 54.8 (7.3) ● <i>Female, N (%):</i> 1 ● <i>BMI, mean (SD):</i> 27.8 (5.4) ● <i>HBA1C, mean (SD):</i> 10.3 (2.8) ● <i>Wound area (cm2), mean (SD):</i> 10.13 (12) <p>Kontrol 1</p> <ul style="list-style-type: none"> ● <i>Age, mean (SD):</i> 52.1 (8.2) ● <i>Female, N (%):</i> 3 ● <i>BMI, mean (SD):</i> 30.8 (6.6) ● <i>HBA1C, mean (SD):</i> 10.3 (1.7) ● <i>Wound area (cm2), mean (SD):</i> 6.46 (8.48) <p>Included criteria: Forty-nine eligible subjects with confirmed diabetes and PN, age 18 or older with noninfected, non ischemic, plantar neu-ropathic foot ulcers. If subjects had noncompressible vessels (ABI > 1.2), we measured toe pressures to determine a toe brachial index (TBI). A TBI > 0.65 was required for enrollment.</p>

	<p>Excluded criteria: Subjects with major foot amputation, active Charcot arthropathy, ankle brachial index (ABI) of 0.5 or less, 27 history of alcohol or substance abuse within 6 months, or unable to keep research appointments were excluded. In addition, we excluded those patients, who could not be accommodated in a standard removable cast walker or were unable to walk a distance of minimum 20 minutes with or without an assistive device.</p>
<p>Interventions</p>	<p>Intervention Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Description: Removable cast walker (RCW, DH Offloading Walker, Ossur, Reykjavik, Iceland) ● Duration: 12 w <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Description: instant total contact cast (ITCC, the same RCW wrapped with a cohesive bandage, rendering it irremovable; Figure 1 ● Duration: 12 w
<p>Outcomes</p>	<p><i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Fully reported ● Unit of measure: n/N ● Direction: Lower is better ● Data value: Endpoint (12 weeks) <p><i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <p><i>Sårhelning (total sårlukning (ja/nej)), efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Unit of measure: n/N ● Direction: Higher is better ● Data value: Endpoint (12 weeks) <p><i>Sårareal, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Fully reported ● Scale: Decrease in wound surface area ● Direction: Higher is better ● Data value: Endpoint (12 weeks) <p><i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Scale: Wound infection ● Unit of measure: n/N ● Direction: Lower is better ● Data value: Endpoint (12 weeks) <p><i>Tryksår, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Not reported <p><i>Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <p><i>Venetrombose, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Not reported <p><i>Recidiv af sår, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Not reported <p><i>Frafald, alle årsager, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Unit of measure: Drop outs, all causes ● Direction: Lower is better ● Data value: Endpoint (12 weeks)
<p>Identification</p>	<p>Sponsorship source: The project described was supported in part by a grant from the Qatar National Research Foundation (Award Number NPRP 4-1026-3-277, http://www.qnrf.org/). The content is solely the responsibility of the authors and does not necessarily represent the official views of the Qatar National Research Foundation. None of the authors employed or contracted by the fund</p> <p>Country: USA</p> <p>Setting: Forty-nine people with diabetic foot ulcers were randomized to wear either a removable cast walker (RCW) or an irremovable instant total contact cast (ITCC).</p> <p>Comments:</p> <p>Authors name: Bijan Najafi</p> <p>Institution: Interdisciplinary Consortium on Advanced Motion Performance (iCAMP)</p> <p>Email: najafi.bijan@gmail.com</p> <p>Address: Department of Surgery, Baylor College of Medicine, One Baylor Plaza, MS:BCM390, Houston, TX 77030, USA.</p>
<p>Notes</p>	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Using a computer generated randomization list, participants were assigned to one of the two off-loading modalities; removable cast walker (RCW, DH Offloading Walker, Ossur, Reykjavik, Iceland) and instant total contact cast (iTCC, the same RCW wrapped with a cohesive bandage, rendering it irremovable; Figure 1)."
Allocation concealment (selection bias)	Low risk	Quote: "Sequentially numbered, opaque envelopes that contained the study group assignment were provided to each site. At the time of randomization, an envelope was opened by the study coordinator to identify the study group assignment."
Blinding of participants and personnel (performance bias)	High risk	Quote: "predictors to successful wound healing. The person who analyzed the data was blind to the type of intervention. The collected physical activity data" Judgement Comment: Not feasible to blind patients and investigator not blinded.
Blinding of outcome assessment (detection bias)	Low risk	Quote: "ensure the absence of infection. At each study visit the study coordinator took photographs of the wound, which were planimetrically measured using a 3-D imaging system (Silhouette, ARANZ Systems, Christchurch, New Zealand) and assessed by a clinician unaware of specific study allocation. This provides measures of wound area, length and width. Pre and post treatment photos were taken. Areas of new epithelium or" Judgement Comment: Only objective outcomes likely blinded..
Incomplete outcome data (attrition bias)	Unclear risk	Judgement Comment: All randomised received group intervention. n= 4 and 2 excluded from analysis in iTCC and RCW respectively. Per protocol analysis.
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol available.
Other bias	Low risk	Quote: "The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The project described was supported in part by a grant from the Qatar National Research Foundation (Award Number NPRP 4-1026-3- 277, http://www.qnrf.org/). The content is solely the responsibility of the authors and does not necessarily represent the official views of the Qatar National Research Foundation. None of the authors employed or contracted by the funder." Judgement Comment: No reasons to suspect other sources of bias.

Piaggisi 2016

Methods	Study design: Randomized controlled trial Study grouping: Parallel group
Participants	<p>Baseline Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Age, mean (SD): 62.3 (9.2) ● Female, N (%): 20 (45%) ● BMI, mean (SD): 29.7 (3.3) ● HBA1C, mean (SD): 8.4 (1.0) <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Age, mean (SD): 61.4 (9.7) ● Female, N (%): 20 (40%) ● BMI, mean (SD): 30.2 (3.9) ● Type 2 diabetes, N (%): ● HBA1C, mean (SD): 8.1 (0.9) <p>Included criteria: type 1 or type 2 diabetes lasting for at least 5 years; presence of a forefoot plantar ulcer wider than 1 cm², staged IA or IIA according to the University of Texas Diabetic Wound Classification, 1 last-ing at least 6 weeks; ankle-brachial pressure index ≥0.9 with 2 palpable pulses in the affected foot.</p> <p>Excluded criteria: Exclusion criteria were the presence of infection according to the criteria of the Infectious Disease Society of America guidelines²⁰; surgical procedure in the previous year on the affected foot; inability to actively dorsiflex the affected foot; involvement of deeper foot structures, that is, probe-to-bone negative; presence of other lesions in the same or contralateral foot; diagnosis of acute or chronic Charcot foot, either in the affected or contralateral foot; lower limb edema; chronic renal insufficiency as demonstrated by creatinine >2 mg/dL; previous minor or major amputations in the affected or contralateral limb; nonambulatory; body mass index >35; visual impairment; metabolic decompensation with HbA1c >10%; cancer; HIV-positive; or any local or systemic conditions that may impair tissue repair. In cases of suspected osteomyelitis, a radiograph of the foot and a magnetic resonance imaging was performed in order to confirm the diagnosis and justify exclusion from the study.</p>
Interventions	<p>Intervention Characteristics</p> <p>Intervention 1</p> <ul style="list-style-type: none"> ● Description: RWD; accommodative offloading was obtained by cutting a hole in the intermediate layer of the 3-layered insole of the device, corresponding to the lesion, in order to reduce the pressure in the area. ● Duration: 90 days <p>Kontrol 1</p> <ul style="list-style-type: none"> ● Description: The TCC was made using fiberglass material (Scotchcast longuettes and Softcast rolls; 3M Health Care, St Paul, MN) with padding put over the ulcer, according to the procedure previously described by Petre eta ● Duration: 90 days
Outcomes	<p><i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Fully reported ● Unit of measure: n/N ● Direction: Lower is better ● Data value: Endpoint <p><i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Fully reported

	<ul style="list-style-type: none"> ● Scale: Able to perform normal daily activities (VAS 0-10) ● Unit of measure: Points ● Direction: Higher is better ● Data value: Endpoint (90 days) <p><i>Sårheling (total sårlukning (ja/nej)), efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Unit of measure: n/N ● Direction: Higher is better ● Data value: Endpoint (90 days) <p><i>Sårareal, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Fully reported ● Scale: wound area cm2 ● Direction: Lower is better ● Data value: Endpoint (90 days) <p><i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <p><i>Tryksår, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: AdverseEvent ● Reporting: Not reported <p><i>Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence</i></p> <ul style="list-style-type: none"> ● Outcome type: DichotomousOutcome ● Reporting: Not reported <p><i>Venetrombose, i interventionsperioden</i></p> <ul style="list-style-type: none"> ● Outcome type: AdverseEvent ● Reporting: Not reported <p><i>Recidiv af sår, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: AdverseEvent ● Reporting: Not reported <p><i>Frafald, alle årsager, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: DichotomousOutcome ● Reporting: Fully reported ● Unit of measure: Drop outs, all causes ● Direction: Lower is better ● Data value: Endpoint (90 days)
Identification	<p>Sponsorship source: he author(s) received no financial support for the research, authorship, and/or publication of this article</p> <p>Country: italy</p> <p>Setting: 60 patients with DFUs, randomly assigned to 3 different offloading modalities: TCC (group A), walking boot rendered irremovable (i-RWD; group B), and removable walking boot (RWD; group C). Patients were followed up weekly for 90 days</p> <p>Comments:</p> <p>Authors name: Alberto Piaggese</p> <p>Institution: Sezione Dipartimentale Piede Diabetico, Dipartimento di Area Medica, Azienda Ospedaliero-Universitaria Pisana, Pisa, Italy</p> <p>Email: piaggese@immr.med.unipi.it</p> <p>Address: Sezione Dipartimentale Piede Diabetico, Azienda Opspedaliero-Universitaria Pisana, Via Paradisa 2, 56124 Pisa, Italy</p>
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "The patients were then randomized, by means of a remote telephone computer-generated randomization into one of the following 3 groups:"
Allocation concealment (selection bias)	Unclear risk	Quote: "The patients were then randomized, by means of a remote telephone computer-generated randomization into one of the following 3 groups: group"
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: no blinding
Blinding of outcome assessment (detection bias)	Low risk	Quote: "Then the patients were evaluated by an investigator blinded to the offloading device adopted for the patient. A photograph and tracing of the lesion were taken, and the local conditions were assessed in order to check for possible complications or signs of infection."
Incomplete outcome data (attrition bias)	Unclear risk	Quote: "The 65 remaining patients were enrolled and randomized in the 3 groups; 3 patients in group A and 2 in group B did not complete the study. Of the patients who interrupted the study, all the patients in group A withdrew consent as did one in group B, whereas the other one was lost to follow-up. All the patients who withdrew consent were treated as per standard of care and all healed within the follow-up period." Judgement Comment: 3 drop outs from Group A (control) and 0 drop outs from intervention group. Unbalanced drop outs, no information about the three participants.
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol available. Reporting relevant outcomes of interest.
Other bias	Low risk	Quote: "The author(s) received no financial support for the research, authorship, and/or publication of this article." Judgement Comment: No reasons to suspect other sources of bias.

VanDeWeg 2008

Methods	Study design: Randomized controlled trial Study grouping: Parallel group
Participants	Baseline Characteristics Intervention 1 <ul style="list-style-type: none"> ● Age, mean (SD): 58.1 (11.1) ● Female, N (%): 2 (10%) ● HBA1C, mean (SD): 8.7 (2.2) ● Distal blood pressure (mmHg), mean (SD): 0.65 (0.21) ● Wound area (cm2), mean (SD): 3.0 (3.1) Kontrol 1 <ul style="list-style-type: none"> ● Age, mean (SD): 64.8 (10.8) ● Female, N (%): 7 (32%) ● HBA1C, mean (SD): 7.8 (0.3) ● Distal blood pressure (mmHg), mean (SD): 0.69 (0.25) ● Wound area (cm2), mean (SD): 4.2 (3.1) Included criteria: Inclusion criteria were confirmed diabetes, sensory neuropathy tested by a quantitativesomatosensory threshold test using the Semmes-Weinstein 5.07 (10 g) monofilament (on firstand fifth metatarsal heads, medial and lateral midfoot and heel), and a plantar ulcer Grade 1or 2 using the Wagner scale (Wagner 1981). The grade was based on clinical examination andevaluation of a plain radiograph; the location of the ulcer and pre-trial ulcer duration wererecorded. Excluded criteria: Patients unable to walk indoors, with dementia or life-threatening co-morbidity,ankle/brachial index50.4 and/or osteomyelitis (determined by plain radiograph) wereexcluded.
Interventions	Intervention Characteristics Intervention 1 <ul style="list-style-type: none"> ● Description: CTF. The CTF was custom-made of felt and supplied with a rigid leather socketstiffened with Rhenoflex, a composite of rubber and plastic with thermoplasticproperties. This ensures that movement of the foot in the shoe is restricted to anabsolute minimum. The height of the shoes is twice the distance from the foot base tothe lateral malleolus. The custom full-length insoles were made from cork and aplastazote and PPT (polyethylene foam and polyurethane) covering. Extra depth wasprovided in the inlay for the ulcer. To ensure maximal relief of pressure under theMTPs, the pivot point of the rocker bar was placed proximal to the MTPs and theoutsole stiffened to facilitate the distribution of forces exerted on the foot. A plastic trialcast was always made for a test fitting to check the last measurements, innersoleaccommodation and balance before the shoe was completed. Patients were instructed towear their footwear at all times whilst out of bed. Detailed instructions regarding routinecare of the cast and shoes were given to all patients. All patients were advised to decreasetheir activity levels considerably (i.e., to one-third of their pre-morbid level). To avoidparticipation bias patients in the CTF group were relied upon to wear their shoes ● Duration: 16w Kontrol 1 <ul style="list-style-type: none"> ● Description: TCC. A well-moulded and minimally padded non-removable below-knee cast thatmaintains contact with the entire plantar aspect of the foot and lower leg was used. TCCwas applied by a cast technician with at least five years experience using the Kominskytechnique (Kominsky 1991). Prior to casting, a single layer of cast padding was applied.After debridement, the wound was dressed with aquacell (565 cm Hydrofiber [sodiumcarboxymethylcellulose] wound dressing with moisture-resorbing properties). Adhesivefoam was used over bony prominences. Cast shoes with a polyphasic rocker weresupplied; patients with poor postural stability were advised to use a crutch/cane tomaintain balance. The cast was changed on a weekly basis for the duration of the trial(i.e., a maximum of 16 weeks) ● Duration: 16w ● Dose: Change every week
Outcomes	<i>Underekstremitets amputationer, længste follow-up (op til 1 år)</i> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Fully reported ● Unit of measure: n/N ● Direction: Lower is better ● Data value: Endpoint (16 weeks) <i>Patientrapporteret helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling</i> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Not reported <i>Sårhelning (total sårlukning (ja/nej)), efter endt behandling</i> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <i>Sårareal, efter endt behandling</i> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome ● Reporting: Fully reported ● Scale: Decrease in wound size (cm2) ● Direction: Higher is better ● Data value: Endpoint (16 weeks) <i>Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden</i> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <i>Tryksår, i interventionsperioden</i> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Not reported <i>Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence</i> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Not reported <i>Venetrombose, i interventionsperioden</i> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Not reported

	<p><i>Recidiv af sår, længste follow-up (op til 1 år)</i></p> <ul style="list-style-type: none"> ● Outcome type: Adverse Event ● Reporting: Not reported <p><i>Frafald, alle årsager, efter endt behandling</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Reporting: Fully reported ● Unit of measure: Drop outs, all causes ● Direction: Lower is better ● Data value: Endpoint (16 weeks)
Identification	<p>Sponsorship source: This study was supported by a grant from Convatec Netherlands and the OFOM(Ontwikkelingsfonds Orthopedisch Maatschoeisel)</p> <p>Country: the netherlands</p> <p>Setting: 43 patients with plantar ulcer Grade 1 or 2 (Wagner scale) wererandomized to one of two off-loading modalities: TCC or CTF.</p> <p>Authors name: F. B. VAN DE WEG</p> <p>Institution: Rehabilitation Centre Amsterdam,</p> <p>Email: f.b.vandeweg@olvg.nl</p> <p>Address: Ambachtsheerensingel 22, 1393 RE Nigtevecht, The Netherlands</p>
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	<p>Quote: "Patients were randomly allocated to one of two off-loading procedures: Total contact cast (TCC) or custom-made temporary footwear (CTF)."</p> <p>Quote: "An independent person prepared a randomization list in advance with an equal number of treatment assignments (5/5) per block of ten to ensure approximately equal numbers of patients in each treatment group (Pocock 1991)."</p> <p>Quote: "Differences between both groups were observed with respect to gender and baseline wound surface."</p> <p>Judgement Comment: OBS: baseline differences</p>
Allocation concealment (selection bias)	Low risk	Quote: "Allocation was concealed using opaque, sealed envelopes."
Blinding of participants and personnel (performance bias)	High risk	<p>Quote: "All patients attended the out-patient department regularly for device inspection. Wound care and wound debridement was carried out by a podiatrist blinded to treatment mode, and antibiotics dispensed if necessary."</p> <p>Judgement Comment: Participants not blinded.</p>
Blinding of outcome assessment (detection bias)	Unclear risk	<p>Quote: "Wound measurement was undertaken by a research assistant blinded for the treatment; patients were instructed not to discuss the treatment with the investigator. The secondary outcome measure was time to wound healing in days. The exact moment of wound closure was identified by a patient's self-report."</p> <p>Judgement Comment: Patients not blinded however primarily objective outcomes.</p>
Incomplete outcome data (attrition bias)	Low risk	<p>Quote: "The analysis of effectiveness was done according to the intention-to-treat principle."</p> <p>Judgement Comment: 2 drop outs from TCC including deviation from intended intervention, however ITT.</p>
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No protocol
Other bias	Low risk	<p>Quote: "This study was supported by a grant from Convatec Netherlands and the OFOM (Ontwikkelingsfonds Orthopedisch Maatschoeisel). Neither was involved in the handling of data in any way or in the publication of this manuscript."</p> <p>Judgement Comment: No reasons to suspect other sources of bias.</p>

Footnotes

Characteristics of excluded studies

Agas 2006

Reason for exclusion	Wrong intervention
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Birke 2002

Reason for exclusion	Wrong study design
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Bus 2018

Reason for exclusion	Wrong comparator
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Bus 2018a

Reason for exclusion	Wrong comparator
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deOliveira 2015

Reason for exclusion	Wrong study design
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Elraiyah 2016

Reason for exclusion	Wrong study design
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Hastings 2012

Reason for exclusion	Wrong setting
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HealthQualityOntario 2017

Reason for exclusion	Wrong study design
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Jeffcoate 2017

Reason for exclusion	Wrong comparator
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Johnson 2018

Reason for exclusion	Wrong intervention
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Johnson 2018a

Reason for exclusion	Wrong comparator
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Katz 2005

Reason for exclusion	Wrong comparator
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Lewis 2013

Reason for exclusion	Wrong study design
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Miyah 2014

Reason for exclusion	Wrong comparator
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Morona 2013

Reason for exclusion	Wrong study design
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Nabuurs Franssen 2005

Reason for exclusion	Wrong comparator
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Nube 2006

Reason for exclusion	Wrong comparator
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Piaggese 1998

Reason for exclusion	Wrong intervention
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Piaggese 2007

Reason for exclusion	Wrong comparator
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Sahu 2018

Reason for exclusion	Wrong intervention
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Udovichenko 2006

Reason for exclusion	Wrong comparator
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Zimny 2003

Reason for exclusion	Wrong comparator
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Footnotes

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Armstrong, D. G.; Nguyen, H. C.; Lavery, L. A.; van Schie, C. H.; Boulton, A. J.; Harkless, L. B.. Off-loading the diabetic foot wound: a randomized clinical trial. *Diabetes care* 2001;24(6):1019-1022. [DOI: 10.2337/diacare.24.6.1019 [doi]]

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Data and analyses

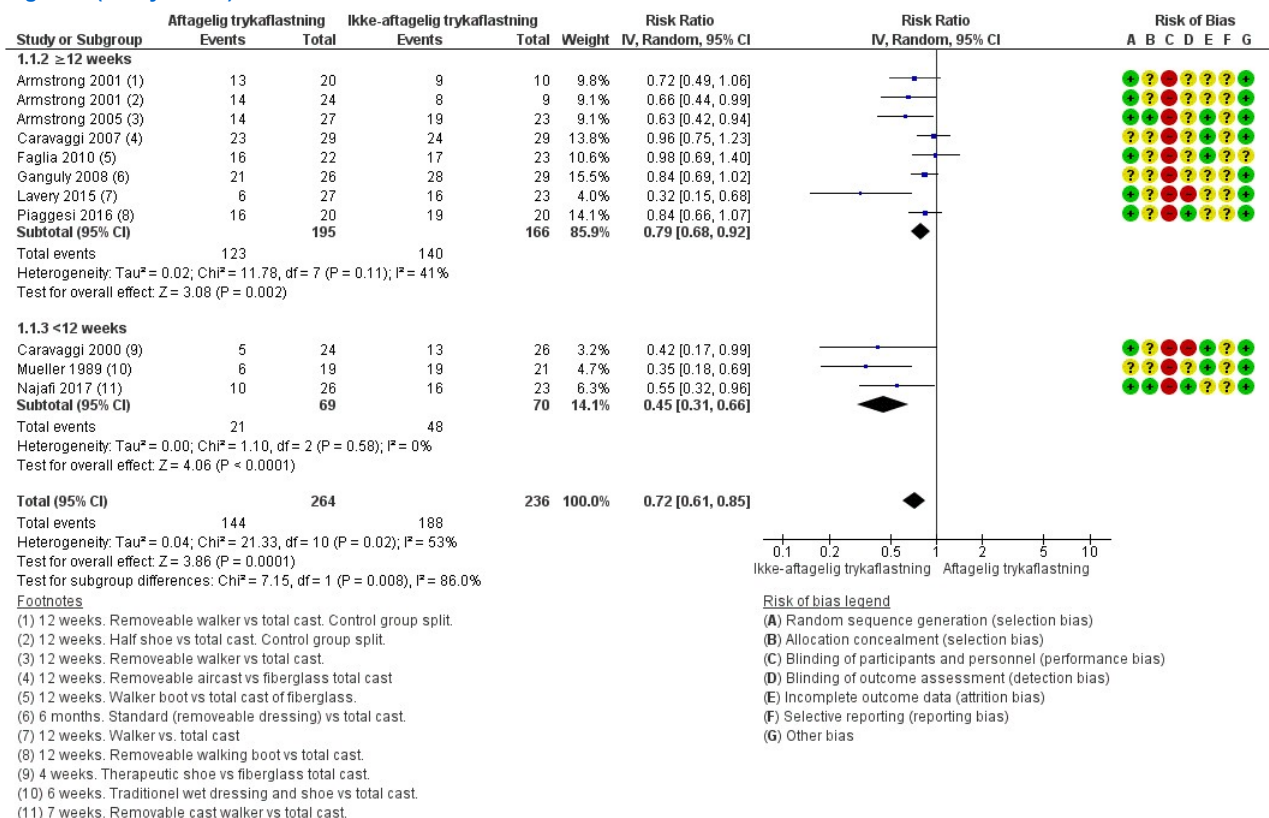
1 Aftagelig vs ikke-aftagelig trykafastning

Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 Sårheling (total sårlukning (ja/nej)), efter endt behandling	10	500	Risk Ratio (IV, Random, 95% CI)	0.72 [0.61, 0.85]
1.1.2 ≥12 weeks	7	361	Risk Ratio (IV, Random, 95% CI)	0.79 [0.68, 0.92]
1.1.3 <12 weeks	3	139	Risk Ratio (IV, Random, 95% CI)	0.45 [0.31, 0.66]
1.2 Underkøstremittets amputationer (total sårlukning (ja/nej)), længste follow-up (op til 1 år), risk ratio	4	178	Risk Ratio (IV, Random, 95% CI)	0.99 [0.17, 5.87]
1.3 Underkøstremittets amputationer (total sårlukning (ja/nej)), længste follow-up (op til 1 år), risk difference	4	178	Risk Difference (IV, Random, 95% CI)	-0.01 [-0.06, 0.05]
1.4 Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden	8	397	Risk Ratio (IV, Random, 95% CI)	1.54 [0.87, 2.74]
1.5 Tryksår, i interventionsperioden, risk ratio	3	169	Risk Ratio (IV, Random, 95% CI)	2.57 [0.11, 60.24]

1.6 Tryksår, i interventionsperioden, risk difference	3	169	Risk Difference (IV, Random, 95% CI)	0.01 [-0.04, 0.06]
1.7 Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence	2	108	Risk Ratio (IV, Random, 95% CI)	0.96 [0.86, 1.07]
1.8 Frafald, alle årsager, efter endt behandling	10	508	Risk Ratio (IV, Random, 95% CI)	0.94 [0.47, 1.85]
1.9 Sårareal, efter endt behandling, mean difference	5	224	Std. Mean Difference (IV, Random, 95% CI)	0.20 [-0.11, 0.50]
1.10 Sårareal, efter endt behandling, std. mean difference	6	254	Std. Mean Difference (IV, Random, 95% CI)	0.62 [-0.07, 1.31]
1.11 Helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling	1	50	Mean Difference (IV, Random, 95% CI)	-0.12 [-2.01, 1.77]
1.12 Recidiv af sår, længste follow-up (op til 1 år)	0		Risk Ratio (IV, Random, 95% CI)	No totals
1.13 Venetrombose, i interventionsperioden	0		Risk Ratio (IV, Random, 95% CI)	No totals

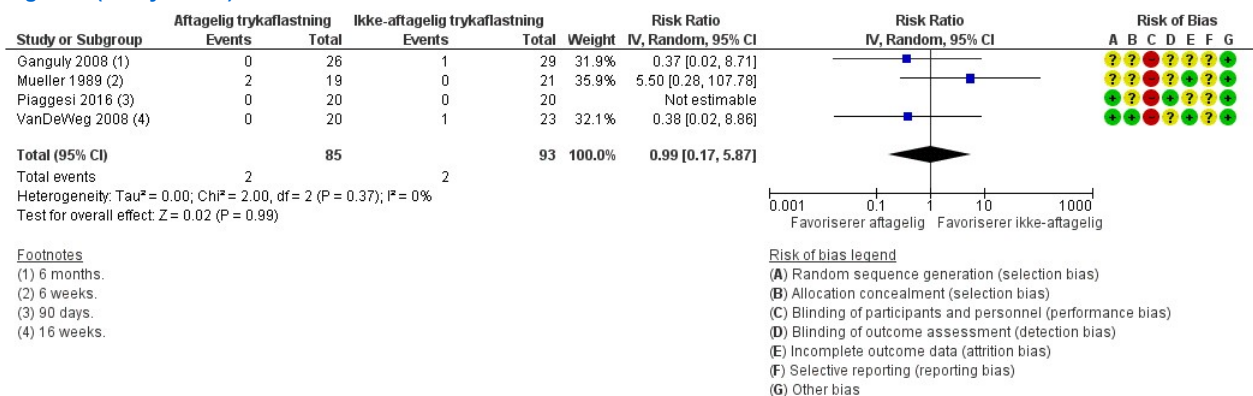
Figures

Figure 1 (Analysis 1.1)



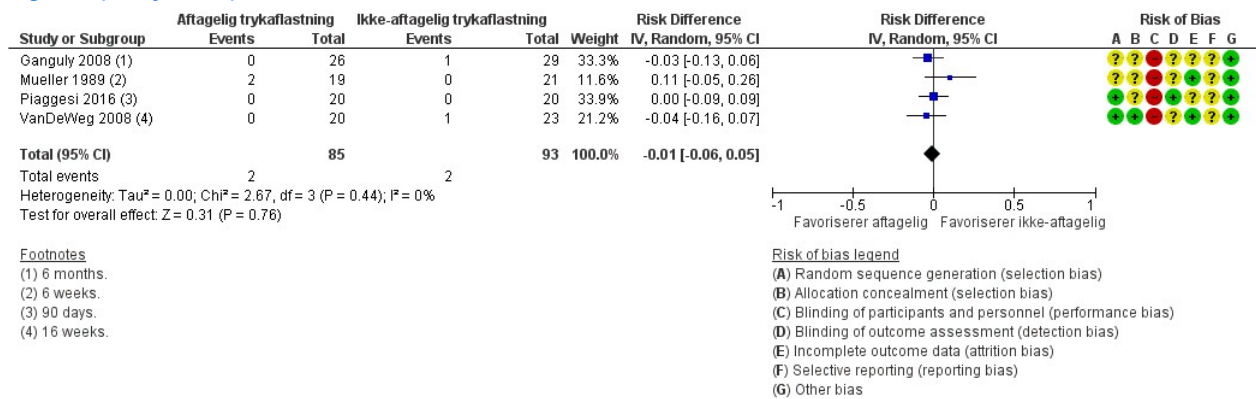
Forest plot of comparison: 1 Aftagelig vs ikke-aftagelig trykafkastning, outcome: 1.1 Sårheling (total sårlukning (ja/nej)), efter endt behandling.

Figure 2 (Analysis 1.2)



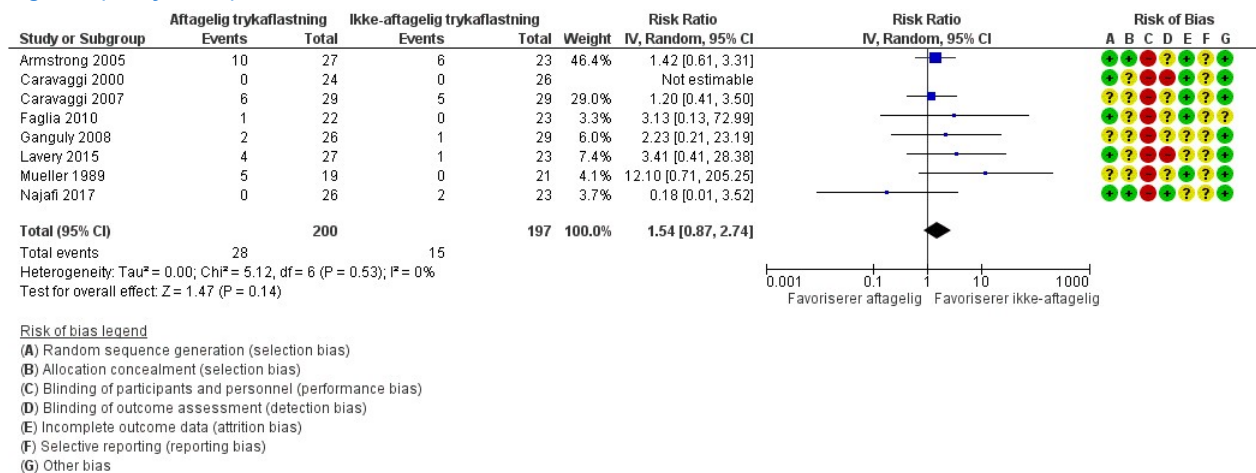
Forest plot of comparison: 1 Aftagelig vs ikke-aftagelig trykafkastning, outcome: 1.2 Underkøstremetets amputationer (total sårlukning (ja/nej)), længste follow-up (op til 1 år), risk ratio.

Figure 3 (Analysis 1.3)



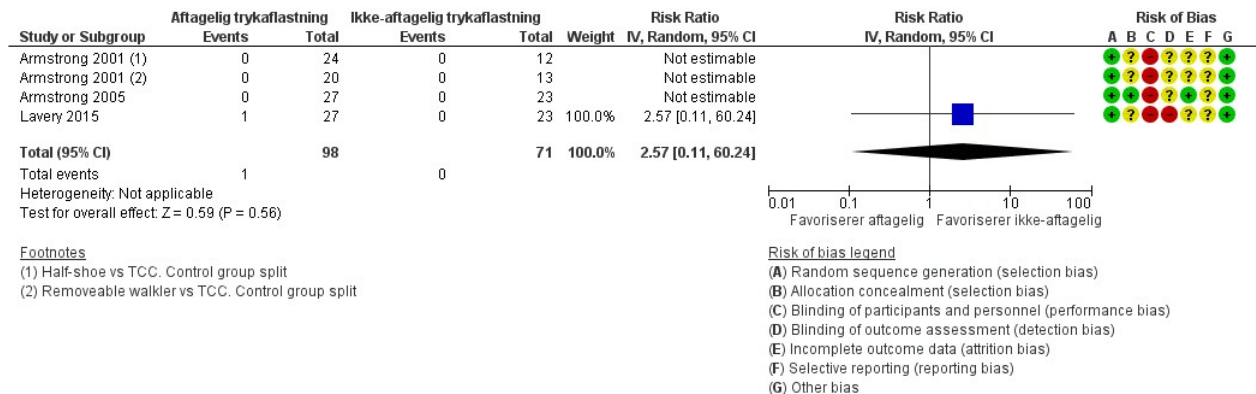
Forest plot of comparison: 1 Aftagelig vs ikke-aftagelig trykaflastning, outcome: 1.3 Underkøstremittets amputationer (total sårlukning (ja/nej)), længste follow-up (op til 1 år), risk difference.

Figure 4 (Analysis 1.4)



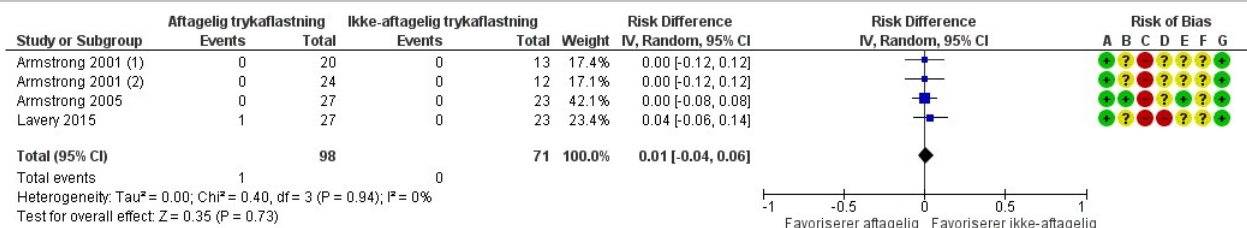
Forest plot of comparison: 1 Aftagelig vs ikke-aftagelig trykaflastning, outcome: 1.4 Infektion (positiv dyrkning, eller klinisk (rødme, pus, lugt, hævelse, smerte)), i interventionsperioden.

Figure 5 (Analysis 1.5)



Forest plot of comparison: 1 Aftagelig vs ikke-aftagelig trykaflastning, outcome: 1.5 Tryksår, i interventionsperioden, risk ratio.

Figure 6 (Analysis 1.6)



Footnotes

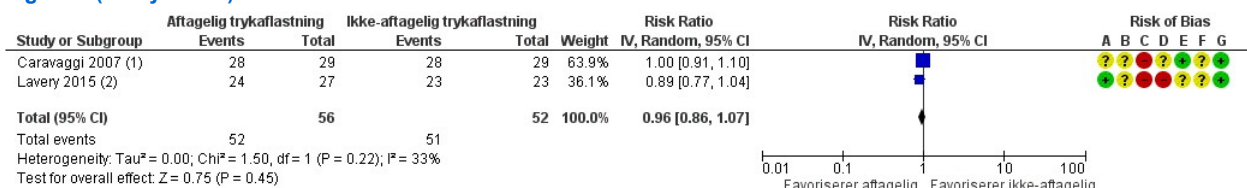
- (1) Removeable walkler vs TCC. Control group split
- (2) Half-shoe vs TCC. Control group split

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Forest plot of comparison: 1 Aftagelig vs ikke-aftagelig trykafkastning, outcome: 1.6 Tryksår, i interventionsperioden, risk difference.

Figure 7 (Analysis 1.7)



Footnotes

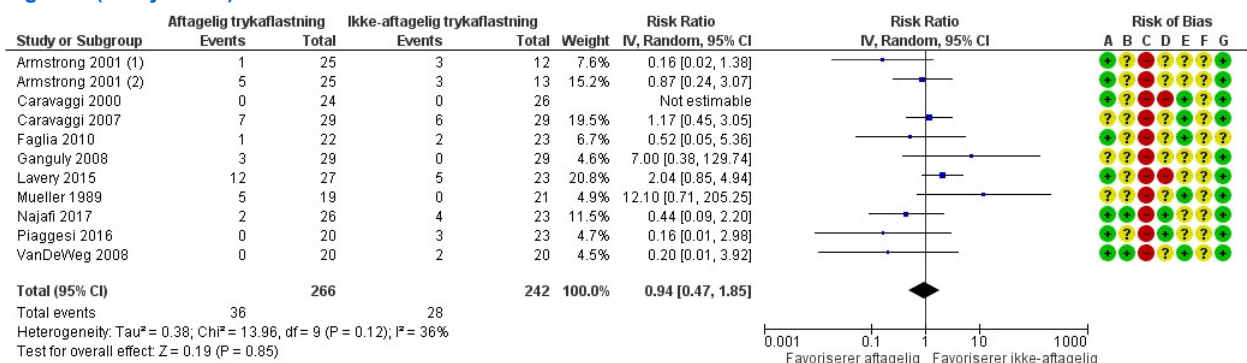
- (1) 30 days. Proportion of adherence
- (2) 12 weeks. compliance with device.

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Forest plot of comparison: 1 Aftagelig vs ikke-aftagelig trykafkastning, outcome: 1.7 Behandlings adherence/ compliance, i interventionsperioden, proportion of adherence.

Figure 8 (Analysis 1.8)



Footnotes

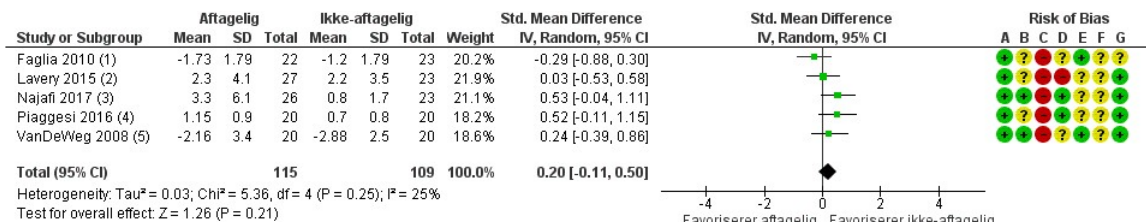
- (1) Half-shoe vs TCC. Control group split
- (2) Removeable walker vs TCC. Control group split

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Forest plot of comparison: 1 Aftagelig vs ikke-aftagelig trykafkastning, outcome: 1.8 Frafald, alle årsager, efter endt behandling.

Figure 9 (Analysis 1.9)



Footnotes

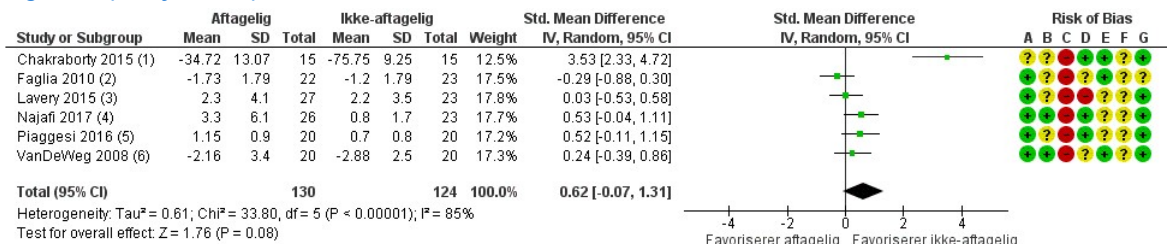
- (1) Cm2 change from baseline 90 days. Walker boot vs total cast of fiberglass.
- (2) Endpoint wound size (cm2) 12 weeks. Walker vs. total cast
- (3) Endpoint wound size (cm2) 7 weeks. Removable cast walker vs. total cast.
- (4) Endpoint wound area cm2 90 days. Removeable walking boot vs. total cast. Baseline SD...
- (5) Decrease in wound size (cm2) 16 weeks. Temporary custom made footwear vs total cast.

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Forest plot of comparison: 1 Aftagelig vs ikke-aftagelig trykafastning, outcome: 1.9 Sårareal, efter endt behandling, mean difference.

Figure 10 (Analysis 1.10)



Footnotes

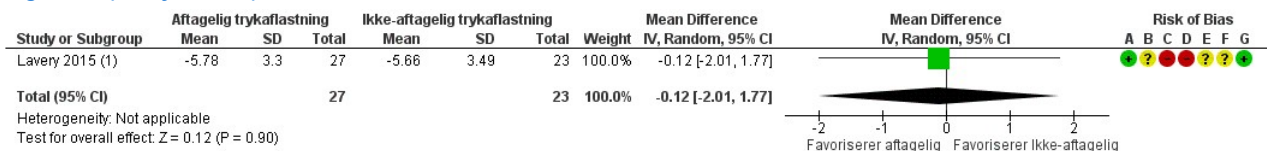
- (1) Percentage surface area reduction 4 weeks. Ankle foot orthosis vs total cast.
- (2) Cm2 change from baseline 90 days. Walker boot vs total cast of fiberglass.
- (3) Endpoint wound size (cm2) 12 weeks. Walker vs. total cast
- (4) Endpoint wound size (cm2) 7 weeks. Removable cast walker vs. total cast.
- (5) Endpoint wound area cm2 90 days. Removeable walking boot vs. total cast. Baseline SD imputed.
- (6) Decrease in wound size (cm2) 16 weeks. Temporary custom made footwear vs total cast.

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Forest plot of comparison: 1 Aftagelig vs ikke-aftagelig trykafastning, outcome: 1.10 Sårareal, efter endt behandling, std. mean difference.

Figure 11 (Analysis 1.11)



Footnotes

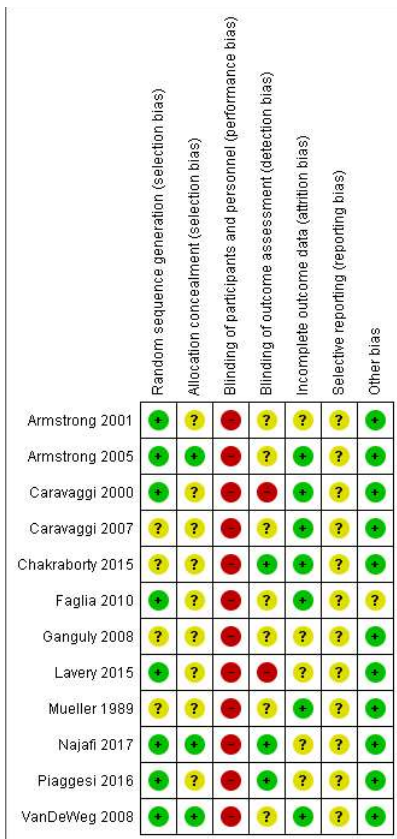
- (1) Able to perform normal daily activities (VAS 0-10).

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

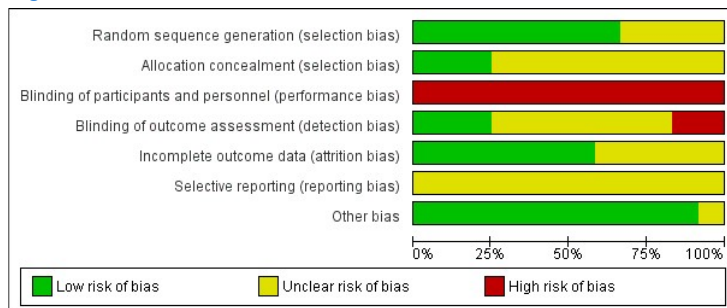
Forest plot of comparison: 1 Aftagelig vs ikke-aftagelig trykafastning, outcome: 1.11 Helbredsrelateret livskvalitet målt med standardiseret spørgeskema, efter endt behandling.

Figure 12



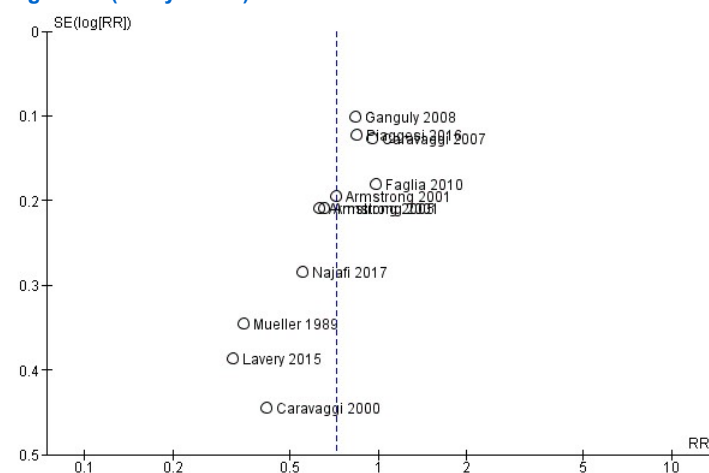
Risk of bias summary: review authors' judgements about each risk of bias item for each included study.

Figure 13



Risk of bias graph: review authors' judgements about each risk of bias item presented as percentages across all included studies.

Figure 14 (Analysis 1.1)



Funnel plot of comparison: 1 Aftagelig vs ikke-aftagelig trykaflastning, outcome: 1.1 Sårheling (total sårlukning (ja/nej)), efter endt behandling.