In-Hospital Sodium Intake for Acute Decompensated Heart Failure

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APPENDIX A. SEARCH STRATEGIES

MEDLINE

(((“Heart Failure”[Mesh] or ((heart failure[tiab] or cardiac failure[tiab] or myocardial failure[tiab] or CHF[tiab]) AND (hospital* OR inpatient OR “Acute Disease”[Mesh] or acute[tiab] or decompensated[tiab])) OR heart decompensation[tiab]) AND ("Saline Solution, Hypertonic"[Mesh] OR Hypertonic Saline OR Hypertonic sodium chloride OR HSS OR salt hypertonic OR Sodium tablets OR "Saline Solution"[Mesh] OR Intravenous saline OR Normal saline OR Hypotonic saline OR Saline solution OR Lactate* ringer's OR "Ringer's Lactate"[Mesh] OR “Diet, Sodium-Restricted”[Mesh] or sodium-restrict* or salt-restrict* or sodium-free or salt-free or low-salt or low-sodium or reduced-salt or reduced-sodium or ((sodium[tiab] or salt[tiab]) AND (restrict*[tiab] or reduc*[tiab] or low[tiab] or free[tiab])))) NOT (“address”[pt] OR “autobiography”[pt] OR “bibliography”[pt] OR “biography”[pt] OR “case reports”[pt] OR “comment”[pt] OR “congress”[pt] OR “dictionary”[pt] OR “directory”[pt] OR “festschrift”[pt] OR “government publication”[pt] OR “historical article”[pt] OR “interview”[pt] OR “lecture”[pt] OR “legal case”[pt] OR “legislation”[pt] OR “news”[pt] OR “newspaper article”[pt] OR “patient education handout”[pt] OR “periodical index”[pt] OR "comment"[ti] OR "Editorial"[Publication Type] OR "ephemera"[pt] OR "in vitro techniques"[mh] OR "introductory journal article"[pt] OR ("Animals"[Mesh] NOT "Humans"[Mesh]) OR (child[Mesh] NOT adult[Mesh]) OR rats[tw] OR rat[tw] OR cow[tw] OR cows[tw] OR chicken*[tw] OR horse[tw] OR horses[tw] OR mice[tw] OR mouse[tw] OR bovine[tw] OR sheep[tw] OR ovine[tw] OR murinae[tw] OR cats[tw] OR cat[tw] OR dog[tw] OR dogs[tw] OR rodent[tw])) AND ("Cohort Studies"[Mesh] OR cohort OR "Clinical Trial" [Publication Type] OR (follow-up OR followup) OR longitudinal OR "Placebos"[Mesh] OR placebo* OR "Research Design"[Mesh] OR "Evaluation Study" [Publication Type] OR "Comparative Study" [Publication Type] OR ((comparative OR Intervention) AND study) OR pretest* OR posttest* OR prepost* OR “before and after” OR interrupted time* OR time serie* OR intervention* OR ((quasi-experiment* OR quasiexperiment* OR quasi OR experimental) AND (method OR study OR trial OR design*)) OR “real world” OR “real-world” OR "Case-Control Studies"[Mesh] OR (case AND control) OR "Random Allocation"[Mesh] OR "Clinical Trial" [Publication Type] OR "Double-Blind Method"[Mesh] OR "Single-Blind Method"[Mesh] OR random* OR "Placebos"[Mesh] OR placebo OR ((clinical OR controlled) AND trial*) OR ((singl* OR doubl* OR trebl* OR tripl*) AND (blind* OR mask*)) OR rct OR crossover OR cross-over OR cross-over OR "treatment switching" OR "Treatment Switching"[Mesh] OR RCT OR "Randomized Controlled Trial" [Publication Type] OR systematic[sb] OR meta-analysis[pt] OR meta-analysis as topic[mh] OR meta-analysis[mh] OR meta analy* OR metanaly* OR metaanaly* OR met analy* OR (systematic AND (review* OR overview*)) OR "Review Literature as Topic"[Mesh] OR cochrane[tiab] OR embase[tiab] OR (psychlit[tiab] or psyclit[tiab]) OR (psychinfo[tiab] or psycinfo[tiab]) OR (cinahl[tiab] or cinhal[tiab] OR “cumulative index to nursing and allied health”) OR science citation index[tiab] OR ibids[tiab] OR “international bibliographic information on dietary supplements” OR cancerlit[tiab] OR reference list*[tiab] OR bibliograph*[tiab] OR hand-search*[tiab] OR relevant journals[tiab] OR manual search*[tiab] OR ((selection OR inclusion OR exclusion) AND criteria[tiab]) OR data extraction[tiab] OR relevant journals OR "Systematic Review" [Publication Type] OR "Comparative Effectiveness Research"[Mesh] or "Comparative Effectiveness")

EMBASE

No.	Query	Results
#64	#45 AND #55 AND #62 AND ([article]/lim OR [article in press]/lim) AND [humans]/lim	5643
#63	#45 AND #55 AND #62	13088
#62	#56 OR #59 OR #60 OR #61	627326
#61	'ringer lactate solution'	9234
#60	(((((((hypertonic AND saline OR hypertonic) AND sodium AND chloride OR hss OR salt) AND hypertonic OR sodium) AND tablets OR intravenous) AND saline OR normal) AND saline OR hypotonic) AND saline OR saline) AND solution OR lactate*) AND ringer*	12542
#59	'sodium chloride'	238797
#58	#45 AND #55 AND #56 AND ([article]/lim OR [article in press]/lim) AND [humans]/lim	4882
#57	#45 AND #55 AND #56	11117
#56	#51 OR #52 OR #53 OR #54	472391
#55	#46 OR #47 OR #48 OR #49 OR #50	10320989
#54	(sodium OR salt) AND (restrict* OR reduc* OR low OR free)	472391
#53	'sodium free' OR 'salt free' OR 'low salt' OR 'low sodium' OR 'reduced salt' OR 'reduced sodium'	14002
#52	'salt restrict'	2
#51	'sodium restriction'	11815
#50	heart AND decompensation	7940
#49	decompensated	32589
#48	acute AND disease	1098740
#47	inpatient	191126
#46	'hospital'	9716334
#45	#41 OR #42 OR #43 OR #44	713122
#44	chf	30735
#43	myocardial AND failure	136191
#42	cardiac AND failure	315468
#41	('heart'/exp OR heart) AND ('failure'/exp OR failure)	686908

COCHRANE

#1	MeSH descriptor: [Heart Failure] explode all trees	12328
#2	heart failure or cardiac failure or myocardial failure or CHF	48961
#3	#1 OR #2	48982
#4	hospital* OR inpatient OR decompensated OR heart decompensation	407267
#5	MeSH descriptor: [Acute Disease] explode all trees	10838
#6	#4 OR #5	413481

#7	sodium-restrict* or salt-restrict* or sodium-free or salt-free or low-salt or low-sodium or reduced-salt or reduced-sodium	2215
#8	MeSH descriptor: [Diet, Sodium-Restricted] explode all trees	701
#9	(sodium or salt) AND (restrict* or reduc* or low or free)	24630
#10	MeSH descriptor: [Saline Solution, Hypertonic] explode all trees	584
#11	MeSH descriptor: [Saline Solution] explode all trees	284
#12	MeSH descriptor: [Ringer's Lactate] explode all trees	281
#13	Hypertonic Saline OR Hypertonic sodium chloride OR HSS OR salt hypertonic OR Sodium tablets OR Intravenous saline OR Normal saline OR Hypotonic saline OR Saline solution OR Lactate* ringer*	32690
#14	#7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13	53612
#15	#3 AND #6 AND #14	2096

CINAHL

((heart failure or cardiac failure or myocardial failure or CHF) AND (hospital OR inpatient or acute or decompensat*)) AND (Hypertonic Saline OR Hypertonic sodium chloride OR HSS OR salt hypertonic OR Sodium tablets OR Intravenous saline OR Normal saline OR Hypotonic saline OR Saline solution OR Lactate* ringer's OR sodium-restrict* or salt-restrict* or sodium-free or salt-free or low-salt or low-sodium or reduced-salt or reduced-sodium OR ((sodium or salt) AND (restrict* or reduc* or low or free)))

CLINICALTRIALS.GOV

Condition: ((heart failure OR cardiac failure OR myocardial failure OR CHF) AND (acute OR decompensat*)) AND

Other terms: (Saline OR Hypertonic sodium chloride OR HSS OR salt OR Sodium OR Lactate ringer)

APPENDIX B. EXCLUDED STUDIES

1. Abshire M, Xu J, Baptiste D, et al. Nutritional interventions in heart failure: a systematic review of the literature. *Journal of Cardiac Failure*. 2015;21(12):989-999. *Systematic Review.*
2. Biao F, Huang L. GW27-e1005 Liberal versus restricted fluid administration in heart failure patients: a meta-analysis of 6 randomized trials. *Journal of the American College of Cardiology*. 2016;68(16_Supplement):C149-C149. doi:doi:10.1016/j.jacc.2016.07.561. *Systematic Review.*
3. Biegus J, Zymlinski R, Siwolowski P, et al. Controlled decongestion by Reprieve therapy in acute heart failure: results of the TARGET-1 and TARGET-2 studies. *European Journal of Heart Failure*. 2019;21(9):1079-1087. *Not sodium intake.*
4. Bikdeli B, Strait KM, Dharmarajan K, et al. Intravenous fluids in acute decompensated heart failure. *JACC: Heart Failure*. 2015;3(2):127-133. *Not sodium intake.*
5. Bocchi E. Hypertonic saline solution in heart failure. 2008. ClinicalTrials identifier: NCT00555685. https://clinicaltrials.gov/study/NCT00555685. *No additional results reported.*
6. Castro-Gutiérrez V, Rada G. Should sodium intake be restricted in chronic heart failure? *Medwave*. 2016;16(Suppl5). *Other; not hospitalized only/This is not primary study but literature review for SRs.*
7. Chimparlee N. Effects of salt and fluid restriction on dyspnea in patients with acute decompensated heart failure. 2020. ICTRP identifier: TCTR20200508002. https://trialsearch.who.int/Trial2.aspx?TrialID=TCTR20200508002. *No additional results reported.*
8. Colin-Ramirez E, Sepehrvand N, Rathwell S, et al. Sodium restriction in patients with heart failure: A systematic review and meta-analysis of randomized clinical trials. *Circulation: Heart Failure*. 2023;16(1):e009879. *Systematic Review.*
9. Covic A, Copur S, Tapoi L, et al. Efficiency of hypertonic saline in the management of decompensated heart failure: a systematic review and meta-analysis of clinical studies. *American Journal of Cardiovascular Drugs*. 2021;21:331-347. *Systematic Review.*
10. Crane C, Hertel A, Hobza C, Menard JR. Does hypertonic saline infusion with furosemide improve outcomes for patients with acute CHF exacerbation? *Evidence-Based Practice*. 2018;21(2):E5-E6. *Other; help desk answer.*
11. d'Almeida KSM, Trojahn MM, Barilli SLS, et al. Preliminary results of a randomized clinical trial on the effect of fluid and dietary sodium restriction in the management of patients with heart failure and preserved ejection fraction. *Journal of Cardiac Failure*. 2016;22(8):S63. *No additional results reported.*
12. da Silva E. Effect of dietary sodium restriction in the management of patients with heart failure and diastolic dysfunction. 2013. ClinicalTrials.gov identifier: NCT01896908. https://clinicaltrials.gov/show/NCT01896908. *No additional results reported.*
13. d'Almeida KS, Rabelo-Silva ER, Souza GC, et al. Effect of fluid and dietary sodium restriction in the management of patients with heart failure and preserved ejection fraction: study protocol for a randomized controlled trial. *Trials*. 2014;15:1-6. *No additional results reported.*
14. De Vecchis R, Baldi C, Cioppa C, Giasi A, Fusco A. Effects of limiting fluid intake on clinical and laboratory outcomes in patients with heart failure. *Herz*. 2016;41(1):63. *Systematic* Review.

15. De Vecchis R, Esposito C, Ariano C, Cantatrione S. Hypertonic saline plus iv furosemide improve renal safety profile and clinical outcomes in acute decompensated heart failure. *Herz*. 2015;40(3):423. *Systematic Review.*
16. De Vecchis R, Paccone A, DiMaio M. Effects of a restricted water intake on various clinical and laboratory outcomes in patients with heart failure: a meta-analysis of randomized controlled trials. *Minerva Cardioangiologica. Retracted.*
17. DiNicolantonio JJ, Di Pasquale P, Taylor RS, Hackam DG. Low sodium versus normal sodium diets in systolic heart failure: systematic review and meta-analysis. *Heart*. 2012. *Systematic Review.*
18. DiNicolantonio JJ, Pasquale PD, Taylor RS, Hackam DG. Low sodium versus normal sodium diets in systolic heart failure: Systematic review and meta-analysis. *Heart. Retracted.*
19. Engelmeier R. Safety and efficacy of low dose hypertonic saline solution and high dose furosemide for congestive heart failure (REaCH). 2009. ClinicalTrials.gov identifier: NCT01028170. https://clinicaltrials.gov/show/NCT01028170. *No additional results reported.*
20. Engelmeier RS, Le TT, Kamalay SE, et al. Randomized trial of high dose furosemide-hypertonic saline in acute decompensated heart failure with advanced renal disease. *Journal of the American College of Cardiology*. 2012;59(13S):E958-E958. *Not sodium intake.*
21. Fabrício CG, Gentil JR, Amato CA, Marques F, Schwartzmann PV, Simões MV. Prospective, randomized and blinded clinical study testing two levels of dietary sodium intake in patients with acute decompensated heart failure. *Journal of Cardiac Failure*. 2016;22(8):S55. *No additional results reported.*
22. Fasullo S, Basile I, Sarullo F, et al. Sodium management in acute and chronic phases in patients with New York Heart Association class III (class C) heart failure. Short- and long-term findings. Journal article; Conference proceeding. *Giornale Italiano di Cardiologia*. 2011;12(5):7S. doi:10.1714/641.7476. *No additional results reported.*
23. Gandhi S, Mosleh W, Myers RB. Hypertonic saline with furosemide for the treatment of acute congestive heart failure: A systematic review and meta-analysis. *International Journal of Cardiology*. 2014;173(2):139-145. *Systematic Review.*
24. García-García A, Alvarez-Sala-Walther LA, Lee H-Y, Sierra C, Pascual-Figal D, Camafort M. Is there sufficient evidence to justify changes in dietary habits in heart failure patients? A systematic review. *The Korean Journal of Internal Medicine*. 2022;37(1):37. *Systematic review.*
25. Gaspare, P. Troponin I release after high diuretic doses (Tra-HSS-Fur).2011. ClinicalTrials.gov identifier: NCT01419132. https://clinicaltrials.gov/study/NCT01419132. *No additional results reported.*
26. Guglin M. Low sodium vs. regular diet in patients admitted for heart failure (SALT). 2016. Clinicaltrials.gov identifier: NCT02689635. https://clinicaltrials.gov/show/NCT02689635. *No additional results reported.*
27. He L, Sun L, Yang Y, et al. Clinical experience of supplying sodium chloride for the treatment of patients with severe heart failure. *Zhonghua xin xue Guan Bing za zhi*. 2012;40(9):766-769. *Not sodium intake.*
28. Ingrassia O. Sodium management in acute and chronic heart failure (SMAC-HF). 2000. ClinicalTrials.gov identifier: NCT01156337. https://ClinicalTrials.gov/show/NCT01156337. *No additional results reported.*

29. Inuzuka Y, Kishimori T, Inoue T, et al. Sodium restriction in Japanese patients hospitalized with acute decompensated heart failure. *Journal of Cardiac Failure*. 2015;21(10):S183. *No additional results reported.*
30. Issa V, Ayub-Ferreira S, Bacal F, et al. Prevention of renal dysfunction with hypertonic saline solution in patients with decompensated heart failure: a prospective, double blind, randomized, placebo-controlled trial. *European Heart Health.* 2011:162-163. *No additional results reported.*
31. Issa VS, Ayub-Ferreira S, Bacal F, et al. Hypertonic saline solution for prevention of renal dysfunction in patients with decompensated heart failure (HYSS-HF STUDY): A double-blind, randomized controlled trial. *Journal of the American College of Cardiology*. 2011;57(14S):E218-E218. *No additional results reported.*
32. Issa VS, Bacal F, Mangini S, et al. Hypertonic saline solution for renal failure prevention in patients with decompensated heart failure. *Arquivos Brasileiros de Cardiologia*. 2007;89:251-255. *No additional results reported.*
33. Issa VS, Bacal F, Mangini S, et al. Hypertonic saline solution for renal failure prevention in patients with decompensated heart failure. *Arquivos Brasileiros de Cardiologia*. 2007;89:251-255. *Other; pre-post (N=9).*
34. Issa VS, Ayub-Ferreira S, Bacal F, et al. Hypertonic saline solution for prevention of renal dysfunction in patients with decompensated heart failure-prospective, double blind, randomized, placebo-controlled trial. *European Heart Health*. *No additional results reported.*
35. Krim SR, Campbell PT, Desai S, et al. Management of patients admitted with acute decompensated heart failure. *Ochsner Journal*. 2015;15(3):284-289. *Other; Literature review.*
36. Lee Y-W, Huang L-H, Ku C-H. Use of dietary sodium intervention effect on neurohormonal and fluid overload in heart failure patients: Review of select research based literature. *Applied Nursing Research*. 2018;42:17-21. *Systematic Review.*
37. Li Z, Wang Z, Liu N, Li H. Effect of hypertonic saline solution combined with furosemide on acute heart failure: A meta-analysis. *Computational and Mathematical Methods in Medicine*. 2022: 5728967. *Systematic Review.*
38. Liu C, Peng Z, Gao X, et al. Simultaneous use of hypertonic saline and IV furosemide for fluid overload: A systematic review and meta-analysis. *Critical Care Medicine*. 2021;49(11):e1163-e1175. *Systematic Review.*
39. Mahtani KR, Heneghan C, Onakpoya I, et al. Reduced salt intake for heart failure: a systematic review. *JAMA Internal Medicine*. 2018;178(12):1693-1700. *Systematic Review.*
40. Nalos M. 0.5M Na Lactate solution in acute heart failure (AHF) (SOLACE1). 2009. ClinicalTrials identifier: NCT01981655. https://clinicaltrials.gov/study/NCT01981655. *Not sodium intake.*
41. Nouira S. Impact of hypertonic saline solution on acute decompensated heart failure (HSS). 2018. ClinicalTrials.gov identifier: NCT05298098. https://clinicaltrials.gov/show/NCT05298098. *No additional results reported.*
42. Okuhara Y. Evaluation of neurohumoral factors and water clearance for treating acute decompensated heart failure with salt. 2017. ICTRP identifier: JPRN-UMIN000029129. https://trialsearch.who.int/Trial2.aspx?TrialID=JPRN-UMIN000029129. *No additional results reported.*
43. Patel N, Patel M, Elzanaty A, et al. Efficacy and safety of hypertonic saline solution with furosemide in patients with acute decompensated heart failure: A systematic review and

meta-analysis. *Journal of the American College of Cardiology*. 2021;77(18_Supplement_1):611-611. *Systematic Review.*

44. Paterna S, Di Gaudio F, La Rocca V, et al. Hypertonic saline in conjunction with high-dose furosemide improves dose–response curves in worsening refractory congestive heart failure. *Advances in Therapy*. 2015;32:971-982. *Not sodium intake.*
45. Reilly CM, Anderson KM, Baas L, et al. American Association of Heart Failure Nurses Best Practices paper: Literature synthesis and guideline review for dietary sodium restriction. *Heart & Lung: The Journal of Cardiopulmonary and Acute Care*. 2015;44(4):289-298. *Systematic Review.*
46. Shaughnessy A. Is furosemide and hypertonic saline more effective than furosemide alone for severe heart failure? *Evidence Based Practice. No additional results reported.*
47. Silva-Neto, L. Fluid and salt restriction in decompensated heart failure patients. 2009. ClinicalTrials identifier: NCT01133236. https://clinicaltrials.gov/study/NCT01133236. *No additional results reported.*
48. Simão DO, da Costa RJ, Verneque BJF, do Amaral JF, Chagas GM, Duarte CK. Sodium and/or fluid restriction and nutritional parameters of adult patients with heart failure: A systematic review and meta-analysis of randomized controlled trial. *Clinical Nutrition ESPEN*. 2021;45:33-44. *Systematic Review.*
49. Simões M. Dietary sodium intake in acute heart failure (SODIC). 2014. ClinicalTrials.gov identifier: NCT03722069. https://clinicaltrials.gov/study/NCT03722069. *No additional results reported.*
50. Sousa MM, Gouveia BLA, Almeida TCF, Freire MEM, Melo FABP, Oliveira SHS. Evidence related to sodium restriction in patients with heart failure. *Revista Brasileira de Enfermagem*. 2020;73. *Outpatient CHF.*
51. Stein C, Helal L, Migliavaca CB, et al. Are the recommendation of sodium and fluid restriction in heart failure patients changing over the past years? A systematic review and meta-analysis. *Clinical Nutrition ESPEN*. 2022;49:129-137. *Systematic Review.*
52. Tang, WH. Oral Sodium to Preserve Renal EfficiencY in Acute Heart Failure (OSPREY-AHF). 2020. ClinicalTrials.gov identifier: NCT04334668. https://clinicaltrials.gov/study/NCT04334668. *No additional results reported.*
53. Torres GS, Posadas C, Tena I, Boyer J, Enríquez C. Use of a normal sodium diet in the diuretic treatment of refractory cardiac insufficiency. *Archivos del Instituto de Cardiologia de Mexico*. 1982;52(6):507-515. *Not sodium intake.*
54. Vijayan A. Concentrated saline infusions and increased dietary sodium with diuretics for heart failure with kidney dysfunction. 2007. ClinicalTrials.gov identifier: NCT00575484. https://clinicaltrials.gov/show/NCT00575484. *No additional results reported.*
55. Wu S, Alikhil M, Forsyth R, Allen B. Impact of potentially unwarranted intravenous antibiotics targeting pulmonary infections in acute decompensated heart failure. *Journal of Pharmacy Technology*. 2021;37(6):298-303. *Not sodium intake.*
56. Yang J. Tolvaptan for treatment of decompensated heart failure patients with diuretic resistance and hyponatremia. *Academic Journal of Second Military Medical University*. 2015:1133-1137. *Not sodium intake.*
57. Yayla C, Akyel A, Canpolat U, et al. Comparison of three different diuretic treatment strategies in acute decompensated heart failure patients. *European Heart Journal*. 2017;38. *No additional results reported.*
58. Zepeda P, Rain C, Sepúlveda P. What are the effects of hypertonic saline plus furosemide in acute heart failure. *Medwave*. 2015;15(Suppl 2):e6233. *Systematic Review.*

59. Zhu C, Cheng M, Su Y, Ma T, Lei X, Hou Y. Effect of dietary sodium restriction on the quality of life of patients with heart failure: A systematic review of randomized controlled trials. *Journal of Cardiovascular Nursing*. 2022;37(6):570-580. *Systematic Review.*
60. Ezekowitz JA, Colin-Ramirez E, Ross H, et al. Reduction of dietary sodium to less than 100 mmol in heart failure (SODIUM-HF): an international, open-label, randomised, controlled trial [published correction appears in Lancet. 2022 Oct 8;400(10359):1194]. *Lancet*. 2022;399(10333):1391-1400. doi:10.1016/S0140-6736(22)00369-5

APPENDIX C. CRITERIA USED IN QUALITY ASSESSMENT

Question	Yes	No	Unclear
Clarity			
1. Clear reporting with no discrepancies (Y/N)			
2. Were eligibility criteria clear? (Y/N)			
3. Were interventions adequately described? (Y/N)			
4. Were the outcomes fully defined? (Y/N)			
Bias Assessment			
5. Random sequence generation: Selection bias (biased allocation to interventions) due to inadequate generation of a randomized sequence.			
6. Allocation concealment: Selection bias (biased allocation to interventions) due to inadequate concealment of allocations prior to assignment.			
7. Blinding of participants and personnel: Performance bias due to knowledge of the allocated interventions by participants during the study.			
8. Blinding of outcome assessor (detection bias): Detection bias due to knowledge of the allocated interventions by outcome assessors.			
9. Incomplete outcome data (attrition bias): Attrition bias due to amount, nature or handling of incomplete outcome data.			
10. Selective Reporting (reporting bias): Reporting bias due to selective outcome reporting.			
11. Intention-to-treat-analysis: Bias due to incomplete reporting and analysis according to group allocation.			
12. If observational study, comparator group was sufficiently similar (and selected patients were all included or a random sample were included).			
13. If observational study, Adjustment for confounders. a. Crude analysis (unadjusted comparison between ADP and no ADP) [High RoB] b. Regression adjustment or patient-matching (accounting for at least age, sex, and symptom duration OR a risk score) [Low RoB] c. Regression adjustment or patient-matching (not accounting at least one of for age, sex, symptom duration, or risk score) [Moderate RoB] d. Propensity score analysis (or equivalent) [Low RoB]			

Author, Year, PMID, Design	Free of Discrepancies	Eligibility Clear	Intervention Clear	Outcomes Adequately Defined	Blinding		Incomplete Outcome Data	Selective Reporting	RCT			NRCS		Overall RoB
					Participants and Personnel	Outcome Assessor			Random Sequence Generation	Allocation Concealment	ITT	Comparator Group Similar	Confounder Adjustment	
Dietary Interventions														
Aliti, 2013, 23689381, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (high concern)	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	N/A	N/A	Low RoB (RCT)
Fabricio, 2019, 31221280, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (high concern)	Yes (low concern)	Yes (high concern)[a]	No (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	N/A	N/A	High RoB (RCT)
D'Almeida, 2018, 29793053, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (high concern)	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	N/A	N/A	Low RoB (RCT)
Velloso, 1991, 1824218, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (high concern)	Yes (low concern)	Unclear	Unclear	No (high concern)[b]	No (high concern)[b]	Unclear	N/A	N/A	High RoB (RCT)
Inuzuka, 2016, NRCS[c]	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (high concern)	N/A	Unclear	Unclear	Unclear	N/A	N/A	N/A	Yes (low concern)	Yes (low concern)	Moderate RoB (NRCS)
Saline Solution Interventions														
Issa, 2013, 22243938, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	N/A	N/A	Low RoB (RCT)
Paterna, 2005, 15963399, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low concern)	No (low concern)	No (high concern)[d]	No (high concern)[d]	Yes (low concern)	N/A	N/A	High RoB (RCT)
Wan, 2017, 28701670, RCT	No (high concern)[e]	Yes (low concern)	Yes (low concern)	No (high concern)[f]	No (high concern)	No (high concern)	No (low concern)	No (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	N/A	N/A	High RoB (RCT)
Mahjoob, 2021, 34903983, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Unclear	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Unclear	Yes (low concern)	N/A	N/A	Moderate RoB (RCT)
Tuttolomondo, 2011, 20346637, NRCS	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Unclear	Yes (low concern)	No (low concern)	No (low concern)	N/A	N/A	N/A	Yes (low concern)	No (high concern)[g]	High RoB (NRCS)
Licata, 2003, 12660669, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (high concern)	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	N/A	N/A	Low RoB (RCT)
Paterna, 2000, 10938493, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (high concern)	Yes (low concern)	Unclear	No (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	N/A	N/A	Moderate RoB (RCT)

Author, Year, PMID, Design	Free of Discrepancies	Eligibility Clear	Intervention Clear	Outcomes Adequately Defined	Blinding		Incomplete Outcome Data	Selective Reporting	RCT			NRCS		Overall RoB
					Participants and Personnel	Outcome Assessor			Random Sequence Generation	Allocation Concealment	ITT	Comparator Group Similar	Confounder Adjustment	
Paterna, 2011, 21701268, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (high concern)	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	N/A	N/A	Low RoB (RCT)
Parrinello, 2012, 22980301, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Unclear	Yes (low concern)	N/A	N/A	Low RoB (RCT)
Yayla, 2015, 26135463, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (high concern)[h]	Yes (low concern)	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	N/A	N/A	Low RoB (RCT)
Parrinello, 2011, 21440872, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	N/A	N/A	Low RoB (RCT)
Tuttolomondo, 2021, 34288546, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (high concern)	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Unclear	Yes (low concern)	N/A	N/A	Moderate RoB (RCT)
Okuhara, 2014, 24462960, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Unclear	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Unclear	Yes (low concern)	N/A	N/A	Low RoB (RCT)
Roul, NRCS[c]	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (high concern)	Unclear	Yes (low concern)	Unclear	Unclear	N/A	N/A	N/A	No (high concern)	No (high concern)	High RoB (NRCS)
Montgomery, 2023, 37044281, RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low concern)	No (low concern)	Yes (low concern)	Unclear	Yes (low concern)	N/A	N/A	Low RoB (RCT)

Notes. [a] 30% of participants had missing outcome data; [b] Randomization based on odd or even of medical record number; [c] Conference abstract with limited methodological details; [d] assignment of patient was decided by an independent physician; [e] Sample sizes and outcome events in the table are different than in text; [f] Outcomes not clearly defined in the methods section; [g] Match treatment and comparison group by age and sex and then conducted unadjusted comparisons; [h] For outcomes reported once patients reach compensated state; unclear when this occurred.
Abbreviations. ITT=intention to treat; NRCS=nonrandomized comparative study; RCT=randomized controlled trial.

APPENDIX D. DESIGN DETAILS

Author, Year, PMID, Protocol Number, Country	Study Design	Study Dates	Study Location Details (Hospital Type, Centers)	Inclusion Criteria	Exclusion Criteria
Aliti, 2013, 2368938, NCT01133236, Brazil	RCT	2009-2012	Academic, Single center	Boston criteria ≥ 8, (LV)EF ≤ 45% Length of stay of no more than 36 hours after hospital admission, ≥ 18 yo	Cardiogenic shock, endogenous creatinine clearance rate of 30 mL/min/1.73m^2, survival compromised due to other underlying disease or hinder treatment adherence (*eg*, dementia, cognitive deficits)
Fabricio, 2019, 31221280, NCT03722069, Brazil	RCT	2014-2016	Academic, Single center	Framingham, ≥ 18 yo	ACS, ADHF secondary to acute renal failure, creatinine clearance <30 ml/ min/1.73 m², stroke, dementia, severe cognitive impairment, cancer, decompensated DM, severe liver disease, septic shock, acute or chronic primary disease of the renal parenchyma, cerebrovascular accident, nutritional disorders or unable to ingest food by mouth, vomiting, dysphagia, or gastroenteritis
d'Almeida, 2018, 29793053, NCT01896908, Brazil	RCT	2013-2016	Academic, Single center	(LV)EF ≥50%, ≥18 yo, Overt clinical signs of congestion, dyspnea, orthopnea in the week before hospitalization, BNP >100 pg/mL	Cardiogenic shock, eGFR ≤ 30 mL/min, HF due to severe valvular disease, difficulty in adhering to treatment (*eg*, dementia or cognitive deficits)
Inuzuka, 2016, Japan	NRCS	2011-2012	Not reported	NYHA: II-IV, median BNP 856 pg/mL	NR
Velloso, 1991, 1824218, Brazil	RCT	NR	Academic, Single center	NYHA: III or IV	Systemic arterial hypertension (upper DBP to 110mmHg), significant pulmonary arterial hypertension, renal insufficiency (serum creatinine > 2mg%), restrictive syndrome cases
Issa, 2013, 22243938 NCT00555685 Brazil	RCT	2008-2010	Academic[a], Single center	≥18 yo, diagnosed DHF with congestive phenomena, (LV)EF: < 40%	Patient refusal, signs of hypoperfusion, alcohol abuse, primary valvular disease, MI or unstable angina within 6 months, cardiac surgery or angioplasty, restrictive cardiomyopathy, COPD, immunosuppressive therapy, malignant tumors, acute pulmonary embolism, surgical

Author, Year, PMID, Protocol Number, Country	Study Design	Study Dates	Study Location Details (Hospital Type, Centers)	Inclusion Criteria	Exclusion Criteria
					intervention or infections in last 30 days, serum creatinine > 3.0 mg/dL, serum potassium > 5.5 mg/dL, severe systemic disease expected to impair survival, pregnancy or childbearing potential, no clinical parameters of hypoperfusion at the time of enrollment
Licata, 2003, 12660669 Italy	RCT	1996-1999	Single center	Refractory CHF according to Framingham criteria and NYHA, uncompensated CHF (dyspnea, weakness, lower limb edema, or anasarca) of NYHA IV, unresponsive to treatment with high oral doses of furosemide and/or combinations of diuretics (thiazide, loop diuretic, and spironolactone), ACEIs, digitalis, nitrates, and receiving this therapy at least 2 weeks before the study and hospitalization. Patients being unresponsive when they showed with a reduction of urine volume and a constant increase of body weight (BW) and the impairment of clinical signs of CHF despite the increase of furosemide and the combination of other diuretics. LV(EF) < 35%, serum creatinine < 2 mg/dL, BUN ≤ 60 mg/dL, a reduced urinary volume, and a low natriuresis. None of the patients had to take non-steroid anti-inflammatory drugs.	NR
Mahjoob, 2021, 34903983 IRCT20200812048380N1 Iran	RCT	2018-2019	Academic, Single center[b]	≥18 yo with diffuse peripheral edema with no response to oral furosemide (80 mg), patients with proteinuria and edema resistant to treatment and nephrotic syndrome	Candidate for hemodialysis, pacemaker implantation, SBP ≤ 80 mmHg, GFR ≤ 15 mL/min, serum albumin ≤ 2.5 g/dL, serum potassium ≥ 5.5 mEq/L, serum sodium > 145 mEq/L, urine volume ≤ 100 mL/ d, dementia, cerebral vascular disease, substance or alcohol addiction, receiving mineralocorticoids, inability to give informed consent

Author, Year, PMID, Protocol Number, Country	Study Design	Study Dates	Study Location Details (Hospital Type, Centers)	Inclusion Criteria	Exclusion Criteria
Okuhara, 2014, 24462960 Japan	RCT	2011-2012	Academic, Single center[c]	ADHF with symptoms of NYAH III/IV and SBP > 80 mmHg, eGFR > 15 mL/min/1.73 m^2, serum sodium < 148 mmol/L	Use of inotropic agents, carperitide, hemodiafiltration or noninvasive positive pressure ventilation (NPPV), complicated by systemic infection, ACS, or distinct endocrine diseases (*eg*, syndrome of inappropriate secretion of antidiuretic hormone)
Paterna, 2000, 10938493 Italy	RCT	1996-1998	NR	Refractory CHF according to Framingham criteria and NYHA, DCHF (dyspnea, weakness, lower limb edema, or anasarca) of NYHA IV, unresponsive to treatment with high oral doses of furosemide and/or combinations of diuretics (thiazide, loop diuretic, and spironolactone), ACEIs, digitalis, nitrates, and receiving this therapy at least 2 weeks before the study and hospitalization. Patients being unresponsive with a reduction of urine volume and a constant increase of body weight and impairment of clinical signs of CHF despite the increase of furosemide and the combination of other diuretics. LV(EF) < 35%, serum creatinine < 2 mg/dL, BUN ≤ 60 mg/dL, a reduced urinary volume, and a low natriuresis. None of the patients had to take non-steroid anti-inflammatory drugs.	NR
Paterna, 2005, 15963399, Italy	RCT	2000-2002	NR	Refractory CHF according to Framingham criteria and NYHA, DCHF (dyspnea, weakness, lower limb edema, or anasarca) of NYHA IV, unresponsive to treatment with high oral doses of furosemide and/or combinations of diuretics (thiazide, loop diuretic, and spironolactone), ACEIs, digitalis, nitrates for at least 2 weeks before the study and hospitalization. Patients being unresponsive with a reduction of urine volume and a constant increase of body weight and impairment of clinical signs of CHF despite the increase of furosemide and the combination of other diuretics.	NR

Author, Year, PMID, Protocol Number, Country	Study Design	Study Dates	Study Location Details (Hospital Type, Centers)	Inclusion Criteria	Exclusion Criteria
				LV(EF) < 35%, serum creatinine < 2 mg/dL, BUN ≤ 60 mg/dL, a reduced urinary volume (<500 ml/24 h), and a low natriuresis. None of the patients had to take non-steroid anti-inflammatory drugs	
Paterna, 2011, 21701268 NCT01156337 Italy	RCT	2000-2007	Academic, Single center[d]	DHF by chronic ischemic or nonischemic cardiomyopathy, > 18 years, Framingham criteria and NYHA functional classification for HF, uncompensated HF (dyspnoea, weakness and lower limb edema), in NYHA III functional class, was unresponsive to treatment with oral high doses of furosemide, spironolactone, ACEIs, digitalis nitrates at least 4 weeks before the study and before hospitalization. Patients were judged unresponsive with a reduction of urine volume, a constant increase of body weight and an impairment of clinical HF despite the increase of furosemide. LV(EF) < 40%, serum creatinine < 2.5 mg/dL, BUN < 60 mg/dL and reduced urinary volume (800 mL/d) despite the established treatments. No patients received NSAIDs.	NYHA class < III or > III on admission or with NYHA class III at discharge, with concomitant main comorbidities, cerebral vascular disease, dementia, cancer, uncompensated diabetes, severe hepatic disease, inability to give informed consent, requiring pacemaker implantation and those with an alcoholic habit, declined to take part in the study protocol, patients with side effects for ACEI treatment (cough), patients who did not follow the assigned treatment, did not attend the scheduled clinical visits, did not adhere to prescribed diet and the fluid intake of 1000 mL/day or had a reduction or discontinuation of prescribed treatments during follow-up.
Parrinello, 2011, 21440872 Italy	RCT	2007-2008	Academic, Single center	Framingham criteria, NYHA functional classification for CHF; DCHF (dyspnea, weakness, lower limb edema or anasarca), NYHA functional class IV, unresponsive to treatment with oral high doses of furosemide and combinations of diuretics (thiazide, furosemide, and spironolactone), ACEIs, digitalis, beta-blockers, nitrates for at least 2 weeks before the study and hospitalization. Patients being unresponsive with reduction in urine volume, a constant increase in body weight, and an impairment in the clinical signs of HF, despite the increase in furosemide and its combination with other diuretics. LV(EF) < 40%; serum creatinine < 2.0 mg/d; BUN < 60 mg/dL; reduced urinary volume (<500 mL/24 h); low natriuresis (< 60 mEq/24	Patients unable to provide informed consent; those with cardiac resynchronization therapy (to avoid interference with echocardiographic measurements); patients with concomitant important comorbidities, such as end-stage of renal insufficiency or those on dialysis; uncompensated diabetes; cerebral vascular disease; dementia; cancer; liver cirrhosis or other edematous syndromes; patients being treated with steroids or nonsteroidal antiinflammatory drugs (NSAIDs) or who were alcohol dependent; and those who did not follow the treatment protocol (a fluid intake of 1,000 mL day and prescribed sodium diet). In addition, patients with side effects for ACE inhibitors (a cough), even if

Author, Year, PMID, Protocol Number, Country	Study Design	Study Dates	Study Location Details (Hospital Type, Centers)	Inclusion Criteria	Exclusion Criteria
				h), despite having received the established treatments and no cardiac resynchronization therapy. None of the patients had taken NSAIDs.	these patients were taking angiotensin-2 blockers, were excluded from the study to maximize the homogeneity of the treatments.
Parrinello, 2012, 22980301 NCT01419132 Italy	RCT	2011	Academic, Single center	ADHF according to the AHA/ ESC guidelines and who met criteria on hospital admission as follows; signs/symptoms of HF; NYHA functional class III or IV on admission due to an exacerbation of symptoms with at least 1 class deterioration; evidence of systolic dysfunction on echocardiographic examination on admission ([EF] < 45%); BNP levels on admission > 100 pg/mL. 18-95 yo	NYHA class < III on admission; patients with ASC, pulmonary thromboembolism, cardiac tamponade, pericarditis, renal insufficiency (serum creatinine > 2.5 mg/dL, BUN > 60 mg/dL), dialysis, chronic liver disease, pleuropneumonia, blood and autoimmune diseases, concomitant other important comorbidity, cerebral vascular disease, dementia, cancer, or uncompensated diabetes; decline to provide informed consent, patients requiring pacemaker implantation and those with issues of excessive alcohol consumption. None of the patients took NSAIDS.
Roul, 2017 France	NRCS, Retrospective	2013-2015	Single center	Patients admitted for heart failure with low plasma sodium level at entry or treated with hypertonic saline solution during hospitalization	NR
Tuttolomondo, 2011, 20346637 Italy	NRCS, Prospective	2005-2009	Single center	Patients admitted with heart failure according to ESC or NYHA functional class II or worse plus objective evidence of cardiac dysfunction (LV)EF: < 30% or abnormal diastolic function echocardiographically detected, normal systolic function at rest without signs of CHF	Acute myocarditis, active pulmonary and liver disease, autoimmune disorders, infections, malignant diseases, muscle diseases, renal insufficiency (serum creatinine ≥ 2.5 mg/dL), chronic inflammatory diseases, rheumatological diseases, hematological disease, regular treatment with anti-inflammatory drugs
Tuttolomondo, 2021, 34288546 NCT04628325 Italy	RCT	2017-2019	Single center[e]	ADHF due to HFrEF according to the European Society of Cardiology (ESC) criteria or NYHA functional class II or worse plus objective evidence of cardiac dysfunction (LV)EF < 40%, >18 yo	Acute myocarditis, active pulmonary and liver disease, autoimmune disorders, infections, malignant diseases, muscle disorders, renal insufficiency (serum creatinine ≥ 2.5 mg/dL), chronic inflammatory diseases, rheumatological diseases, hematological diseases, regular treatment with anti-inflammatory drugs.

Author, Year, PMID, Protocol Number, Country	Study Design	Study Dates	Study Location Details (Hospital Type, Centers)	Inclusion Criteria	Exclusion Criteria
Wan, 2017, 28701670 China	RCT	2017	Single center	DHF (dyspnoea, weakness, lower limb edema or anasarca) and chronic ischemic or nonischemic cardiomyopathy according to the definition of HF, Framingham criteria, and NYHA functional classification for HF; unresponsive to treatment with high doses of furosemide, spironolactone, ACEIs, digitalis, and nitrates (reduction of urine volume, a constant increase of body weight, and impairments caused by clinical HF as reported above, in spite of an increase in furosemide and a combination of other diuretics; had started this therapy at least 6 months before hospitalization. LV(EF) < 40%, serum creatinine < 1.73 mg/dL, BUN < 60 mg/dL, urinary volume < 500 mL/d.	Age < 18 years; plasma albumin < 30 g/L; cancer, severe diabetes, cerebral vascular disease, dementia, or severe hepatic disease; NYHA class > III or < III on admission or with NYHA class III at discharge; failure to follow the assigned treatment; did not attend scheduled clinical visits, did not follow the prescribed diet, or serious water or activity restrictions.
Yayla, 2015, 26135463 Turkey	RCT	2011-2012	Academic, Single center	ADHF with reduced or preserved LVEF, Patients who were admitted to the emergency department within the previous 24 h with diagnosis of ADHF, pro-BNP > 300 pg/ml	IV diuretic use before admission to hospital, serum creatinine levels > 2.0 mg/dl, SBP < 90 mmHg; requiring IV vasodilators or inotropic agents other than digoxin, patients with suspected ACS
Montgomery, 2023, 37044281 United States	RCT	2020-2022	Academic, Single center	≥ 18 yo, admitted to cardiology floor (non-ICU) with primary diagnosis of DHF, NT-proBNP >1000 ng/L, Initiation of continuous furosemide infusion of ≥ 10 mg/hr	Renal replacement therapy, ultrafiltration, eGFR < 15mL/min/1.73m2, average SBP > 180mmHg, DBP > 100mmHg for 24 h, serum sodium concentration <120mEq/L or >145mEq/L, admission with intention to undergo open heart surgery, inability to swallow or absorb oral medications, diagnosis of diabetes insipidus, use of IV inotropes, vasopressors or vasodilators at enrollment, anticipated stay of fewer than 72 h, use of intravenous radiocontrast in the prior 72 h or anticipated use during current hospitalization, current use of NaCl tablets or vasopressin antagonist medication.

Notes. [a] Tertiary hospital dedicated to cardiology; [b] Patients admitted to post CCU ward; [c] Patients admitted to Division of Cardiovascular Medicine; [d] Patients admitted to Emergency Medicine and Cardiology Department; [e] Patients admitted to Internal Medicine ward.
Abbreviations. ACE=angiotensin converting enzyme; ACEI= angiotensin converting enzyme inhibitor; ACS=acute coronary syndrome; ADHF=acute decompensated heart failure; AHA=American Heart Association; BNP=brain (or B-type) natriuretic peptide; BP=blood pressure; BUN=blood urea nitrogen;

CCU=critical care unit; COPD=chronic obstructive pulmonary disease; DBP=diastolic blood pressure; DHF=decompensated heart failure; DM=diabetes mellitus; ED=emergency department; eGFR=estimated glomerular filtration rate; ESC=European Society of Cardiology; GFR=glomerular filtration rate; h=hour; HF=heart failure; ICU=intensive care unit; IV=intravenous; LVEF=left ventricular ejection fraction; m=meter; MI=myocardial infraction; min=minute; mL=milliliter; mmHg= millimeters of mercury; NR=not reported; NRCS=nonrandomized comparative studies; NSAIDs=non-steroidal anti-inflammatory drugs; NT-proBNP=N-terminal pro-brain (or B-type) natriuretic peptide; NYHA= New York Heart Association; pro-BNP= pro B-type Natriuretic Peptide; RAAS= renin-angiotensin-aldosterone system; RCT=randomized controlled trial; SBP=systolic blood pressure; yo=years old.

APPENDIX E. BASELINE CHARACTERISTICS

Author, Year, PMID	N Analyzed	Race/Ethnicity, %	Age, Mean (SD) or %	Male, %	Clinical Features, Mean (SD) or %	Heart Failure Classification, Mean (SD) or %	Medication History, %
Aliti, 2013, 23689381	75	White, 84 Other races, NR	60 (11.0)	69	NR	LVEF (%), 26.0 (8.7) NYHA III, 47 NYHA IV, 45	Metoprolol tartrate, 56 Carvedilol, 3 Captopril, 48 Enalapril maleate, 29 ARBs, 11 Spironolactone, 51 Hydralazine, 29 Furosemide, 81 Hydrochlorothiazide, 12
Fabricio, 2019, 31221280	44	NR	57.9 (12.0)	59.1	Weight, 77.1 (23.7) SBP, 109.2 (23.1) DBP, 70.8 (18.2) MAP, 83.7 (19.5) HR, 73.6 (12.2) Serum Na, 135.3 (4.9)	LVEDD (mm), 63.2 (12.2) LVEF (%), 28.9 (12.6)	β-blockers, 79.5[a] ACEIs, 43.2[a] ARBs, 20.5[a] Hydralazine, 29.5[a] Furosemide, 88.6[a] Nitrate, 29.5[a]
d'Almeida, 2018, 29793053	53	White, 81.1 Other races, NR	72.3 (11.7)	32.1	SBP, 127.0 (25.9) DBP, 70.5 (12.9)	LVEF (%), 60.9 (7.5) NYHA II, 9.5 NYHA III, 50.9 NYHA IV, 39.6	β-blockers, 75.5 ACEIs, 64.2 ARBs, 17 Spironolactone, 26.4 Hydralazine, 18.9 Furosemide, 83 Hydrochlorothiazide, 11.3
Inuzuka, 2016	190	NR	79 (Med)	NR	BNP, 856 (Med)	NYHA II-IV, 100	NR
Velloso, 1991, 1824218	32	NR	54	56.3	NR	NYHA III, 28.6% in low sodium diet group NYHA IV, 71.4% in low sodium diet group	Furosemide, 100 Hydrochlorothiazide, 100 Digitalis, 100 Amiloride, 100

Author, Year, PMID	N Analyzed	Race/Ethnicity, %	Age, Mean (SD) or %	Male, %	Clinical Features, Mean (SD) or %	Heart Failure Classification, Mean (SD) or %	Medication History, %
Issa, 2013, 22243938	32	NR	47.4 (13.1)	81.3	BMI, 27.7 (6.1) SBP, 101.6 (15.5) DBP, 65.2 (9.1) Serum Na, 136.7 (3.5)	LVEDD (mm), 71.6 (9.7) LVEF (%), 23.9 (6.3)	β-blockers, 78.1 ACEIs, 56.4 Spironolactone, 43.8 Hydralazine, 56.3 Digoxin, 28.1 Dobutamine, 34.4
Licata, 2003, 12660669	107	NR	74.6 (7)	63.6	SBP, 143.5 (23.5) DBP, 81 (13.5) HR, 83.5 (14) Serum Na, 135.3 (7.5)	LVEF (%), 30.4 (4) NYHA IV, 100	NR[b]
Mahjoob, 2021, 34903983	28	NR	65.1(12.9)	53.6	Weight, 83.2 (20.5) SBP, 123.3 (19.7) DBP, 72.5 (8.7) HR, 80.3 (72-110) [Med (full range)] Serum Na, 135.1 (4.1)	NR	NR
Okuhara, 2014, 24462960	44	NR	72 (10.5)	68.2	NR	LVEF (%), 34.5 (26.5,41) [Med (IQR)] NYHA III, 54.5 NYHA IV, 45.5	ACEIs/ ARBs, 65.9 Loop diuretics, 68.2 Aldosterone antagonists, 40.9 Thiazide diuretics, 15.9 β-blockers, 65.9
Paterna, 2000, 10938493	60	NR	73.9 (6.9) 65-90 yo (Range)	65	Weight, 73.4 (9.2) SBP, 143.5 (25.7) DBP, 81.4 (14.1) HR, 83.3 (14.6) Serum Na, 135.3 (7.4)	LVEF (%), 30.3 (4.3) NYHA IV, 100	NR
Paterna, 2005, 15963399	94	NR	74.6 (7)	63.8	Weight, 75.9 (15.5) SBP, 145.5 (21.5) DBP, 81 (13.5) HR, 83 (13.5) Serum Na, 134.4 (6.5)	LVEF (%), 30.2 (3) NYHA IV, 100	NR

Author, Year, PMID	N Analyzed	Race/Ethnicity, %	Age, Mean (SD) or %	Male, %	Clinical Features, Mean (SD) or %	Heart Failure Classification, Mean (SD) or %	Medication History, %
Paterna, 2011, 21701268	1927	NR	74.1(12)	62.9	Weight, 83.6 (14) SBP, 135.5 (15.5) DBP, 76 (7.5) HR, 89 (19.5) Serum Na, 138.3 (7.5)	LVEF (%), 34.1 (4.5) NYHA III, 100	Carvedilol, 69.4 Captopril, 100 Spironolactone, 84.9 Furosemide, 100 Digitalis, 11.5
Parrinello, 2011, 21440872	133	NR	76.0 (8) 65-82 yo (range)	64.7	Weight, 75.9 (15.5) SBP, 134 (23) DBP, 80.5 (12.5) HR, 81.5 (12) Serum Na, 135.5 (5)	LVEF<40%, 100 NYHA IV, 100	NR[b]
Parrinello, 2012, 22980301	248	NR	73.5 (9.7)	59.7	SBP, 143.5 (23) DBP, 81.0 (12) HR, 84.0 (11) Serum Na, 138.8 5.2)	LVEF<45%, 100 NYHA III or IV, 100	β-blockers, 46 ACEIs, 100 Spironolactone, 64.9 Furosemide, 62.9 Digitalis, 40.3
Roul, 2017	167	NR	78	55	NR	NR	NR
Tuttolomondo, 2011, 20346637	150[c]	NR	65 (61.5, 80.5) [Med (IQR)]	54	Weight, 73.5 (69.5, 83) [Med (IQR)][a] SBP, 142.5 (134, 150) [Med (IQR)][a] DBP, 80.5 (77.5, 95) [Med (IQR)][a] HR, 84 (80, 97) [Med (IQR)] Serum Na, 138 (129.5, 140.5) [Med (IQR)][a]	LVEF (%), 37 (28.5, 42.5) [Med (IQR)] NYHA II, 40 NYHA III, 34.7 NYHA IV, 25.3	NR

Author, Year, PMID	N Analyzed	Race/Ethnicity, %	Age, Mean (SD) or %	Male, %	Clinical Features, Mean (SD) or %	Heart Failure Classification, Mean (SD) or %	Medication History, %
Tuttolomondo, 2021, 34288546	136	NR	76.2 (7.7)	49.3	Weight, 78.1 (14.2) SBP, 127.1 (17.5) DBP, 70.4 (10.5)	LVEF (%), 56.4 (10.6) NYHA II, 16.9 NYHA III, 66.2 NYHA IV, 16.9	β-blockers, 61 ACEIs, 73.5 ARBs, 13.2 Mineralocorticoid receptor antagonists, 18.4
Wan, 2017, 28701670	264	NR	60.9 (10.1)	38.3	SBP, 143 (17.5 DBP, 67 (10.5) Serum Na: 135.7 (3.6	LVEF (%), 38.3 (1.6) NYHA III, 100	β-blockers, 39.4 ACEIs, 85.2 Spironolactone, 91.7 Digitalis, 77.7 Furosemide, 100
Yayla, 2015, 26135463	28[d]	NR	69.2 (10.4)	56	Weight, 81 (17.5) Serum Na, 137.4 (4.8)	LVEF (%), 42.1 (14.2)	β-blockers, 55.8 ACEIs or ARB, 60.5 Aldosterone antagonist, 25.6 Furosemide, 65.1
Montgomery, 2023, 37044281	65	White 86 Black 14	70 (12)	63	Weight, 100 (29) SBP, 113 (17) DBP, 62 (7.9) HR, 76 (14) Serum Na, 140 (3.4)	LVEF (%), 45 (16)	β-blockers, 72.3 ACEIs or ARB, 32.3 Spironolactone, 52.3 Hydralazine, 52.3 Furosemide, 100

Notes. [a] Calculated by the research team based on data of low sodium and normal sodium diet groups; [b] Patients received medications (*eg*, ACEIs, digitalis, nitrates) during the study period; did not report the % of patients; [c] NRCS, prospective study with 4 arms (furosemide with HSS group [N=120], furosemide group [N=30], asymptomatic group [N=30], healthy group [N=30]); we included furosemide with HSS group and furosemide group in the analysis; [d] Furosemide with HSS (N=14) and furosemide bolus (N=14) groups were included in the analysis.

Abbreviations. ACE=angiotensin converting enzyme; ACEIs= angiotensin converting enzyme inhibitors; ARB=angiotensin receptor blockers; BMI=body mass index; BNP=brain (or B-type) natriuretic peptide; DBP=diastolic blood pressure; LVEDD=left ventricle end-diastolic diameter; LVEF=left ventricular ejection fraction; mm=millimeters; Na=sodium; NR=not reported; NRCS=nonrandomized comparative studies; NYHA= New York Heart Association; SBP=systolic blood pressure; yo=year.

APPENDIX F. DESCRIPTION INTERVENTIONS

Table F.1. Description of Dietary Sodium Interventions

Author, Year, PMID	Arm	Sodium Intake	Fluid Intake	Duration of Interventions
Aliti, 2013, 23689381	Low sodium diet	0.8g/d Na	Maximum intake, 800 mL/d	Until hospital day 7 or until discharge in patients whose length of stay was less than 7 days
	Unrestricted sodium diet	Standard hospital diet, 3-5 g/d Na	Liberal fluid, at least 2500 mL/d	Until hospital day 7 or until discharge in patients whose length of stay was less than 7 days
Fabricio, 2019, 31221280	Low sodium diet	1.2 g/d Na	1000 mL/d	7 days (or less based on clinical indication[a])
	Unrestricted sodium diet	2.8 g/d Na	1000 mL/d	7 days (or less based on clinical indication[a])
d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na	800 mL/d	Until day 7 of admission or at hospital discharge, whichever came first
	Unrestricted sodium diet	Standard hospital diet, ~4 g/d Na	Unlimited fluid intake	Until day 7 of admission or at hospital discharge, whichever came first
Inuzuka, 2016	Low sodium diet	2.4 g/d Na	NR	NR[b]
	Unrestricted sodium diet	4 g/d Na	NR	NR[b]
Velloso, 1991, 1824218	Low sodium diet	0.8 g/d Na	800 mL/d	NR[b]
	Unrestricted sodium diet	4 g/d Na	800 mL/d	NR[b]

Notes. [a] Clinical indication defined by the medical team responsible for the treatment of the patient based on the occurrence of hypotension, hyponatremia, or worsening of renal function, the intervention could be stopped before the 7th day of hospitalization; [b] The study did not clearly define the duration of intervention.
Abbreviations. d=day; g=gram; mL=milliliter; Na=sodium; NR=not reported.

Table F.2. Description of Hypertonic Saline Solution Interventions

Author, Year, PMID	Arm	Saline Solution	Fluid Intake	Diuretic	Other interventions	Sodium Intake via Saline Solution[a]	Sodium Intake from Diet[b]	Total Sodium Intake[c]	Duration of Interventions
Issa, 2013, 22243938	Furosemide with HSS	100 mL of HSS[d] (7.5% NaCl) twice daily	NR	IV furosemide[e] Bolus per day	NR	5.9 g/d	NR	5.9 g/d	3 (d)
	Furosemide without HSS	100 mL of NS[d] (0.9% NaCl) twice daily	NR	IV furosemide[e] Bolus per day	NR	0.7 g/d	NR	0.7 g/d	3 (d)
Licata, 2003, 12660669	Furosemide with HSS	150 mL of HSS[f] (1.4%-4.6% NaCl) twice daily	1000 mL/d	IV furosemide[g,h] (500-1000 mg) 30-min infusion twice daily	Sodium diet (2.76 g/d Na)	1.65 g/d – 5.43 g/d	2.76 g/d	4.41– 8.1 g/d	6-12 (d)
	Furosemide without HSS	NR	1000 mL/d	IV furosemide[g,h] (500-1000 mg) bolus twice daily	Sodium diet (1.84 g/d Na)	NR	1.84 g/d	1.84 g/d	6-12 (d)
Mahjoob, 2021, 34903983	Furosemide with HSS	150 mL of HSS (5% NaCl) twice daily	NR	IV furosemide (250 mg) per day	NR	5.9 g/d	NR	5.9 g/d	48 (h)
	Furosemide without HSS	150 mL of NS every 12 h	NR	IV furosemide (250 mg) per day	NR	1.06 g/d	NR	1.06 g/d	48 (h)
Okuhara, 2014, 24462960	Furosemide with HSS	500 mL of HSS (1.7% NaCl) per day	500 mL/d	IV furosemide (40 mg) per day	Sodium diet (2.4 g/d Na)	3.34 g	2.4 g/d	5.7 g/d	24 (h)
	Furosemide with glucose	500 mL of glucose (5%) per day	500 mL/d	IV furosemide (40 mg) per day	Sodium diet (2.4 g/d)	0 g/d	2.4 g/d	2.4 g/d	24 (h)
Paterna, 2000, 10938493	Furosemide with HSS	150 ml of HSS[f] (1.4-4.6% NaCl) twice daily	1000 mL/d	IV furosemide[g,h] (500-1000 mg) 30-min infusion twice daily	Sodium diet (2.76 g/d Na)	1.65 g/d – 5.42 g/d	2.76 g/d	4.41– 8.1 g/d	6-12 (d)
	Furosemide without HSS	NR	1000 mL/d	IV furosemide[g,h] (500-1000 mg) bolus twice daily	Sodium diet (2.76 g/d Na)	NR	2.3 g/d	2.3 g/d	6-12 (d)

Author, Year, PMID	Arm	Saline Solution	Fluid Intake	Diuretic	Other interventions	Sodium Intake via Saline Solution[a]	Sodium Intake from Diet[b]	Total Sodium Intake[c]	Duration of Interventions
Paterna, 2005, 15963399	Furosemide with HSS	150 ml of HSS[f] (1.4%- 4.6%) NaCl twice daily	1000 mL/d	IV furosemide[h] (500-1000 mg) 30-min infusion twice daily	Sodium diet (2.76 g/d Na)	1.65 g/d – 5.42 g/d	2.76 g/d	4.41– 8.1 g/d	4-6 (d)
	Furosemide without HSS	NR	1000 mL/d	IV furosemide[h] (500-1000 mg) bolus twice daily	Sodium diet (1.84 g/d Na)	NR	1.84 g/d	1.84 g/d	4-6 (d)
Paterna, 2011, 21701268	Furosemide with HSS	150 ml of HSS[f] (1.4%–4.6% NaCl) twice daily	1000 mL/d	IV furosemide[h] (250 mg) 30-minute infusion twice daily	Sodium diet (2.76 g/d Na)	1.65 g/d – 5.42 g/d	2.76 g/d	4.41 – 8.1 g/d	NR
	Furosemide without HSS	NR	1000 mL/d	IV furosemide[h] (500-1000 mg) bolus twice daily	Sodium diet (1.84 g/d Na)	NR	1.8 g/d	1.8 g/d	NR[1]
Parrinello, 2011, 21440872	Furosemide with HSS	150 ml of HSS (3% NaCl) twice daily	1000 mL/d	IV furosemide (250 mg) twice daily	Sodium diet (2.76 g/d Na)	3.54 g/d	2.76 g/d	6.3 g/d	6 (d)
	Furosemide without HSS	150 mL of NS (0.9% NaCl) twice daily	1000 mL/d	IV furosemide (250 mg) twice daily	Sodium diet (1.84 g/d Na)	1.06 g/d	1.84 g/d	2.9 g/d	6 (d)
Parrinello, 2012, 22980301	Furosemide with HSS	HSS[f] (1.4%–4.6% NaCl) twice daily	1000 mL/d	IV furosemide (250 mg) 30-min infusion twice daily	Normal sodium diet	NR	NR	NR	NR
	Furosemide without HSS	NR	1000 mL/d	IV infusion furosemide (250 mg) twice daily	NR	NR	NR	NR	NR
Roul, 2017	HSS	HSS	NR	NR	NR	NR	NR	NR	NR
	Without HSS	NR	NR	NR	NR	NR	NR	NR	NR

Author, Year, PMID	Arm	Saline Solution	Fluid Intake	Diuretic	Other interventions	Sodium Intake via Saline Solution[a]	Sodium Intake from Diet[b]	Total Sodium Intake[c]	Duration of Interventions
Tuttolomondo, 2011, 20346637	Furosemide with HSS	150 mL of HSS[i,k] (1.4-4.6% NaCl) twice daily	NR	IV infusion furosemide[g, h] (125-1000 mg) 30-min infusion twice daily	Sodium diet (1.61 g/d Na)	1.65 g/d – 5.43 g/d	1.61 g/d	3.3 g/d – 7 g/d	8 (d)
	Furosemide without HSS	NR	NR	IV infusion furosemide[g,h] (125-1000 mg) 30-min infusion twice daily	Sodium diet (1.61 g/d Na)	NR	1.61 g/d	1.61 g/d	8 (d)
Tuttolomondo, 2021, 34288546	Furosemide with HSS	150 ml of HSS[j, k] (1.4-4.6% NaCl) twice daily	NR	IV infusion furosemide[g,h] (120–250 mg) 30-min infusion twice daily	Sodium diet (1.61 g/d Na)	1.65 g/d – 5.43 g/d	1.61 g/d	3.3 g/d – 7 g/d	6 (d)
	Furosemide without HSS	NR[k]	NR	IV infusion furosemide (120–250 mg) 30-min infusion twice daily	Sodium diet (1.61 g/d Na)	NR	1.61 g/d	1.61 g/d	6 (d)
Wan, 2017, 28701670	Furosemide with HSS	100 ml of c-HSS[l] twice daily	< 500 mL	IV furosemide (100 mg) 1 h infusion twice daily	Normal sodium diet (2.76 g/d Na)	2.2 g/d	2.76 g/d	4.96 g/d	Until compensated[m]
	Furosemide without HSS	NR	< 500 mL	IV furosemide (100 mg) 1 h infusion twice daily	Normal sodium diet (2.76 g/d Na)	NR	2.76 g/d	2.76 g/d	Until compensated[m]

Author, Year, PMID	Arm	Saline Solution	Fluid Intake	Diuretic	Other interventions	Sodium Intake via Saline Solution[a]	Sodium Intake from Diet[b]	Total Sodium Intake[c]	Duration of Interventions
Yayla, 2015,[n] 26135463	Furosemide with HSS	150 ml of HSS (1.95% NaCl) in 30 min once daily	NR	IV furosemide (160 mg) in 30 min once daily	NR	1.15 g/d	NR	1.15 g/d	48 (h)
	Furosemide (cIV) without HSS	NR	NR	IV furosemide (160 mg) continuous infusion in 16h/ d	NR	NR	NR	NR	48 (h)
	Furosemide (bI) without HSS	NR	NR	IV furosemide (80 mg) bolus twice daily	NR	NR	NR	NR	48 (h)
Montgomery, 2023, 37044281 United States	Furosemide with oral NaCl	NR	Unlimited	IV furosemide	2 g Oral NaCl thrice per day + Restricted Na diet (~0.8 g/d Na)	NR	3.2 g/d	3.2 g/d	4 (d)
	Furosemide without oral NaCl	NR	Unlimited	IV furosemide	Restricted Na diet (~0.8 g/d Na)	NR	0.8 g/d	0.8 g/d	4 (d)

Notes. [a] Calculated by the research team based on sodium intake from IV HSS if reported; [b] Calculated by the research team based on oral sodium intake from diet if reported; [c] Calculated by the research team based on combined sodium intake from IV HSS and oral diet if reported; [d] 100 mL of solution was infused during 1 h; [e] Initial dose of furosemide was estimated based on the dose previously administered to patient, renal function and body weight, and initial dose could be modified according to the initial patient response with pre-established objective to achieve a weight loss of 500-1000 g/d; [f] The dose of HSS was determined according to serum Na (HSS 4.6%, 3.5%, between 1.4% and 2.4% were administered for patients with serum Na < 125 mEq/L, between 126 and 135 mEq/L, > 135 mEq/L respectively); [g] Daily dosage of furosemide was defined considering diuretics, urinary volume, BP, severity of signs of symptoms of congestion; [h] Once the clinically compensated state was reached, IV furosemide and HSS were stopped and replaced with oral furosemide and oral KCl supplementation, and the best therapy continued without changes after discharge with the standard therapy (*eg*, ACEIs, digitalis, and nitrates) in both groups; [i] The dose of HSS was determined in each patient according to these schedules: for serum Na values <125 mEq/L, the HSS concentration was 3.5% and for serum Na values >135 mEq/L, the HSS concentration varied between 1.4% and 2.4%; [j] The dose of HSS was determined in each patient as follows: the HSS concentration 3.5% for serum Na values < 135 mEq/L and between 1.4% and 2.4% for serum Na values > 135 mEq/L; [k] All patients underwent an acute saline load with 15 mL/kg of 0.9% NaCl (over 60 min) on the day after the end of the treatment period (6 days); [l] Compound hypertonic saline solution: the concentrations of NaCl, KCl, and MgSO4 were 2.8%, 0.2%, and 0.9% respectively; [m] Did not clearly define the duration of intervention; [n] Furosemide with HSS (N=14) and furosemide bolus (N=14) groups were included in the analysis.
Abbreviations. bI=bolus IV; cIV=continuous intravenous infusion; d=day; g=gram; HSS=hypertonic saline solution; h=hour; IV=intravenous; kg=kilograms; mg=milligram; min=minute; mL=milliliter; Na=sodium; NaCl=sodium chloride; NR=not reported.

APPENDIX G. CATEGORICAL OUTCOMES

Outcome	Study Year PMID	Arm	Total Sodium Intake[1]	Fluid Intake	Time	Outcome Definition	n/N (%)	Effect Size (95% CI)[2]	Reported P value
Clinical Outcomes									
Mortality	*Diet (g/d Na)*								
	Aliti, 2013, 23689381 RCT	Low sodium diet	Max 0.8 g/d Na for 7 days or less	Max 800 mL/d	7 (d)	All-cause mortality	0/38 (0)	RD 0.0 (-0.051, 0.051)	-
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less	≥2500 mL/d			0/37 (0)		
	d'Almeida, 2018, 29793053 RCT	Low sodium diet	0.8 g/d Na for 7 days or less	800 mL/d	30 (d) after discharge	All-cause mortality	2/30 (6.7)	RR 0.77 (0.12, 5.04)	> 0.99
		Unrestricted sodium	~4 g/d Na for 7 days or less	Unlimited fluid intake			2/23 (8.7)		
	Fabricio, 2019, 31221280 RCT	Low sodium diet	1.2 g/d Na for 7 days	1000 mL/d	During hospitalization	All-cause mortality	0/16 (0)	RD 0.0 (-0.117, 0.117)	-
		Unrestricted sodium diet	2.8 g/d Na for 7 days	1000 mL/d			0/15 (0)		
		Low sodium diet	1.2 g/d Na for 7 days	1000 mL/d	30 (d) after discharge	All-cause mortality	2/16 (12.5)	RR 0.93 (0.15, 5.84)	1.0
		Unrestricted sodium diet	2.8 g/d Na for 7 days	1000 mL/d			2/15 (13.3)		
	Velloso, 1991, 1824218 RCT	Low sodium diet	0.8 g/d Na for NR days[3]	800 mL/d	NR	Mortality not directly related to congestive heart failure (one a sudden death and one septic shock due to lung disease)	1/14 (7.1)	RR 1.29 (0.09,18.8)	NR
		Unrestricted sodium diet	4 g/d Na for NR days[3]	800 mL/d			1/18 (5.6)		
	HSS (%NaCl)								
	Issa, 2013, 22243938 RCT	Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 (d) Total Na 5.9 =~6 g/d[4]	NR	During hospitalization	All-cause mortality	10/20 (50)	RR 1.5 (0.60, 3.74)	NR
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 (d) Total Na 0.7 g/d[4]	NR			4/12 (33.3)[5]		
	Paterna, 2005, 15963399 RCT	Furosemide with HSS	150 mL of HSS (1.4%-4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	30 (d)	Death during the 30-day study period, all-cause (2 sudden death and 1 irreversible HF)	0/48 (0)	RD -0.065 (-0.145, 0.015)	NR
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			3/46 (6.5)		
	Paterna, 2011,	Furosemide with	150 mL of HSS	1000 mL/d	During	Mortality from cardiac	0/953 (0)		-

Outcome	Study Year PMID	Arm	Total Sodium Intake[1]	Fluid Intake	Time	Outcome Definition	n/N (%)	Effect Size (95% CI)[2]	Reported P value
	21701268 RCT	HSS	(1.4%–4.6% NaCl) twice daily until compensation[6] (1.65-5.42 g/d Na) Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d		hospitalization	cause during hospitalization		RD 0.0 (-0.002, 0.002)	
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[6] Total Na 1.8 g/d	1000 mL/d			0/974 (0)		
	Wan, 2017, 28701670, RCT	Furosemide with compound HSS	100 mL c-HSS[7] (2.8% NaCl) twice daily until clinical compensation[8] (2.2 g/d Na) Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	During hospitalization	All-cause mortality	0/132 (0)	RD 0.0 (-0.015, 0.015)	-
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d Na until clinical compensation[8] Total Na 2.76 g/d = ~2.8 g/d	< 500 mL/d			0/132 (0)		
HF-Related Symptom	*HF-Related Symptom (Change in NYHA Functional Class)*								
	HSS (% NaCl)								
	Paterna, 2000, 10938493	Furosemide with HSS	150 mL of HSS (1.4%-4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Number of patients who had their NYHA changed from IV to III at discharge	2/30 (6.67)	RR 0.11 (0.03, 0.44)	< 0.05
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			18/30 (60)		
		Furosemide with HSS	150 mL of HSS (1.4%-4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d		Number of patients who had their NYHA changed from IV to IIa or IIb at discharge	28/30 (93.33)	RR (2.42) (1.55, 3.76)	-
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			12/30 (40)		
	Paterna, 2011, 21701268 RCT	Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl) twice daily until compensation[6]	1000 mL/d	Discharge	Number of patients who had their NYHA changed from III to II at discharge	736/953 (77.2)	RR 0.93 (0.89, 0.97)	

Outcome	Study Year PMID	Arm	Total Sodium Intake[1]	Fluid Intake	Time	Outcome Definition	n/N (%)	Effect Size (95% CI)[2]	Reported P value
			(1.65- 5.42 g/d Na) Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d						<0.29[9]
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[6] Total Na 1.8 g/d	1000 mL/d			813/974 (83.5)		
		Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl) twice daily until compensation[6] (1.65- 5.42 g/d Na) Moderate sodium diet 2.76 g/d Na Total Na ~4.5-8.2 g/d	1000 mL/d	Discharge	Number of patients who had their NYHA changed from III to I at discharge	217/953 (22.8)	RR 1.38 (1.15, 1.65)	<0.006
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[6] Total Na 1.8 g/d	1000 mL/d			161/974 (16.5)		
	Wan, 2017, 28701670 RCT	Furosemide with compound HSS	100 mL c-HSS[7] (2.8% NaCl) twice daily until clinical compensation[8] (2.2 g/d Na) Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Discharge	Number of patients who had their NYHA change from NYHA class III to II at discharge	92/132[10] (69.7), 89/132 (67.4)	RR 0.96 (0.82, 1.12) RR (second data) 0.93 (0.79, 1.09)	>0.05
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d Na until clinical compensation[8] Total Na 2.76 g/d = ~2.8 g/d	< 500 mL/d			96/132 (72.7)		
		Furosemide with compound HSS	100 mL c-HSS[7] (2.8% NaCl) twice daily until clinical compensation[8] (2.2 g/d Na) Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Discharge	Number of patients who had their NYHA class change from III to I at discharge	26/132[10] (19.7), 43/132 (32.6)	RR 1.53 (0.87, 2.68) RR (second data) 1.19 (0.82, 1.73)	<0.05
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d Na until clinical compensation[8] Total Na 2.76 g/d = ~2.8 g/d	< 500 mL/d			17/132[10] (12.9) 36/132 (27.3)		

Outcome	Study Year PMID	Arm	Total Sodium Intake[1]	Fluid Intake	Time	Outcome Definition	n/N (%)	Effect Size (95% CI)[2]	Reported P value
	HF-Related Symptom (Shortness of Breath)								
	HSS (%NaCl)								
	Okuhara, 2014, 24462960 RCT	Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) for 24 hs (3.34 g/d Na) Restricted sodium to 2.4 g/d Na Total Na 5.7 g/d = ~6 g/d	500 mL/d	24 (h)	Rapid relief from dyspnea[11] and systemic venous congestion provided by HSS infusion (duration of intervention = 24 hours)	19/22 (86)	RR 1.73 (1.10, 2.71)	0.01
		Furosemide with glucose (5%)	500 mL/d 5% glucose Restricted sodium to 2.4 g/d Na for 24 hs Total Na 2.4 g/d	500 mL/d			11/22 (50)		
	Tuttolomondo, 2021, 34288546 RCT	Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 6 days (1.65-5.42 g/d Na) 15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 3.3-7 g/d[12]	NR	Baseline	Resting dyspnea (not specified how it was assessed or what was score or scale used)	12/68 (17.6)	-	0.97
		Furosemide without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 1.61 g/d[12]	NR			11/68 (16.2)		
	Tuttolomondo, 2021, 34288546, RCT	Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 6 days (1.65-5.42 g/d Na) 15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 3.3-7 g/d[12]	NR	6 (d)	Resting dyspnea (not specified how it was assessed or what was score or scale used) at the end of the first phase of the therapy.	2/12[13] (16.7)	RR 0.46 (0.1, 2.03)	0.24
		Furosemide Without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 1.61 g/d[12]	NR			4/11[13] (36.4)		
	Tuttolomondo, 2021,	Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 6 days (1.65-5.42	NR	Baseline	Work/effort dyspnea (not specified how it was assessed or what was	61/68 (89.7)	-	

Outcome	Study Year PMID	Arm	Total Sodium Intake[1]	Fluid Intake	Time	Outcome Definition	n/N (%)	Effect Size (95% CI)[2]	Reported P value
	34288546, RCT		g/d Na) 15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 3.3-7 g/d[12]			score or scale used)			1.0
		Furosemide Without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 1.61 g/d[12]	NR			61/68 (89.7)		
	Tuttolomondo, 2021, 34288546, RCT	Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 6 days (1.65-5.42 g/d Na) 15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 3.3-7 g/d[12]	NR	6 (d)	Work/effort dyspnea (not specified how it was assessed or what was score or scale used) at the end of the first phase of the therapy.	11/61[13] (18.0)	RR 0.52 (0.278, 0.99)	0.044
		Furosemide without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 1.61 g/d[12]	NR			21/61[13] (34.4)		
	HF-Related Symptom (Clinical Parameter Indicates Dyspnea, Lower Edema, Weakness, Palpitation and Fatigue)								
	HSS (%NaCl)								
	Wan, 2017, 28701670, RCT	Furosemide with compound HSS	100 mL c-HSS[7] (2.8% NaCl) twice daily until clinical compensation[8] (2.2 g/d Na) Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	At discharge	Improvement in clinical symptoms after treatment (clinical parameter indicates dyspnea, lower edema, weakness, palpitation and fatigue), compensated state (discharge).	119/132 (90.33)	RR 0.99 (0.92, 1.07)	>0.05
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d Na until clinical compensation[8] Total Na 2.76 g/d= ~2.8 g/d	< 500 mL/d			120/132 (91.2)		

Outcome	Study Year PMID	Arm	Total Sodium Intake[1]	Fluid Intake	Time	Outcome Definition	n/N (%)	Effect Size (95% CI)[2]	Reported P value
Patients Received Diuretic in Hospital	*Diet (g/d Na)*								
	Aliti, 2013, 23689381 RCT	Low sodium diet	Max 0.8 g/d Na for 7 days or less	Max 800 mL/d	3 (d)	Patients administered IV furosemide during the first 3 days of hospitalization	36/38 (94.7)	RR 0.97 (0.89, 1.07)	>0.99
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less	≥2500 mL/d			36/37 (97.3)		
	Fabricio, 2019, 31221280 RCT	Low sodium diet	1.2 g/d Na for 7 days	1000 mL/d	During hospitalization	Patients administered furosemide (route not specified)	15/16 (94)	RR 1.0 (0.83, 1.20)	NR
		Unrestricted sodium diet	2.8 g/d Na for 7 days	1000 mL/d			14/15 (93)		
Utilization Measure									
30-Day Readmission	*Diet (g/d Na)*								
	Aliti, 2013, 23689381 RCT	Low sodium diet	Max 0.8 g/d Na for 7 days or less	Max 800 mL/d	30 (d)	Readmission because of heart failure	11/38 (29)	RR 1.53 (0.67, 3.52)	0.41
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less	≥2500 mL/d			7/37 (19)		
	d'Almeida, 2018, 29793053 RCT	Low sodium diet	0.8 g/d Na for 7 days or less	800 mL/d	30 (d)	Readmission	12/30 (40)	RR 0.92 (0.49, 1.74)	> 0.99
		Unrestricted sodium	~4 g/d Na for 7 days or less	Unlimited fluid intake			10/23 (43.5)		
	Fabricio, 2019, 31221280 RCT	Low sodium diet	1.2 g/d Na for 7 days	1000 mL/d	30 (d)	Readmission	5/16 (31)	RR 0.94 (0.34, 2.6)	1.0
		Unrestricted sodium diet	2.8 g/d Na for 7 days	1000 mL/d			5/15 (33)		
	HSS (%NaCl)								
	Paterna, 2005, 15963399 RCT	Furosemide with HSS	150 mL of HSS (1.4%-4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	30 (d)	Readmissions in the 30-day follow-up for clinical signs of HF[14]	0/48 (0)	RD -0.261 (-0.39, -0.13)	<0.05
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			12/46 (26.1)		
	Montgomery, 2023, 37044281 RCT	Furosemide with oral NaCl	2 g oral NaCl three times per day for 4 days. Restricted sodium diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	30 (d)	Readmissions	7/34 (21)	RR 0.91 (0.36, 2.31)	NR

Outcome	Study Year PMID	Arm	Total Sodium Intake[1]	Fluid Intake	Time	Outcome Definition	n/N (%)	Effect Size (95% CI)[2]	Reported P value
		Furosemide without oral NaCl	Restricted sodium diet ~0.8 g/d Na	No restriction			7/31 (23)		
Transfer to ICU (Proxy for Clinical Deterioration)	*HSS (%NaCl)*								
	Montgomery, 2023, 37044281 RCT	Furosemide with oral NaCl	2 g oral NaCl three times per day for 4 days. Restricted sodium diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	During hospitalization	ICU stay during hospitalization	3/ 34 (9)	RR 0.56 (0.15, 2.15)	NR
		Furosemide without oral NaCl	Restricted sodium diet ~0.8 g/d Na	No restriction			5/31 (16)		
Laboratory/Intermediate Measures									
Kidney Function (Creatinine)	*Diet (g/d Na)*								
	Fabricio, 2019, 31221280 RCT	Low sodium diet	1.2 g/d Na for 7 days	1000 mL/d	7 (d)	Worsening of renal function, represented by an increase in serum creatinine ≥ 0.3 mg/dL	7/16 (43.8)	RR 0.94 (0.43, 2.04)	NR
		Unrestricted sodium diet	2.8 g/d Na for 7 days	1000 mL/d			7/15 (46.7)		
Calorie Intake	*Diet (g/d Na)*								
	Inuzuka, 2016 NRCS	Low sodium diet	Max 2.4 g/d Na for NR days[15]	NR	Time point was not explicitly reported	The incidence of low caloric intakes (caloric intakes less than 20 kcal/kg per day)	77/145 (53)	RR 3.4 (1.7, 6.86) OR 6.15 (2.58, 14.67)	0.02
		Unrestricted sodium diet	4 g/d Na for NR days[15]	NR			7/45 (15)		

Notes. [1] Review team calculated based on IV and oral sodium intake if reported; [2] Review team calculated effect size and 95% CI; [3] The duration of intervention was not reported; however, most outcomes were reported at compensation which was defined as return to functional classes 1 or II and without edema; [4] Total sodium per day provided by IV fluid only, sodium diet was not reported; [5] Percentage has been corrected from the one reported in the text (33.3 instead of 30); [6] Defined as dry status, change in NYHA functional class to at least II on clinical judgment and the accomplishment of ideal body weight, as calculated by the Lorenz formula and detected by bioimpedance vector analysis; [7] c-HSS contains, additional to the 2.8% NaCl, 0.2% KCl, 0.9% MgSO4; [8] Patients were considered clinically compensated when they achieved an improved NYHA classification and appropriate body weight calculated by the Lorenz formula and bioelectrical impedance measurement; [9] Adjusted for multiple comparison; [10] Discrepancy between the data in the table and the text – we report data from the table; [11] Using 5-point Likert scale (patients with worse dyspnea and no change of score between baseline and 24 hours after initiation of the treatment were categorized as ‘‘no dyspnea improvement,’’ and those with improved dyspnea score were categorized as “dyspnea improvement"); [12] Total sodium per day during the 6 days of intervention (first phase of therapy), not including the sodium from the 0.9% NaCl (second phase of therapy); [13] The denominator is the number of patients who had dyspnea at admission (baseline) and not the sample (group) size; [14] They presented, at entry, higher functional class than at discharge (NYHA functional class III), while the remaining patients maintained the same NYHA functional class achieved at the time of hospital discharge; [15] Intervention duration was not reported.
Abbreviations. C-HSS=Compound hypertonic saline solution; d=day; HF=heart failure; HSS=hypertonic saline solution; IV=intravenous; Max=maximum; Na=sodium; NaCl=sodium chloride; n/N=n number of event; N sample size; NR=not reported; NYHA=New York Heart Association; OR=odds ratio; RD=risk difference; RR=risk ratio.

APPENDIX H. CONTINUOUS OUTCOMES

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
Lab/Intermediate Measures										
Weight	*Diet (g/d Na)*									
	Aliti, 2013, 23689381	Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	Baseline	Weight (kg)	38	78 (14.6)	-	0.29
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	82.4 (21.5)		
		Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	3 (d)	Weight change (kg) from baseline to day 3 (primary end point).	38	−4.42 (2.85)	NMD 0.25 (-1.9, 2.4)[3]	P value (NMD) 0.82
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	−4.67 (5.6)		
		Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	7 (d)	Weight change from baseline to day 7	38	NR	-	P value (NMD) 0.12
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	NR		
	d'Almeida, 2018, 2979305	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	Baseline	Weight (kg)	30	80.5 (17.8)	-	0.58
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	77.6 (16.1)		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	3 (d)	Weight (kg) change from baseline to day 3 (primary end point).	30	NR	NR	P value (NMD) >0.99
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	NR		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	7 (d)[#]	Weight (kg) change from baseline to day 7	30	-1.6 (2.2)	NMD 0.2 (-0.36, 0.77)[3]	P value (NMD) 0.49
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	-1.8 (2.1)		
	Fabricio, 2019, 31221280	Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	Baseline	Weight (kg)	16	80.9 (32.7)	-	
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	68.5 (13)		
		Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	7 (d)	Weight (kg) at day 7	16	76.2 (31.8)	11.4 (-5.7, 28.5)	NR
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	64.8 (14.0)	NMD -1	

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
									(-18.2, 16.2)	
	Velloso, 1991, 1824218	Low sodium diet	0.8 g/d Na for NR days[4]	800 mL/d	Uncompensated and vs. compensated	Percentage change in weight	14	12.2 (9.2)	2.2 (-3.5, 7.9)[3]	0.45
		Unrestricted sodium diet	4 g/d Na for NR days[4]	800 mL/d			18	10.0 (5.9)		
	HSS (% NaCl)									
	Issa, 2013, 22243938	Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 (d) Total Na 5.9 =~6 g/d[5]	NR	Baseline	Weight (kg)	20	83.8 (18.4)	-	P interaction 0.62
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 (d) Total Na 0.7 g/d[5]	NR			12	79.0 (28.0)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 (d) Total Na 5.9 =~6 g/d[5]	NR	1 (d)	Weight (kg)	20	82.8 (18.0)	4.6 (-13.8, 23.0)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 (d) Total Na 0.7 g/d[5]	NR			12	78.2 (27.7)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 (d) Total Na 5.9 =~6 g/d[5]	NR	2 (d)	Weight (kg)	20	82.0 (17.8)	3.4 (-12.93, 19.73)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 (d) Total Na 0.7 g/d[5]	NR			12	78.6 (27.6)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 (d) Total Na 5.9 =~6 g/d[5]	NR	3 (d)	Weight (kg)	20	81.3 (17.6)	3.4 (-12.9, 19.2) NMD (Baseline-3 d) -1.4 (-19.05, 16.25)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 (d) Total Na 0.7 g/d[5]	NR			12	77.9 (27.8)		
	Issa, 2013, 22243938	Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 (d) Total Na 5.9 =~6 g/d[5]	NR	4 (d) which is 24 h after intervention	Weight (kg)	20	80.9 (18.3)	4.5 (-12.0, 21.0) NMD -0.3	

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 (d) Total Na 0.7 g/d[5]	NR			12	76.4 (27.6)	(-17.97, 17.37)	
	Paterna, 2005, 15963399	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Weight (kg)	48	76.0 (16)	-	NR
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	75.8 (15)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	6 (d)	Weight (kg)	48	65.8 (15)	-1.3 (-7.2, 4.6) NMD -1.5 (-7.58, 4.58)	NR
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	67.1 (14)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline-6 d	Weight (kg)	48	-10.9 (4.1)	NMD (Baseline-6 d) -2.8 (-4.15, -1.44)	<0.0001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	-8.1 (2.4)		
	Wan, 2017, 28701670	Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Baseline	Weight (kg)	132	23.4 (9)[10]	-	NR
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[9] Total Na ~2.8 g/d	< 500 mL/d			132	24.2 (11)[10]		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Discharge	Weight (kg)	132	21.7(70)[10]	-	
		Without c-HSS Furosemide	Normal sodium diet 2.76 g/d until clinical compensation[9] Total Na ~2.8 g/d	< 500 mL/d			132	22.0 (01)[10]		
	Mahjoob, 2021, 34903983	Furosemide with HSS	150 mL (5% NaCl) twice daily for 48 (h) Sodium diet NR Total Na 5.9=~6 g/d[5]	NR	Baseline	Weight (kg)	14	84.71 (21.11)	-	0.7[11]
		Furosemide without HSS	150 mL (0.9% NaCl) twice daily for 48 (h) Sodium diet NR Total Na ~1.1 g/d[5]	NR			14	81.74 (19.82)		
		Furosemide with HSS	150 mL (5% NaCl) twice daily for 48 (h) Sodium diet NR Total Na 5.9=~6 g/d[5]	NR	3 (d)	Weight (kg)	14	78.3 (20.26)	0.2 (-14.4,14.8) NMD -2.77 (-17.65, 12.11)	0.98[12]
		Furosemide without HSS	150 mL (0.9% NaCl) twice daily for 48 (h) Sodium diet NR Total Na ~1.1 g/d[5]	NR			14	78.1 (19.04)		
		Furosemide with HSS	150 mL (5% NaCl) twice daily for 48 (h) Sodium diet NR Total Na 5.9=~6 g/d[5]	NR	Baseline-3 (d)	Weight change from baseline to day 3	14	-6.38 (2.17)	NMD (Baseline-3 d) -2.79 (-4.5, -1.0)[3]	0.002[12]
		Furosemide without HSS	150 mL (0.9% NaCl) twice daily for 48 (h) Sodium diet NR Total Na ~1.1 g/d[5]	NR			14	-3.59 (2.12)		
	Licata, 2003, 12660669	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to 12 (d) Normal sodium diet 2.76 g/d= ~2.8 g/d Na Total Na 4.41-8.1 g/d	1000 mL/d	Baseline	Weight (kg)	53	74.5 (9)	-	NR

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 (d) Total Na 1.8 g/d	1000 mL/d			54	72.7 (9)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to 12 (d) Normal sodium diet 2.76 g/d= ~2.8 g/d Na Total Na 4.41-8.1 g/d	1000 mL/d	Discharge	Weight (kg)	53	63.6 (8)	-0.7 (-3.9, 2.2) NMD -2.5(-5.67, 0.67)	
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 (d) Total Na 1.8 g/d	1000 mL/d			54	64.3 (7)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to 12 days Normal sodium diet 2.76 g/d= ~2.8 g/d Na Total Na 4.41-8.1 g/d	1000 mL/d	Baseline-Discharge	Weight change from baseline to discharge, kg.	53	-9.9 (4.15)	NMD (Baseline-Discharge) -1.4 (-2.7, -0.08)	NS
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 days Total Na 1.8 g/d	1000 mL/d			54	-8.5 (2.6)		
	Paterna, 2000, 10938493	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Weight (kg)	30	73.8 (9.1)	-	NR
		Furosemide Without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	72.9 (9.3)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Weight (kg)	30	63.8 (8.8)	-0.7 (-4.8, 3.4) NMD -1.6 (-6.03, 2.83)	NR

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	64.5 (7.5)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline-Discharge	Weight change from baseline to discharge, kg.	30	-9.9 (4.14)	NMD (Baseline-Discharge) -1.43 (-3.18, 0.32)	NS
		Furosemide Without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	-8.47 (2.61)		
	Paterna, 2011, 21701268	Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Weight (kg)	953	82.7 (13)	-	NR
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	84.5 (15)		
		Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Weight (kg)	953	73.2 (6)	-3.4 (-3.99, -2.80) NMD (Baseline-Discharge) -1.6 (-2.69, -0.51)	<0.0001
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	76.6 (7)		
	Parrinello, 2012, 22980301	Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Baseline	Weight (kg)	122	75.8 (15)	-	0.72
		Furosemide without HSS	NR	1000 mL/d			126	76.5 (16)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Discharge	Weight (kg)	122	64.4 (5)	-5.6 (-9.08, -2.12)[3]	P value between-group: Discharge 0.0001
		Furosemide without HSS	NR	1000 mL/d			126	70.7 (3)		
		Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Baseline-Discharge	Weight change from baseline to discharge	122	-11.4 (1.43)[16]	NMD -5.6 (-5.96, -5.23)	<0.001
		Furosemide without HSS	NR	1000 mL/d			126	-5.8 (1.45)[16]		
	Yayla, 2015, 26135463	Furosemide with HSS	150 mL HSS (1.95% NaCl) once daily for 48 (h) Sodium Diet NR Total Na 1.15 g/d[5]	NR	Baseline-Discharge	Weight change from baseline to discharge	14	-5.7 (3.6)	NMD (HSS vs bIV)[17] (Baseline-Discharge) -1.6 (-3.96, 0.76)	0.66
		Furosemide (continuous) cIV without HSS	Sodium Diet NR	NR			15	-4.6 (5.2)		
		Furosemide (bolus) bIV	Sodium Diet NR	NR			14	-4.1 (2.7)		
	Parrinello, 2011, 21440872	Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	Baseline	Weight (kg)	66	75.8 (15)	-	NS
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	76.0 (16)		
		Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	6 (d)	Weight (kg)	66	64.8 (5)	-3.2 (-6.1, -0.30) NMD (Baseline-6 d) -3 (-7.66, 1.66)	P value between-group at discharge <0.033
		Furosemide	150 mL of 0.9%	1000 mL/d			67	68.0 (11)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		without HSS	NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d							
	Tuttolomondo, 2021, 34288546	Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 6 days 15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 3.3-7 g/d[18]	NR	Baseline	Weight (kg)	68	82.9 (14.5)	-	<0.0005
		Furosemide without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 1.61 g/d[18]	NR			68	73.3 (13.8)		
	Tuttolomondo, 2021, 34288546	Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 6 days 15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 3.3-7 g/d[18]	NR	6 (d)	Weight (kg)	68	67.50 (5.32)	-2.19 (-3.78, -0.59) NMD (Baseline-6 d) -11.79 (-15.99, -7.59)	NR
		Furosemide without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 1.61 g/d[18]	NR			68	69.69 (4.08)		
	Okuhara, 2014, 24462960	Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	24 h	Weight (kg) change from baseline to 24 h, median (IQR)	22	-1.1 (0.725, 1.475)	Net Median Difference -0.71	P value (Net Median Difference) 0.05
		Furosemide with Glucose (5%)	500 mL/d 5% glucose per day	500 mL/d			22	-0.39 (-0.05, 1.20)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d							
	Roul, 2017	HSS	HSS (NaCl% NR) Sodium diet NR[19]	NR[19]	After intervention	Weight (kg)	11	73 (NR)	-7	<0.008
		without HSS	NR[19]	NR[19]			156	80 (NR)		
	Montgomery, 2023, 37044281	Furosemide With Oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	4 (d)	Weight change from enrollment to day 4, (kg)	34	-4.0 (4.3)	Cohen d[α] 0.14 (-0.35, 0.63) NMD 0.6 (-1.468, 2.668)	0.57
		Furosemide without Oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	-4.6 (4.2)		
		Furosemide With Oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	Discharge	Weight change from enrollment to discharge, (kg)	34	-6.3 (6.4)	Cohen d[α] 0.22 (-0.30, 0.74) NMD 1.4 (-1.845, 4.645)	0.41
		Furosemide without Oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	-7.7 (6.9)		
Kidney Function	*Kidney function (Creatinine, mg/dL)*									
	Diet (g/d Na)									
	Aliti, 2013, 23689381	Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	Baseline	Serum creatinine (mg/dL)	38	1.3 (0.5)	-	0.86
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	1.3 (0.6)		
		Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	7d	Serum creatinine (mg/dL)	38	1.3 (0.5)	0.1 (-0.08, 0.28) NMD (Baseline-7 d) 0.1 (-0.22, 0.42)[3]	P group * time (baseline – day 7) 0.44[20] P group * time (baseline-discharge) 0.55[21]
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	1.2 (0.3)		
	Fabricio, 2019, 31221280	Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	Baseline	Serum creatinine (mg/dL)	16	1.5 (0.5)	-	NR
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	1.5 (0.5)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	7 (d)	Serum creatinine (mg/dL)	16	1.7 (0.5)	0 (-0.35, 0.35) NMD (Baseline-7 d) 0 (-0.36, 0.36)	NR
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	1.7 (0.5)		
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	Baseline	Serum creatinine (mg/dL)	30	1.0 (0.3)	-	NR
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	1.2 (0.4)		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	7 (d)#	Serum creatinine (mg/dL)	30	1.2 (0.7)	-0.1 (-0.44, 0.24) NMD (Baseline-7 d) 0.1 (-0.01, 0.30)[3]	P group * time (baseline - ≤ 7 days) 0.32[21]
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	1.3 (0.5)		
	HSS (% NaCl)									
	Issa, 2013, 22243938	Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	Baseline	Serum creatinine (mg/dL)	20	1.72 (0.47)	-	P group * time interaction 0.004
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1.58 (0.48)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	1 (d)	Serum creatinine (mg/dL)	20	1.71 (0.44)	-	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1.81 (1.01)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	2 (d)	Serum creatinine (mg/dL)	20	1.65 (0.44)	-	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1.96 (1.06)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice	NR	3 (d)	Serum creatinine (mg/dL)	20	1.66 (0.55)	-0.23	

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			daily for 3 days Total Na 5.9 =~6 g/d[5]						(-0.72, 0.26) NMD (Baseline-3 d)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1.89 (0.77)	-0.37 (-0.81, 0.07)	
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	4 (d) which is 24 h after intervention	Serum creatinine (mg/dL)	20	1.88 (0.68)	-0.02 (-0.54, 0.50) NMD (Baseline-3 d)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1.90 (0.76)		
	Paterna, 2005, 15963399	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Serum creatinine (mg/dl)	48	1.51 (0.1)	-	NR
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	1.55 (0.05)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	6 (d)	Serum creatinine (mg/dl)	48	1.45 (0.05)	-0.53 (-0.59, -0.47) NMD (Baseline-6 d) -0.49 (-0.55, -0.43)	P value between- group: At 6 days <0.0001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	1.98 (0.2)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Serum creatinine (mg/dl)	48	1.55 (0.05)	-0.42 (-0.48, -0.36) NMD (Baseline-Discharge) -0.42 (-0.48, -0.36)	<0.001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	1.97 (0.2)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
	Mahjoob, 2021, 34903983	Furosemide with HSS	150 mL (5% NaCl) twice daily for 48 (h) Sodium diet NR Total Na 5.9=~6 g/d[5]	NR	Baseline	Serum creatinine (mg/dL)	14	1.68 (0.81)	-	0.19[11]
		Furosemide without HSS	150 mL (0.9% NaCl) twice daily for 48 (h) Sodium diet NR Total Na ~1.1 g/d[5]	NR			14	2.36 (1.22)		
		Furosemide with HSS	150 mL (5% NaCl) twice daily for 48 (h) Sodium diet NR Total Na 5.9=~6 g/d[5]	NR	3 (d)	Serum creatinine (mg/dL)	14	1.74 (0.75)	-0.82 (-1.64, 0.21)[3] NMD (Baseline-3 d)	0.12[11]
		Furosemide without HSS	150 mL (0.9% NaCl) twice daily for 48 (h) Sodium diet NR Total Na ~1.1 g/d[5]	NR			14	2.56 (1.38)	-0.14 (-0.93, 0.65)	
	Licata, 2003, 12660669	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to 12 ds Normal sodium diet 2.76 g/d= ~2.8 g/d Na Total Na= ~4.5-8.2 g/d	1000 mL/d	Baseline	Serum creatinine (mg/dL)	53	1.6 (0.05)	-	NR
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 days Total Na 1.8 g/d	1000 mL/d			54	1.65 (0.05)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to 12 ds Normal sodium diet 2.76 g/d= ~2.8 g/d Na Total Na= ~4.5-8.2 g/d	1000 mL/d	Discharge	Serum creatinine (mg/dL)	53	1.4 (0.05)	-0.55 (-0.58, -0.52) NMD (Baseline-Discharge) -0.5 (-0.53, -0.47)	P value between groups: (Discharge) <0.001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 days Total Na 1.8 g/d	1000 mL/d			54	1.95 (0.1)		
	Paterna, 2000, 10938493	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12	1000 mL/d	Baseline	Serum creatinine (mg/dL)	30	1.6 (0.05)	-	NR

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			(d) Total Na 4.4-8.1 g/d							
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	1.65 (0.07)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Serum creatinine (mg/dL)	30	1.4 (0.07)	-0.54 (-0.58, -0.49) NMD (Baseline-Discharge) -0.49 (-0.53, -0.45)	P value between-group at discharge <0.001
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	1.94 (0.1)		
	Paterna, 2011, 21701268	Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Serum creatinine (mg/dL)	953	1.65 (0.05)	-	NR
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	1.61 (0.05)		
		Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Serum creatinine (mg/dL)	953	1.45 (0.05)	-0.46 (-0.47, -0.45) NMD (Baseline-Discharge) -0.5 (-0.51, -0.49)	NR
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	1.91 (0.1)		
	Parrinello, 2012, 22980301	Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Baseline	Serum creatinine (mg/dL)	122	1.22 (0.4)	-	0.53

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide without HSS	NR	1000 mL/d			126	1.18 (0.6)		
		Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Discharge	Serum creatinine (mg/dL)	122	1.28 (0.48)	-0.32 (-0.48, -0.16) NMD (Baseline-Discharge) -0.36 (-0.48, -0.24)	P value between-group At Discharge 0.0001
		Furosemide without HSS	NR	1000 mL/d			126	1.6 (0.32)		
	Yayla, 2015, 26135463	Furosemide with HSS	150 mL HSS (1.95% NaCl) once daily for 48 (h) Sodium Diet NR Total Na 1.15 g/d[5]	NR	Baseline	Serum creatinine (mg/dL)	14	0.96 (0.29)	-	P values between-group 0.27
		Furosemide (continuous) clV without HSS	Sodium Diet NR	NR			15	1.10 (0.26)		
		Furosemide (bolus) blV without HSS	Sodium Diet NR	NR			14	0.93 (0.32)		
		Furosemide with HSS	150 mL HSS (1.95% NaCl) once daily for 48 (h) Sodium Diet NR Total Na 1.15 g/d[5]	NR	48 (h)	Serum creatinine (mg/dL)	14	1.17 (0.32)	0.2 (-0.12, 0.52)[3] NMD (HSS vs blV)[17] 0.17 (-0.05, 0.39)	P values between-group 0.04 HSS vs blV 0.22
		Furosemide (continuous) clV without HSS	Sodium Diet NR	NR			15	1.27 (0.31)		
		Furosemide (bolus) blV without HSS	Sodium Diet NR	NR			14	0.97 (0.27)		
		Furosemide with HSS	150 mL HSS (1.95% NaCl) once daily for 48 (h) Sodium Diet NR Total Na 1.15 g/d[5]	NR	Baseline-compensated	Serum creatinine (mg/dL)	14	1.27 (0.49)	NMD (HSS vs blV)[17] (Baseline-compensation) 0.24 (-0.09, 0.57)	0.09
		Furosemide (continuous) clV without HSS	Sodium Diet NR	NR			15	1.46 (0.60)		
		Furosemide (bolus) blV without HSS	Sodium Diet NR	NR			14	1.03 (0.40)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide with HSS	150 mL HSS (1.95% NaCl) once daily for 48 (h) Sodium Diet NR Total Na 1.15 g/d[5]	NR	Baseline-48 (h)	Change in serum creatinine from baseline to 48 hours.	14	0.20 (0.21)	NMD HSS vs bIV[17] (Baseline-48 h) 0.16 (0.03, 0.30)	0.08
		Furosemide (continuous) cIV without HSS	Sodium Diet NR	NR			15	0.16 (0.21)		
		Furosemide (bolus) bIV without HSS	Sodium Diet NR	NR			14	0.04 (0.15)		
		Furosemide with HSS	150 mL HSS (1.95% NaCl) once daily for 48 (h) Sodium Diet NR Total Na 1.15 g/d[5]	NR	Baseline-Compensation	Change in serum creatinine from baseline to compensation	14	0.30 (0.42)	NMD HSS vs bIV[17] (Baseline-compensation) 0.2 (-0.06, 0.46)	0.18
		Furosemide (continuous) cIV without HSS	Sodium Diet NR	NR			15	0.36 (0.42)		
		Furosemide (bolus) bIV without HSS	Sodium Diet NR	NR			14	0.10 (0.28)		
	Parrinello, 2011, 21440872	Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	Baseline	Serum creatinine (mg/dL)	66	1.5 (0.3)	--	NS
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	1.4 (0.5)		
		Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	6 (d)	Serum creatinine (mg/dL)	66	1.1 (0.3)	-0.7 (-0.80, -0.59) NMD (Baseline-6 d) -0.8 (-0.93, -0.67)	<0.0001
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	1.8 (0.3)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
	Okuhara, 2014, 24462960	Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	Baseline	Serum creatinine (mg/dL)	22	1.56 (0.85)	-	NR
		Furosemide with Glucose (5%)	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	1.45 (0.77)		
		Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	24 (h)	Serum creatinine (mg/dL) at 24 hours (end of intervention)	22	1.55 (0.75)	0.02 (-0.45, 0.49) NMD (Baseline-24 h) -0.09 (-0.56, 0.38)	NR
		Furosemide with Glucose (5%)	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	1.53 (0.81)		
	Montgomery, 2023, 37044281	Furosemide With Oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	4 (d)	Serum creatinine change from enrollment to day 4, mg/dL (units determined from clinical trial.gov and baseline table)	34	0.04 (0.39)	Cohen d[a] -0.26 (-0.75, 0.23) NMD -0.11 (-0.313, 0.093),	0.30
		Furosemide without Oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	0.15 (0.44)		
		Furosemide With Oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	Discharge	Serum creatinine change from enrollment to discharge, mg/dL	34	-0.04 (0.51)	Cohen d[a] -0.41 (-0.91, 0.09) NMD -0.22 (-0.479, 0.039),	0.11
		Furosemide without Oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	0.18 (0.55)		
	Kidney Function (Urea, mg/dL)									

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
	Diet (g/d Na)									
	Aliti, 2013, 23689381	Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	Baseline	Urea, median (IQR)	38	56 (48, 87)	-	P value between-group Baseline 0.38 7 (d) 0.06 group * time 0.32
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	58 (41, 83)		
		Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	7 (d)	Urea, median (IQR)	38	59 (43, 88)	Median Difference 10 Net Median Difference (Baseline-7 d) 12	
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	49 (42, 71)		
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	Baseline	Urea, mg/dL	30	51(19)	-	NR
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	54 (21)		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	≤7 (d)	Urea, mg/dL,	30	60 (33)	5 (-10.8, 20.8) NMD (Baseline-study end) 8 (-1.8, 17.8)[3]	P group * time (Baseline-study end) 0.11[21]
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	55 (21)		
	Fabricio, 2019, 31221280	Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	Baseline	Urea, mg/dL	16	68.4 (40.2)	-	NR
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	66.6 (30.2)		
		Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	7 (d)	Urea, mg/dL	16	76.9 (36.6)	4 (-19.3, 27.3) NMD (Baseline-7 d) 2.2 (-21.6, 26.0)	NR
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	72.9 (27.2)		
	HSS (% NaCl)									
	Issa, 2013, 22243938	Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days	NR	Baseline	Urea, mg/dL	20	80.8 (35.6)	-	P group * time interaction

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			Total Na 5.9 =~6 g/d[5]							0.66
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	83.7 (43.6)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	1 (d)	Urea, mg/dL	20	78.6 (33.3)	-	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	82.7 (43.6)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	2 (d)	Urea, mg/dL	20	77.6 (32.8)	-	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	85.9 (46.5)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	3 (d)	Urea, mg/dL	20	77.0 (38.6)	-8.7 (-37.8, 20.5) NMD (Baseline-3 d) -5.8 (-35.00, 23.40)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	85.7 (42.0)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	4 (d) which is 24 h after intervention	Urea, mg/dL	20	83.2 (45.2)	-3.3 (-34.4, 27.8) NMD	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	86.5 (42.3)		
	Licata, 2003, 12660669	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to 12 ds Normal sodium diet	1000 mL/d	Baseline	Urea, mg/dL	53	62 (4)	-	

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			2.76 g/d= ~2.8 g/d Na Total Na= ~4.5-8.2 g/d							
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 days Total Na 1.8 g/d	1000 mL/d			54	58.2 (3.5)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to 12 ds Normal sodium diet 2.76 g/d= ~2.8 g/d Na Total Na= ~4.5-8.2 g/d	1000 mL/d	Discharge	Urea, mg/dL	53	70 (9.5)	-27 (-31.3, -22.7) NMD (Baseline-Discharge) -30.8 (-34.62, -26.98)	P value between- group: At Discharge <0.001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 days Total Na 1.8 g/d	1000 mL/d			54	97 (13)		
	Mahjoob, 2021, 34903983	Furosemide with HSS	150 mL (5% NaCl) twice daily for 48 (h) Sodium diet NR Total Na 5.9=~6 g/d[5]	NR	Baseline	Urea, mg/dL	14	76.21 (52.28)	-	0.3[12]
		Furosemide without HSS	150 mL (0.9% NaCl) twice daily for 48 (h) Sodium diet NR Total Na ~1.1 g/d[5]	NR			14	101.32 (72.04)		
		Furosemide with HSS	150 mL (5% NaCl) twice daily for 48 (h) Sodium diet NR Total Na 5.9=~6 g/d[5]	NR	3 (d)	Urea, mg/dL	14	138.86 (2.35)	25.1 (-15.2, 65.4) NMD (Baseline-3 d) 50.2 (3.54, 96.90)	P value between group at day 3 0.31[11]
		Furosemide without HSS	150 mL (0.9% NaCl) twice daily for 48 (h) Sodium diet NR Total Na ~1.1 g/d[5]	NR			14	113.75 (73.91)		
	Okuhara, 2014, 24462960	Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) for 24 (h) Restricted sodium to 2.4 g/d Na Total Na 5.7=~6 g/d	500 mL/d	Baseline	Urea, mg/dL	22	32.33 (21.26)	-	NR
		Furosemide with Glucose (5%)	500 mL/d 5% glucose Restricted sodium to	500 mL/d			22	29.76 (15.37)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			2.4 g/d Na for 24 (h) Total Na 2.4 g/d							
		Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	24 (h)	Urea, mg/dL	22	30.86 (20.03)	2.43 (-8.60, 13.5) NMD (Baseline-24 h) -0.14 (-10.93, 10.65)	NR
		Furosemide with Glucose (5%)	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	28.43 (15.58)		
	Parrinello, 2011, 21440872	Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	Baseline	Urea, mg/dL	66	62 (4)	-	NS
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	59 (4)		
		Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	6 (d)	Urea, mg/dL	66	52 (4)	-41 (-43.0, -38.9) NMD (Baseline-6 d) -44 (-45.75, -42.25)	<0.0001
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	93 (7)		
	Parrinello, 2012, 22980301	Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Baseline	Urea, mg/dL	122	67.7 (32.0)	-	0.48
		Furosemide without HSS	NR	1000 mL/d			126	65 (28)		
		Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily	1000 mL/d	Discharge	Urea, mg/dL	122	78.1 (32.4)	-28.9	P value between-group

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]						(-36.0, -21.8) NMD (Baseline-Discharge)	Discharge 0.0001
		Furosemide without HSS	NR	1000 mL/d			126	107 (24)	-31.6 (-38.92, -24.28)	
	Paterna, 2000, 10938493	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Urea, mg/dL	30	62.1 (4.1)	-	-
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	58.1 (3.7)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Urea, mg/dL	30	70 (9.5)	-27 (-32.91, -21.09) NMD (Baseline-Discharge)	<0.001
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	97 (13.5)	-31 (-36.24, -25.76)	
	Paterna, 2005, 15963399	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Urea, mg/dL	48	62 (4)	-	NR
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	56.1 (3.5)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	6 (d)	Urea, mg/dL	48	64 (9.5)	-35 (-39.1, -30.8) NMD (Baseline-6 d) -40.9 (-44.56,	P value between-group: At 6 days <0.0001

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	99 (11)	-37.24)	
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Urea, mg/dL	48	65 (10)	-33 (-37.5, -28.5) NMD (Baseline-Discharge) -38.9 (-42.9, -34.9)	P value between-group: At discharge <0.0001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	98 (12)		
	Paterna, 2011, 21701268	Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Urea, mg/dL	953	58.2 (3.5)	-	NR
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	56 (4)		
		Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Urea, mg/dL	953	71 (13)	-30 (-31.1, -28.9) NMD (Baseline-Discharge) -32.2 (-33.19, -31.21)	P value between groups <0.0001
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	101 (12)		
	Wan, 2017, 28701670	Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Baseline	Urea, mg/dL	132	56.1 (2.3)	-	NR

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[9] Total Na ~2.8 g/d	< 500 mL/d			132	54.5 (4.7)		
		Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Discharge	Urea, mg/dL	132	50.4 (6.4)	0.2 (-1.34, 1.74) NMD (Baseline-Discharge) -1.4 (-2.77, -0.03)	NR
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[9] Total Na ~2.8 g/d	< 500 mL/d			132	50.2 (6.4)		
	Yayla, 2015, 26135463	Furosemide with HSS	150 mL HSS (1.95% NaCl) once daily for 48 (h) Sodium Diet NR Total Na 1.15 g/d[5]	NR	Baseline-to-compensation	Uea, mg/dL	14	37.9 (16.8)	NMD HSS vs bIV[17] (Baseline-compensation) 3.8 (-9.37, 16.97)	0.72
		Furosemide (continuous) cIV without HSS	Sodium Diet NR	NR			15	38.8 (15.3)		
		Furosemide (bolus) bIV without HSS	Sodium Diet NR	NR			14	34.1 (18.7)		
	Montgomery, 2023, 37044281	Furosemide With Oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	4 (d)	Urea change from enrollment to day 4, mEq/L, mg/dL (1mg/dL= 0.357 mEq/L)	34	3.1 (13), 8.68 (36.41)[2]	Cohen d[a] -0.57 (-1.07, -0.07) NMD -7.9 (-14.754, -1.046), -22.1 (-41.32, -2.93)	0.025
		Furosemide without Oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	11 (15) 30.81 (42.01)[2]		
		Furosemide With Oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	Discharge	Urea change from enrollment to discharge, mEq/L, mg/dL (1mg/dL = 0.357 mEq/L)	34	3.2 (15), 8.96 (42.02)[2]	Cohen d[a] -0.55 (-1.05, -0.05) NMD	0.036

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
									-9.8 (-18.460, -1.140), -27.5 (-51.7, -3.19)	
		Furosemide without Oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	13 (20), 36.42 (56.02)[2]		
	Kidney Function (eGFR, mL/min or mL/min/1.73 m²)									
	HSS									
	Paterna, 2011, 21701268	Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Creatinine clearance[##], x (Unit: NR)	953	52.5 (2.2)	-	NR
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	52.1 (2.3)		
		Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Creatinine clearance[##], x(Unit: NR)	953	55.4 (3.3)	6.7 (6.5, 6.9) NMD (Baseline-Discharge) 6.3 (6.07, 6.53)	P value between groups: Discharge <0.0001
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	48.7 (2.1)		
	Parrinello, 2012, 22980301	Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Baseline	MDRD GFR, mL/min/1.73 m²	122	58.8 (26.8)	-	0.84
		Furosemide without HSS	NR	1000 mL/d			126	59.4 (22.2)		
		Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Discharge	MDRD GFR, mL/min/1.73 m²	122	59.1 (31.9)	17.1 (11.06, 23.14) NMD (Baseline-Discharge)	P value between-group. At discharge 0.0001

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide without HSS	NR	1000 mL/d			126	42 (12)	17.7 (11.45, 23.95)	
	Parrinello, 2011, 21440872	Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	Baseline	GFR, mL/min	66	52 (8)	-	NS
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	51 (5)		
		Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	6 (d)	GFR, mL/min	66	58 (6)	14 (11.8, 16.2) NMD (Baseline-6 d) 13 (10.71, 15.29)	<0.0001
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	44 (7)		
	Okuhara, 2014, 24462960	Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	Baseline	GFR, mL min^{-1} 1.73 m^{-2}	22	42.9 (22.6)	-	NR
		Furosemide with Glucose (5%)	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	44.3 (25.6)		
		Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	24 (h)	GFR, mL min^{-1} 1.73 $m^{-2,}$	22	43.1 (21.9)	2 (-11.1, 15.1) NMD (Baseline-24 h) 3.4 (-10.35, 17.15)	NR
		Furosemide with Glucose (5%)	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h)	500 mL/d			22	41.1 (22.5)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			Total Na 2.4 g/d							
	Wan, 2017, 28701670	Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Baseline	Creatinine clearance##	132	56.5 (3.5)	-	-
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[9] Total Na ~2.8 g/d	< 500 mL/d			132	45.7 (2.4)		
		Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Discharge	Creatinine clearance##	132	53.8 (4.1)	MD 9.6 (8.71, 10.49) NMD (Baseline-Discharge) -1.2 (-2.02, -0.38)	-
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[9] Total Na ~2.8 g/d	< 500 mL/d			132	44.2 (3.2)		
	Montgomery, 2023, 37044281	Furosemide With Oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	4 (d)	eGFR change from enrollment to day 4, mL/min/1.73 m^2, median	34	1.67 (-4.55, 4.11)	Rank Biserial[α] (r_{rb}) 0.17 (-0.11, 0.42) Net Median Difference 4.5	0.25
		Furosemide without Oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	-2.83 (-7.45, 3.13)		
		Furosemide With Oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	Discharge	eGFR change from enrollment to discharge, mL/min/1.73 m^2	34	1.4 (12)	Rank Biserial[α] (r_{rb}) 0.24 (-0.25, 0.73) NMD 2.8 (-2.792, 8.392)	0.34
		Furosemide without Oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	-1.4 (11)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
	Kidney Function (Serum Cystatin c, mg/L)									
	HSS (% NaCl)									
	Issa, 2013, 22243938	Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	Baseline	Cystatin C, mg/L###	20	1.53 (0.40)	-	P group * time interaction 0.03
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1.45 (0.50)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	1 (d)	Cystatin C, mg/L###	20	1.49 (0.39)	-	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1.73 (0.63)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	2 (d)	Cystatin C, mg/L###	20	1.43 (0.31)	-	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1.65 (0.53)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	3 (d)	Cystatin C, mg/L###	20	1.47 (0.30)	-0.23 (-0.52, 0.06) NMD (Baseline-3 d) -0.31 (-0.63, 0.01)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1.70 (0.46)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	4 (d) which is 24 h after intervention	Cystatin C, mg/L###	20	1.63 (0.46)	-0.07 (-0.4, 0.3) NMD -0.15 (-0.50, 0.20)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days	NR			12	1.70 (0.55)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			Total Na 0.7 g/d[5]							
	Okuhara, 2014, 24462960	Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	Baseline	Serum Cystatin C, mg/L	22	2.04 (0.98)	-	NR
		Furosemide with Glucose (5%)	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	1.94 (0.90)		
		Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	24 (h)	Serum Cystatin C, mg/L	22	2.04 (0.92)	0 (-0.54, 0.54) NMD (Baseline-24 h) -0.1 (-0.65, 0.45)	
		Furosemide with Glucose (5%)	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	2.04 (0.92)		
Urine Output (mL/24h)	*Diet (Na g/d)*									
	Fabricio, 2019, 31221280	Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	Baseline-7 d	Urine output (water loss), L[†]	16	-4.3 (3.0)	NMD (Baseline-7 d) 1.4 (-0.58, 3.38)	P value (NMD) 0.17
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	-2.9 (2.1)		
	HSS (%NaCl)									
	Issa, 2013, 22243938	Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	Baseline	Urine output (mL/kg/h), Urine output mL/24 h	20	0.93 (0.55), 1870 (1106.1)[2]	-	P interaction 0.11
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	0.73 (0.33), 1384 (625.7)[2]		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	1 (d)	Urine output (mL/kg/h), Urine output mL/24 h	20	1.15 (0.44), 2285 (874.4)[2]	239.3 (-712.1, 1190.7)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days	NR			12	1.09 (0.82), 2045.7 (1539)[2]		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			Total Na 0.7 g/d[5]							
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	2 (d)	Urine output (mL/kg/h), Urine output mL/24 h	20	1.29 (0.46), 2539 (905.2)[2]	822.4 (215.7, 1429.1)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	0.91 (0.43), 1716.6 (811.2)[2]		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	3 (d)	Urine output (mL/kg/h), Urine output mL/24 h,	20	1.12 (0.41), 2185.3 (800)[2]	-151.7 (-1009.4, 706.0) NMD (Baseline-3 d) -637.7 (-1443.21, 167.81)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1.25 (0.74), 2337 (1383.5)[2]		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	4 (d) which is 24 h after intervention	Urine output (mL/kg/h), Urine output mL/24 h	20	0.83 (0.32), 1611.5 (621.3)[2]	-736 (-1609.0, 138.0) NMD -1221.5 (-2056.65, -386.35)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1.28 (0.8), 2347 (1466.9)[2]		
	Paterna, 2005, 15963399	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Urine output, ml/24 h	48	410 (141)	-NR	NR
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	425 (129)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	6 (d)	Urine output, ml/24 h	48	2250 (652)	450 (154, 745)	P value between groups At day 6 <0.0001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d)	1000 mL/d			46	1660 (515)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			Total Na 1.8 g/d[7]							
	Wan, 2017, 28701670	Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Baseline	-Urine output, mL/24 h	132	737(298)	-	NR
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[7] Total Na ~2.8 g/d	< 500 mL/d			132	792 (201)		
		Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Discharge	Urine output, (mL/24 h)	132	2048 (471)	486 (362.5, 609.5) NMD (Baseline-Discharge) 541 (432.75, 649.25)	P value between groups NR
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[7] Total Na ~2.8 g/d	< 500 mL/d			132	1562 (550)		
	Mahjoob, 2021, 34903983	Furosemide with HSS	Normal sodium diet 2.76 g/d = ~2.8 g/d Na until clinical compensation[9] Total Na ~2.8 g/d	< 500 mL/d	Baseline	Urine Output, mL/24 h	14	1254 (321)	-	0.48[11]
		Furosemide without HSS	150 mL (0.9% NaCl) twice daily for 48 (h) Sodium diet NR Total Na ~1.1 g/d[5]	NR			14	1450 (1100)		
		Furosemide with HSS	150 mL (5% NaCl) twice daily for 48 (h) Sodium diet NR Total Na 5.9=~6 g/d[5]	NR	3 (d)	Urine Output, mL/24 h	14	2282 (790)	243 (-303.7, 789.7) NMD (Baseline-3 d)	0.39[12]
		Furosemide without HSS	150 mL (0.9% NaCl) twice daily for 48 (h) Sodium diet NR Total Na ~1.1 g/d[5]	NR			14	2039 (682)	439 (-180.43, 1058.43)	
	Licata, 2003, 12660669	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to	1000 mL/d	Baseline	Urine Output, mL/24 h	53	390 (151)	-	NR

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			12 (d) Normal sodium diet 2.76 g/d= ~2.8 g/d Na Total Na= ~4.5-8.2 g/d							
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 (d) Total Na 1.8 g/d	1000 mL/d			54	435 (139)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to 12 (d) Normal sodium diet 2.76 g/d= ~2.8 g/d Na Total Na= ~4.5-8.2 g/d	1000 mL/d	Discharge	Urine Output, mL/24 h	53	2100 (622)	450 (230.3, 669.7) NMD (Baseline-Discharge) 495 (296.68, 693.32)	P value between groups At discharge <0.001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 (d) Total Na 1.8 g/d	1000 mL/d			54	1650 (535)		
	Okuhara, 2014, 24462960	Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) for 24 (h) Restricted sodium to 2.4 g/d Na Total Na 5.7=~6 g/d	500 mL/d	24 (h)	Urine Output, mL/24 h	22	2701 (920)	924 (415.37, 1432.63)	<0.001
		Furosemide wutg Glucose (5%)	500 mL/d 5% glucose Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	1777 (797)		
	Paterna, 2000, 10938493	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Urine Output, mL/24 h	30	390 (155)	-	NR
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	433 (141)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Urine Output, mL/24 h	30	2100 (626)	450 (154.9, 745.1) NMD (Baseline-Discharge) 493 (227.28, 758.72)	P value between groups At discharge <0.001
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	1650 (537)		
	Paterna, 2011, 21701268	Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Urine Output, mL/24 h	953	635 (145)	-	NR
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	690 (155)		
		Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Urine Output, mL/24 h	953	2150 (565)	475 (425.2, 524.8) NMD (Baseline-Discharge) 530 (485.36 574.64)	P value between- group: At discharge <0.0001
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	1675 (550)		
	Parrinello, 2012, 22980301	Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Baseline	Urine Output, mL/24 h	122	427 (128)	-	0.18
		Furosemide without HSS	NR	1000 mL/d			126	447 (106)		
		Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14]	1000 mL/d	Discharge	Urine Output, mL/24 h	122	2180 (545)	730 (362.2, 1097.8) NMD	P value between- group. Discharge 0.0001

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			Total Na: assumed at least 3.5-4.5 g/d[15]						(Baseline-Discharge)	
		Furosemide without HSS	NR	1000 mL/d			126	1450 (352)	750 (646.78, 853.22)	
	Parrinello, 2011, 21440872	Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	Baseline	Urine Output, mL/24 h	66	425 (129)	-	NS
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	410 (141)		
		Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	6 (d)	Urine Output, mL/24 h	66	2180 (545)	630 (473.4, 786.6) NMD (Baseline-6 d) 615 (474.79, 755.21)	P value between-group At 6 d <0.0001
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	1550 (355)		
	Tuttolomondo, 2021, 34288546	Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 6 days 15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 3.3-7 g/d[18]	NR	Baseline	Urine Output, mL/24 h	68	1031.62 (212.29)	-	NR
		Furosemide without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 1.61 g/d[18]	NR			68	1001.47 (167.72)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 6 days 15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 3.3-7 g/d[18]	NR	6 (d)	Urine Output, mL/24 h	68	2260.74 (466.37)	353.4 (225.4, 481.4) NMD (Baseline-6 d) 323.20 (211.96, 434.44)	NR
		Furosemide without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 1.61 g/d[18]	NR			68	1907.35 (269.36)		
	Montgomery, 2023, 37044281	Furosemide with Oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	4 (d)	Urine output, total amount from enrollment to day 4, mean urine output per day, mL	34	10000 (4200), 2500 (1050)	Cohen d[α] 0.13 (-0.36, 0.61) MD 600 (-1469.89), 2669.89)	0.61
		Furosemide without Oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	9400 (4300), 2350 (1075)	MD 150 (-362.73, 662.73)	
		Furosemide with Oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	4 (d)	Cumulative diuretic efficiency from enrollment to day 4 (urine output (L) per 40 mg oral FE), median (IQR)	34	0.17 (0.06, 0.24)	Rank Biserial[α] (r_{rb}) 0.11 (-0.17, 0.37) Median Difference 0.03	0.45
		Furosemide without Oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	0.14 (0.07, 0.21)		
BNP/NT-proBNP	*Diet (g/d Na)*									
	Aliti, 2013, 23689381	Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	Baseline	BNP, pg/mL, median (IQR),	38	1084 (608, 1820)	-	0.67
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	1425 (632, 2297)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	7 (d)	BNP, pg/mL, median (IQR),	38	954 (488, 1331)	Median Difference 184 Net Median Difference 525	P value between-group Study end 0.92[20] From baseline to study end 0.51[21]
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	770 (4485, 1400)		
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	Baseline	BNP, pg/mL, median (IQR)	30	301 (215, 524)	-	NR
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	186 (100, 325)		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	7 (d)[#]	BNP, pg/mL, median (IQR),	30	286 (161, 368)	Median Difference 102 Net Median Difference -13	P group * time = 0.85[21]
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	184 (113, 286)		
	Fabricio, 2019, 31221280	Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	Baseline	NT-proBNP, pg/mL, median (IQR)	16	4733 (503, 25000)	-	NR
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	4069 (1486, 25000)		
		Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	7 (d)	NT-proBNP. pg/mL, median (IQR)	16	3954 (273, 10816)	Median Difference 803 Net Median Difference 139	NS
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	3151 (282, 6157)		
	HSS (% NaCl)									
	Issa, 2013, 22243938	Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	Baseline	BNP, median (IQR)[##]	20	2077 (1046, 3353)	-	No difference in baseline values between HSS and placebo.
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1219 (574, 2336)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	4 (d) which is 24 h after intervention	BNP, median (IQR)[##],	20	1728 (1067, 3574)	Median Difference 344	NR

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	1384 (682, 1816)	Net Median Difference -514	
	Okuhara, 2014, 24462960	Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	Baseline	NT-proBNP, pg/mL, median (IQR),	22	6776 (4341, 10079)	-	NR
		Furosemide with glucose (5%)	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	6525 (3547, 16116)		
		Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	24 (h)	NT-proBNP, pg/mL, , median (IQR),	22	4913 (2818, 8667)	Median Difference -2280 Net Median Difference -2531	NR
		Furosemide with glucose (5%)	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	7193 (3604, 15670)		
	Parrinello, 2011, 21440872	Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	6 (d)	BNP, pg/mL	66	NR	-	P value between-group at 6 d Significant but not reported (BNP plasma levels were significantly lower for the HSS group compared with those without HSS)
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	NR		
	Parrinello, 2012, 22980301	Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Baseline	BNP, pg/mL	122	1284 (515)	-	0.64
		Furosemide without HSS	NR	1000 mL/d			126	1255 (475)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Discharge	BNP, pg/mL	122	542 (285)	-140 (-210.5, -69.5)[3] NMD (Baseline-Discharge) -169 (-276.47, -61.53)	P value (MD) between-group At discharge 0.0001
		Furosemide without HSS	NR	1000 mL/d			126	682 (296)		
	Paterna, 2011, 21701268	Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	BNP, pg/mL	953	355 (105)	-30 (-39.8, -20.2)	<0.0001
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	385 (115)		
	Paterna, 2005, 15963399	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	BNP, pg/mL	48	1212 (491)	-	<0.6
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	1265 (515)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	6 (d)	BNP, pg/mL	48	343 (196)	-125 (-216.3, -33.7) NMD (Baseline-6 d) -72 (-248.86, 104.86)	P value (MD) between-group At 6 d <0.008
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	468 (251)		
	Tuttolomondo, 2011, 20346637	Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 8 (d) 15 mL/kg of 0.9% NaCl (over 60 min) after 8 (d) once only. Low sodium diet 1.61 g/d Na for 10	NR	Baseline	BNP, pg/mL, median (IQR)	120	215.5 (80.5, 487	-	NR

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			(d) Total Na 3.3-7 g/d[18]							
		Furosemide without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 8 (d) once only. Low sodium diet 1.61 g/d Na for 10 (d) Total Na 1.61 g/d[18]	NR			30	NR		
		Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 8 (d) 15 mL/kg of 0.9% NaCl (over 60 min) after 8 (d) once only. Low sodium diet 1.61 g/d Na for 10 (d) Total Na 3.3-7 g/d[18]	NR	8 (d)	BNP, pg/mL, median (IQR)	120	87 (66, 141.5)	Median difference -48 Net Median Difference could not be calculated due to NR at baseline for the second group	NR
		Furosemide without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 8 (d) once only. Low sodium diet 1.61 g/d Na for 10 (d) Total Na 1.61 g/d[18]	NR			30	135 (78.5, 202)		
	Tuttolomondo, 2021, 34288546	Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 6 days 15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 3.3-7 g/d[18]	NR	Baseline	NT-proBNP, pg/mL	68	7237 (7931)	-	0.102
		Furosemide without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 1.61 g/d[18]	NR			68	5381 (4829)		
		Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 6 days 15 mL/kg of 0.9%	NR	6 (d)	NT-proBNP, pg/mL	68	3244 (4159)	-1222 (-2660.9, 216.9)[3] NMD	P value between-group at 6 d 0.096

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 3.3-7 g/d[18]						(Baseline-6 d) -3078 (-5043.5, -1112.5)	
		Furosemide without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 6 days once only. Low sodium diet 1.61 g/d Na Total Na 1.61 g/d[18]	NR			68	4466 (4332)		
	Wan, 2017, 28701670	Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Baseline	BNP, pg/ml	132	859 (154)	-	NR
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[7] Total Na ~2.8 g/d	< 500 mL/d			132	911 (277)		
		Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Discharge	BNP, pg/ml	132	134 (56)	NMD (Baseline-Discharge) -90 (-138.08, -41.92)	NR
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[7] Total Na ~2.8 g/d	< 500 mL/d			132	276 (78)		
	Montgomery, 2023, 37044281	Furosemide With Oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	Enrollment	NT-proBNP at admission, pg/mL, median (IQR)	25	4540 (2690, 10700)	-	-
		Furosemide without oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			21	3550 (2350, 6490)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide With oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	≤ 5 (d)	NT-proBNP at the end of study visit (≤ 5 (d)), pg/mL, median (IQR)	26	2840 (1630, 4550)	Rank biserial[α] (r_{rb}) -0.16 (-0.46, 0.17) Median Difference -680	0.34
		Furosemide without oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			22	3520 (2430, 5980)		
		Furosemide With oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted Sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	Enrollment to ≤ 5 (d)	NT-proBNP change from enrollment to the end of study visit (≤ 5 (d)), pg/mL, median (IQR)	25	-1050 (-3050, 207)	Rank biserial[α] (r_{rb}) -0.11 (-0.41, 0.22) Net Median Difference -10	0.52
		Furosemide without oral NaCl	Restricted Sodium Diet ~0.8 g/d Na	No restriction			21	-1040 (-1730, 212)		
Serum Na (mEq/L)	*Diet (g/d Na)*									
	Aliti, 2013, 23689381	Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	Baseline	Sodium, mEq/L	38	139 (4)	-	NR
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	139 (5)		
		Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	≤ 7 (d)	Sodium, mEq/L	38	139 (4)	0 (-1.6, 1.6) NMD 0 (-1.90, 1.90)	P value between-groups Study end > 0.99[20] From baseline to the study end 0.48[21]
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	139 (3)		
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	Baseline	Sodium, mEq/L	30	140 (4)	-	NR
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	141 (3)		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	≤ 7 (d)	Sodium, mEq/L	30	140 (4)	0 (-1.89, 1.89) NMD 1 (-0.88, 2.88)	P value Between-group (Baseline vs study end) 0.64[21]
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	140 (3)		
	Fabricio, 2019, 31221280	Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	Baseline	Sodium, mEq/L	16	136.3 (3.2)	-	NR
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	136.5 (2.2)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	7 (d)		16	135.3 (3.7)	-2.4 (-4.45, -0.35) NMD (Baseline-7 d) -2.2 (-4.19, -0.20)	P value (MD) < 0.05
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	137.7 (1.9)		
	HSS (% NaCl)									
	Issa, 2013, 22243938	Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	Baseline	Sodium, mEq/L	20	137.6 (3.5)	-	P interaction 0.92
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	134.4 (5.6)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	1 (d)	Sodium, mEq/L	20	138.7 (3.7)	-	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	135.0 (5.5)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	2 (d)	Sodium, mEq/L	20	139.1 (3.9)	-	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	134.9 (6.1)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	3 (d)	Sodium, mEq/L	20	139.5 (4.6)	3.5 (0.03, 6.97) NMD (Baseline-3 d) 0.3 (-3.22, 3.82)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	136.0 (5.0)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	4 (d) which is 24 h after intervention	Sodium, mEq/L	20	137.8 (4.3)	NMD (Baseline-24 h after intervention) -0.3 (-3.8, 3.2)	
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	134.9 (5.2)		
	Roul, 2017	HSS	HSS (NaCl% NR) Sodium diet NR[19]	NR[19]	In-hospital	Sodium, mEq/L	11	137 (7)	8 (2.1, 13.8)	0.007
		without HSS	NR[19]	NR[19]			156	129 (3)		
	Licata, 2003, 12660669	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to 12 ds Normal sodium diet 2.76 g/d= ~2.8 g/d Na Total Na= ~4.5-8.2 g/d	1000 mL/d	Baseline	Sodium, mEq/L	53	135.8 (7)	-	NR
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 days Total Na 1.8 g/d	1000 mL/d			54	134.8 (8)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to 12 ds Normal sodium diet 2.76 g/d= ~2.8 g/d Na Total Na= ~4.5-8.2 g/d	1000 mL/d	Discharge	Sodium, mEq/L	53	142.3 (3.9)	12.1 (10.6, 13.6) NMD (Baseline-Discharge) 11.1 (8.63, 13.57)	P value between-group (Discharge) <0.001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 days Total Na 1.8 g/d	1000 mL/d			54	130.2 (4)		
	Mahjoob, 2021, 34903983	Furosemide with HSS	150 mL (5% NaCl) twice daily for 48 (h) Sodium diet NR Total Na 5.9=~6 g/d[5]	NR	Baseline	Sodium, mEq/L	14	135.21 (4)	-	0.91[11]
		Furosemide without HSS	150 mL (0.9% NaCl) twice daily for 48 (h) Sodium diet NR Total Na ~1.1 g/d[5]	NR			14	134.93 (4.2)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide with HSS	150 mL (5% NaCl) twice daily for 48 (h) Sodium diet NR Total Na 5.9=~6 g/d[5]	NR	3 (d)	Sodium, mEq/L	14	138.86 (2.35)	0.28 (-0.05, 0.61) NMD (Baseline-3 d)	0.10[11]
		Furosemide without HSS	150 mL (0.9% NaCl) twice daily for 48 (h) Sodium diet NR Total Na ~1.1 g/d[5]	NR			14	137.79 (3.14)	0.79 (-1.90, 3.48)	
	Okuhara, 2014, 24462960	Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	Baseline	Sodium, mEq/L, median (IQR)	22	138 (136, 141)	-	NR
		Furosemide with glucose (5%)	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	140.5 (137.3, 142)		
		Furosemide with HSS	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	24 (h)	Sodium, mEq/L, at 24 h end of intervention, median (IQR)	22	140.5 (138, 142)	Median Difference 1 Net Median Difference (Baseline-24 h) 3.5	NR
		Furosemide with glucose (5%)	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	139.5 (135.3, 141)		
	Parrinello, 2011, 21440872	Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	Baseline	Sodium, mEq/L	66	136 (6)	-	NS
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	135 (4)		
		Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d)	1000 mL/d	6 (d)	Sodium, mEq/L	66	140 (5)	1 (-0.7, 2.7) NMD (Baseline-6 d)	<0.0001

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			Total Na 6.3 g/d						8 (6.27, 9.73)	
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	131 (5)		
	Parrinello, 2012, 22980301	Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Baseline	Sodium, mEq/L	122	139.5 (5.6)	-	0.12
		Furosemide without HSS	NR	1000 mL/d			126	138 (4.7)		
		Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Discharge	Sodium, mEq/L	122	140.2 (3.5)	8.2 (4.1, 12.3)[3] NMD (Baseline-Discharge)	P value between-group At discharge 0.0001
		Furosemide without HSS	NR	1000 mL/d			126	132 (2.5)	6.7 (5.58, 7.82)	
	Paterna, 2000, 10938493	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Sodium, mEq/L	30	135.9 (6.8)	-	NR
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	134.7 (7.9)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Sodium, mEq/L	30	142.2 (3.8)	12.1 (10.0, 14.2) NMD (Baseline-Discharge)	P value between-group At discharge <0.001
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	130.1 (4.3)	10.9 (7.66, 14.14)	

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
	Paterna, 2005, 15963399	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Sodium, mEq/L	48	133.8 (6)	-	NR
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	134.9 (7)		
		Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	6 (d)	Sodium, mEq/L	48	142.3 (3.4)	12.2 (10.9, 13.5) NMD (Baseline-6 d) 13.3 (11.01, 15.59)	P value between-group At 6 days <0.0001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	130.1 (3)		
	Paterna, 2011, 21701268	Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Baseline	Sodium, mEq/L	953	137.8 (8)	-	NR
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	138.8 (7)		
		Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Sodium, mEq/L	953	143.2 (4)	7.9 (7.5, 8.3) NMD (Baseline-Discharge) 8.9 (8.32, 9.48)	P value between-group At discharge <0.0001
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	135.3 (3.9)		
	Wan, 2017, 28701670	Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice	< 500 mL/d	Baseline	Sodium, mEq/L	132	135.2 (2.3)	-	NR

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d							
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[7] Total Na ~2.8 g/d	< 500 mL/d			132	136.1 (4.8)		
		Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Discharge	Sodium, mEq/L	132	137.5 (2.9)	3.9 (3.11, 4.68) NMD (Baseline-Discharge) 4.8 (3.93, 5.67)	NR
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[7] Total Na ~2.8 g/d	< 500 mL/d			132	133.6 (3.6)		
	Yayla, 2015, 26135463	Furosemide with HSS	150 mL HSS (1.95% NaCl) once daily for 48 (h) Sodium Diet NR Total Na 1.15 g/d[5]	NR	Baseline-to-compensated	Sodium, mEq/	14	136.7 (4.1)	NMD HSS vs bIV[17] (Baseline-to-compensation) 0.7 (-2.2, 3.6)	P value between-group 0.37
		Furosemide (continuous) cIV without HSS	Sodium Diet NR	NR			15	134.0 (7.2)		
		Furosemide (bolus) bIV without HSS	Sodium Diet NR	NR			14	136.0 (3.8)		
	Montgomery, 2023, 37044281	Furosemide with oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	4 (d)	Sodium change from enrollment to day 4, mEq/L	34	-0.03 (3.3)	Cohen d[a] 0.86 (0.35, 1.37) NMD 2.57 (1.109, 4.031)	<0.001
		Furosemide without oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	-2.6 (2.7)		
		Furosemide with oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium	No restriction	Discharge	Sodium change from enrollment to discharge, mEq/L	34	-0.91 (3.5)	Cohen d[a] 0.66 (0.16, 1.17)	0.010

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
			Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d						NMD 2.29 (0.612, 3.968)	
		Furosemide without oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	-3.2 (3.4)		
Aldosterone,pg/mL	**Diet (g/d Na)**									
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	Baseline	Aldosterone, pg/mL, median (IQR)	30	65 (44, 159)	-	NR
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	61 (35, 126)		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	at 7 days or at discharge which came first (study end)? (d)[#]	Aldosterone, pg/mL, median (IQR).	30	81 (58, 164)	Median Difference 15 Net Median Difference (Baseline-7 d) 11	P value Between-group (Baseline vs study end) 0.85[21]
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	66 (36, 129)		
	HSS (% NaCl)									
	Issa, 2013, 22243938	Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	Baseline	Aldosterone, median (IQR)[##]	20	10 (3.7, 17.2)	-	P value between-group At baseline NS
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	9.7 (6.2, 41.6)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 days Total Na 5.9 =~6 g/d[5]	NR	4 (d) which is 24 h after intervention	Aldosterone, median (IQR)[##]. after intervention)	20	12 (4.6, 19.7)	Median Difference 4.4 Net Median Difference (Baseline-after-intervention) 4.1	NR
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 days Total Na 0.7 g/d[5]	NR			12	7.6 (3.1, 79.9)		
	Okuhara, 2014, 24462960	HSS Furosemide	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	Baseline	Plasma aldosterone, pg/mL, median (IQR).	22	71 (35.1, 112.0)	-	NR

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Glucose (5%) Furosemide	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	76.4 (42.6, 94.6)		
		HSS Furosemide	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	24 (h)	Plasma aldosterone, pg/mL, median (IQR).	22	42.7 (23.3, 68.3)	Median Difference (Baseline-24 h) -2.1 Net Median Difference (Baseline-24 h) 3.3	NR
		Glucose (5%) Furosemide	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	44.8 (26.5, 66.2)		
	Montgomery, 2023, 37044281	Furosemide with oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	Enrollment	Aldosterone, pd/mL, median (IQR)	25	280 (131, 585)	-	-
		Furosemide without oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			21	303 (230, 481)		
		Furosemide with oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	≤ 5 (d)	Aldosterone, pd/mL, median (IQR)	26	284 (194, 593)	Rank biserial[α] (r_{rb}) -0.03 (-0.35, 0.30) Median Difference -7	0.87
		Furosemide without oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			22	291 (159, 639)		
		Furosemide with oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	Enrollment to ≤ 5 (d)	Aldosterone change from enrollment to end of stud visit (≤ 5 (d)), pd/mL, median (IQR)	25	17.1 (-51.2, 123)	Rank biserial[α] (r_{rb}) 0.17 (-0.16, 0.47) Net Median Difference 64.5	0.32
		Furosemide without oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			21	-47.4 (-116, 85.1)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
Renin	*HSS (%NaCl)*									
	Issa, 2013, 22243938	Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 (d) Total Na 5.9 =~6 g/d[5]	NR	Baseline	Renin, median (IQR)	20	20.6 (5.4, 35.4)	-	No difference in baseline values between groups
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 (d) Total Na 0.7 g/d[5]	NR			12	32.9 (17.9, 42.6)		
		Furosemide with HSS	100 mL/d HSS (7.5% NaCl) twice daily for 3 (d) Total Na 5.9 =~6 g/d[5]	NR	4 (d) which is 24 h after intervention	Renin, median (IQR)	20	13.7 (5.6, 35.1)	Median Difference -10.1 Net Median Difference 2.2	NR
		Furosemide without HSS	100 mL (0.9% NaCl) twice daily for 3 (d) Total Na 0.7 g/d[5]	NR			12	23.8 (17.8, 45.1)		
PRA (ng/ml/h)	*Diet (g/d Na)*									
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	Baseline	PRA, ng/mL/h, median (IQR)	30	2.4 (0.6–9.1)	-	NR
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	2.8 (0.4–6.4)		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	≤ 7 (d)	PRA, ng/mL/h,median (IQR).	30	4.5 (2.3–22.1)	Median Difference -1.3 Net Median Difference (Baseline-7d or less) -0.9	P value Between-group (Baseline vs ≤ 7 (d)) 0.42[21]
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	5.8 (1.5–21.3)		
	HSS (% NaCl)									
	Okuhara, 2014, 24462960	HSS Furosemide	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	Baseline	Plasma renin activity, (ng/ml/h), median (IQR)	22	1.1 (0.5, 6.5)	-	NR
		Glucose (5%) Furosemide	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	0.7 (0.3, 5.2)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
	Okuhara, 2014, 24462960	HSS Furosemide	500 mL/d of HSS (1.7% NaCl) per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 5.7=~6 g/d	500 mL/d	24 (h)	Plasma renin activity, (ng/ml/h), at 24 h, end of intervention, median (IQR)	22	0.9 (0.4, 8.1)	Median Difference 0.3 Net Median Difference (Baline-24 h) -0.1	
		Glucose (5%) Furosemide	500 mL/d 5% glucose per day Restricted sodium to 2.4 g/d Na for 24 (h) Total Na 2.4 g/d	500 mL/d			22	0.6 (0.3, 4.1)		
Calorie intake (kcal/kg)/ Fluid intake	*Calorie Intake/Fluid Intake*									
	Diet (g/d Na)									
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	≤ 7d	Calorie intake (kcal/kg/d)	30	15.1 (5.1)	-4.4 (-7.26, -1.53)	0.01
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	19.5 (5.4)		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	≤ 7d	Fluid intake, mL/d, median (IQR)	30	582.7 (496.9, 662.4)	Median Difference -312.7	<0.001[11]
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	895.4 (751.2, 1121.8)		
	Inuzuka, 2016	Low sodium diet	Max 2.4 g/d for NR days	NR	NR	Caloric intake represented as a percentage of estimated daily requirements (timepoint was not reported)	145	96% (25)	-16 (-6.6, -25.4)	<0.01
		Unrestricted sodium diet	~4 g/d for NR days	NR			45	112% (29)		
Clinical Outcomes										
Clinical congestion score (CCS)	*Diet (g/d Na)*									
	Aliti, 2013, 23689381	Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	Baseline	CCS[22]	38	12.6 (3.1)	-	0.67
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	12.8 (2.8)		
		Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	3 (d)	CCS change from baseline to day 3 (a primary end point)	38	-4.03 (3.3)	NMD -0.59 (-2.10, 0.92)[3]	0.47
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	-3.44 (3.35)		
		Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	7 (d)	CCS at study end	38	6.4 (3.0)	-0.7 (-1.97, 0.57) NMD -0.5 (-1.76, 0.76)	NR
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	7.1 (2.6)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	Baseline	CCS[22]	30	12.2 (3.2)	-	0.36
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	11.4 (2.7)		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	3 (d)	CCS change from baseline to day 3.	30	NR	-	0.1
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	NR		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	7 (d)	CCS change from baseline to day 7.	30	-3.4 (3.5)	NMD 0.4 (-1.6, 2.4)	0.70
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	-3.8 (3.4)		
HF-Related Symptom	*HF-Related Symptom (Thirst)*									
	Diet (g/d Na)									
	Aliti, 2013, 23689381	Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	Baseline	Perceived thirst using Visual analogue scale[26]	38	4.08 (2.6)		0.65
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	3.95 (2.5)		
		Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	7 (d)	Perceived thirst using Visual analogue scale[26]	38	5.1 (2.9)	0.67 (0.2-1.13) NMD (Baseline-7 d) 1.53 (0.38, 2.67)	Time x group P 0.01[27]
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	3.44 (2)		
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	Baseline	Perceived thirst using Visual analogue scale[26]	30	4.2 (3.6)	-	0.14
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	5.8 (2.6)		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	≤ 7 d	Perceived thirst using Visual analogue scale	30	NR	-	Time x group P 0.03
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	NR		
	HSS (% NaCl)									
	Montgomery, 2023, 37044281	Furosemide with oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	4 (d)	TDS-HF score change from enrollment to day 4	34	-1.2 (5.1)	Cohen d[a] -0.23 (-0.73, 0.28) NMD -1.31 (-4.169, 1.549)	0.39

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide without oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	0.11 (6.5)		
	HF-Related Symptom (Shortness of Breath)									
	Diet (g/d Na)									
	Fabricio, 2019, 31221280	Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	Baseline	Perceived dyspnea using Visual analogue scale[28]	16	4.8 (1.6)	-	NR
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	6.3 (1.8)		
		Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	7 (d)	Perceived dyspnea using Visual analogue scale[28]	16	8.5 (1.4)	-0.7 (-1.55, 0.15)	P between-group 0.3
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	9.2 (1.0)	NMD (Baseline-7 d) 0.8 (-0.28, 1.88)	
	HF-Related Symptom (General Well-Being)									
	Diet (g/d Na)									
	Fabricio, 2019, 31221280	Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	Baseline	Perceived General well-being using Visual analogue scale[29]	16	5.0 (2.3)	-	-
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	5.7 (2.2)		
		Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	7 (d)		16	8.1 (1.9)	-0.1 (-1.47, 1.27)	P between-group 0.59
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	8.2 (2.0)	NMD (Baseline-7 d) 0.6 (-0.89, 2.09)	
Diuretics Dose During Hospitalization	*Diet (g/d Na)*									
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	Baseline	Mean dose of loop diuretics (furosemide), mg/d	30	72.7 (29)	-	0.64
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	69 (26.9)		
		Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	3 (d)	Mean dose of loop diuretics (furosemide), mg/d.	30	74.7 (34.8)	-	0.36
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	66.1 (31.0)		
		Low sodium diet	0.8 g/d Na for 7 days ora less**	800 mL/d	≤7 (d)	Mean dose of loop diuretics (furosemide)	30	68 (34.3)	NMD 4.3 (-11.97, 20.57)	0.38
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	60 (29.5)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
						administered, mg/d				
	Fabricio, 2019, 31221280	Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	7 (d)	Final dose of furosemide, mg/d	16	81.3 (36.6)	14.2 (-6.80, 35.20)	NS
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	67.1 (21.6)		
		Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	During hospitalization	Cumulative dose of diuretic during hospitalization, mg	16	517.5 (209.6)	103.5 (-14.25, 221.25)	NS
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	414.0 (113.8)		
	Velloso, 1991, 1824218	Low sodium diet	0.8 g/d Na for NR days[4]	800 mL/d	During compensation period	Cumulative dose of furosemide, mg.	14	568 (343)	-31 (-265.74, 203.74)	P value 0.80[25]
		Unrestricted sodium diet	4 g/d Na for NR days[4]	800 mL/d			18	599 (327)		
		Low sodium diet	0.8 g/d Na for NR days[4]	800 mL/d	During compensation period	Daily furosemide dose, mg/h/day	14	1.43 (0.74)	-0.15 (-0.64, 0.34)	P value 0.57[25]
		Unrestricted sodium diet	4 g/d Na for NR days[4]	800 mL/d			18	1.58 (0.62)		
	HSS (% NaCl)									
	Montgomery, 2023, 37044281	Furosemide with oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	4 (d)	Total oral furosemide equivalent (FE) dosage from enrollment to day 4, mg	34	1840 (915, 2810)	Rank Biserial[α] (r_{rb}) -0.02 (-0.29, 0.26) Median Difference 220	0.91
		Furosemide without oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	1620 (1070, 3080)		
Time on IV Diuretics	*Diet (g/d Na)*									
	Aliti, 2013, 23689381	Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	During hospitalization	The median days to transition from IV to oral diuretic therapy	38	4 (2.0, 7.2)	Median Difference 0	0.58
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*	≥2500 mL/d			37	4 (2.0, 7.0)		
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	≤ 7 (d)	The mean days to transition from IV to oral diuretic therapy .	30	3 (2.3)	0.3 (-0.86, 1.46)	0.63
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	2.7 (2)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
Time to Clinical Stability	*Diet (g/d Na)*									
	Velloso, 1991, 1824218	Low sodium diet	0.8 g/d Na for NR days[4]	800 mL/d	During compensation period	Days to compensation (d)	14	7.5 (1.9)	0.9 (-0.34, 2.14)[3]	P value 0.18[25]
		Unrestricted sodium diet	4 g/d Na for NR days[4]	800 mL/d			18	6.6 (1.6)		
Adherence to Prescribed Diet Inpatient Setting										
	Diet (g/d Na)									
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	≤ 7 (d)	Consumption of dietary Na g/d, median (IQR)	30	1.2 (1.1, 1.3)	Median Difference -1.3	<0.001[21]
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	2.5 (2.4, 2.8)		
	Fabricio, 2019, 31221280	Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	7 (d)	Consumption of dietary Na g/d, g/d (through the 24-h dietary recall),	16	0.10 (0.17)	-1.47 (-1.70, -1.23)	NR
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	2.47 (0.43)		
		Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	7 (d)	Consumption of at least 80% of the entire meal	16	79.6 (14.3%)	-8.5 (-17.87, 0.87)[3]	0.08
		Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d			15	88.1 (12.3%)		
Utilization Measures										
Length of Hospital Stay	*Diet (g/d Na)*									
	Aliti, 2013, 23689381	Low sodium diet	Max 0.8 g/d Na for 7 days or less*	Max 800 mL/d	Discharge	The overall median length of stay (d)	38	7 (3.8, 13)	Median Difference 1	0.89
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less*.	≥2500 mL/d			37	6 (4, 12.5)		
		Low sodium diet	Max 0.8 g/d Na for 7 days or less	Max 800 mL/d	Discharge	The length of stay among patients remained hospitalized after day 7	NR	NR	-	0.9
		Unrestricted sodium diet	~3- 5 g/d Na for 7 days or less	≥2500 mL/d			NR	NR		
	d'Almeida, 2018, 29793053	Low sodium diet	0.8 g/d Na for 7 days or less**	800 mL/d	Discharge	The overall median length of stay (d)	30	6 (1, 17)	Median Difference 2	0.52
		Unrestricted sodium	~4 g/d Na for 7 days or less**	Unlimited fluid intake			23	4 (2, 8)		
	Fabricio, 2019,	Low sodium diet	1.2 g/d Na for 7 days***	1000 mL/d	Discharge		16	18.1 (9.6)	6.7	0.02

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
	31221280	Unrestricted sodium diet	2.8 g/d Na for 7 days***	1000 mL/d		Mean hospitalization duration (d)	15	11.4 (3.5)	(1.67, 11.73)[3]	
	HSS (% NaCl)									
	Licata, 2003, 12660669	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily for 6 to 12 ds Normal sodium diet 2.76 g/d= ~2.8 g/d Na Total Na= ~4.5-8.2 g/d	1000 mL/d	Discharge	Hospitalization (d)	53	8.57 (2.3)	-3.13 (-4.06, -2.20)	<0.001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 6 to 12 days Total Na 1.8 g/d	1000 mL/d			54	11.7 (2.6)		
	Parrinello, 2011, 21440872	Furosemide with HSS	150 mL of HSS (3% NaCl) twice daily Light sodium diet 2.76 g/d Na for 6 (d) Total Na 6.3 g/d	1000 mL/d	Discharge	Hospitalization (d)	66	6.3 (3)	-5.7 (-6.90, -4.50)	<0.0001
		Furosemide without HSS	150 mL of 0.9% NaCl twice daily Low sodium diet 1.8 g/d Na for 6 (d) Total Na 2.9 g/d = ~3 g/d	1000 mL/d			67	12 (4)		
	Parrinello, 2012, 22980301	Furosemide with HSS	HSS (1.4%-4.6% NaCl)[6] twice daily Normosodic diet until compensation[14] Total Na: assumed at least 3.5-4.5 g/d[15]	1000 mL/d	Discharge	Hospitalization (d)	122	6.25 (2.12)	-3.95 (-4.53, -3.37)	<0.0001
		Furosemide without HSS	NR	1000 mL/d			126	10.2 (2.54)		
	Paterna, 2000, 10938493	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Hospitalization (d)	30	8.57 (2.3)	-3.1 (-4.34, -1.86)[3]	0.001

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
		Furosemide without HSS	Sodium diet 2.76 g/d Na for 6 to 12 (d) Total Na ~2.8 g/d[7]	1000 mL/d			30	11.67 (2.6)		
	Paterna, 2011, 21701268	Furosemide with HSS	150 mL of HSS (1.4%–4.6% NaCl)[6] twice daily until compensation[13] Moderate sodium diet 2.76 g/d Na Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Hospitalization (d)	953	3.5 (1)	-2 (-2.09, -1.91)	<0.0001
		Furosemide without HSS	Low sodium diet 1.8 g/d Na until compensation[13] Total Na 1.8 g/d[7]	1000 mL/d			974	5.5 (1)		
	Paterna, 2005, 15963399	Furosemide with HSS	150 mL of HSS (1.4%- 4.6% NaCl)[6] twice daily Normal sodium diet 2.76 g/d for 4 to 6 (d) Total Na 4.4-8.1 g/d	1000 mL/d	Discharge	Hospitalization (d)	48	6.57 (2.3)	-3.93 (-4.92, -2.94)	<0.0001
		Furosemide without HSS	Iposodic diet 1.8 g/d Na for 4 to 6 (d) Total Na 1.8 g/d[7]	1000 mL/d			46	10.5 (2.6)		
	Roul, 2017	HSS	HSS (NaCl% NR) Sodium diet NR[19]	NR[19]	Discharge	Median length of stay (d)	11	21 (IQR: NR)	Median Difference 11	NR
		without HSS	NR[19]	NR[19]			156	10 (IQR:NR)		
	Tuttolomondo, 2011, 20346637	Furosemide with HSS	150 mL of HSS (1.4–4.6% NaCl) twice daily for 8 (d) 15 mL/kg of 0.9% NaCl (over 60 min) after 8 (d) once only. Low sodium diet 1.61 g/d Na for 10 (d) Total Na 3.3-7 g/d[18]	NR	Discharge	Hospitalization (d), median (IQR)	120	10 (9, 11)	Median Difference 0	NR
		Furosemide without HSS	15 mL/kg of 0.9% NaCl (over 60 min) after 8 (d) once only. Low sodium diet 1.61 g/d Na for 10 (d) Total Na 1.61 g/d[18]	NR			30	10 (8,11)		

Outcome	Study, Year, PMID	Arm	Total Sodium Intake/d[1]	Fluid Intake/d	Time	Outcome Definition	N	Mean (SD)/Median (IQR)	MD (95% CI)[2]	Reported P Value
	Wan, 2017, 28701670	Furosemide with compound HSS	100 mL c-HSS[8] (2.8% NaCl) twice daily until clinical compensation[9] Normal sodium diet 2.76 g/d Na Total Na 5 g/d	< 500 mL/d	Discharge	Hospitalization time (d)	132	4 (2)	-3 (-3.48, -2.52)	<0.01
		Furosemide without compound HSS	Normal sodium diet 2.76 g/d until clinical compensation[9] Total Na ~2.8 g/d	< 500 mL/d			132	7 (2)		
	Yayla, 2015, 26135463	Furosemide with HSS	150 mL HSS (1.95% NaCl) once daily for 48 (h) Sodium Diet NR Total Na 1.15 g/d[5]	NR	Until compensation	Hospitalization (d), from baseline to compensated state.	14	3.7 (1.3)	HSS vs bIV[17] -4.2 (-6.45, -1.95)	<0.01
		Furosemide (continuous) cIV without HSS	Sodium Diet NR	NR			15	6.6 (3.4)		
		Furosemide (bolus) bIV without HSS	Sodium Diet NR	NR			14	7.9 (4.1)		
	Montgomery, 2023, 37044281	Furosemide with oral NaCl	2 g Oral NaCl three times per day for 4 days. Restricted sodium Diet ~0.8 g/d Na. Total Na ~ 3.2 g/d	No restriction	Discharge	Time to discharge from enrollment (days), median (IQR)	34	8.0 (6.00, 12.5)	Median Difference 1.0	NR
		Furosemide without oral NaCl	Restricted sodium Diet ~0.8 g/d Na	No restriction			31	7.0 (5.00, 13.5)		

Notes. [1] Calculated by research team based on IV Na (saline) and oral sodium intake (diet Na) if reported; [2] Calculated by research team; [3] 95% CI was calculated based on p value reported in the study; [4] The duration of intervention was not reported; however, most outcomes were reported at compensation which was defined as return to functional classes 1 or II and without edema; [5] Total sodium per day provided by IV fluid Na only, sodium diet in both groups was not reported and we assume it was at least 2.8 g/d; [6] The dose of HSS was determined according to serum Na (HSS 4.6%, 3.5%, between 1.4% and 2.4% were administered for patients with serum Na < 125 mEq/L, between 126 and 135 mEq/L, > 135 mEq/L respectively). In Tuttolomondo 2011, it was reported that HSS 3.5%, and between 1.4% and 2.4% were administered to patients with serum Na <125 mEq/L, and > 135 mEq/L respectively. In Tuttolomondo 2021, it was reported that HSS 3.5%, and between 1.4% and 2.4% were administered to patients with serum Na <135 mEq/L, and > 135 mEq/L respectively; [7] Total sodium per day provided by oral sodium intake (diet only) as no IV Na (saline) was reported or administered;[8] c-HSS contains, additional to the 2.8% NaCl, 0.2% KCl, 0.9% MgSO4; [9] Did not clearly define the duration of intervention; however, it was mentioned that the intervention would stop once patients reached compensation. Patients were considered clinically compensable when they achieved an improved NYHA classification and appropriate BW calculated by the Lorenz formula and bioelectrical impedance measurement; [10] The reported weight was not consistent with adult weight and not corresponding to the mean age reported, and it was not the difference or BMI, we did not include these values in our analysis. We contacted the author for clarification, but there has been no response; [11] Based on Mann-Whitney U test; [12] Based on Independent Sample T-test; [13] Defined as dry status, change in NYHA functional class to at least II on clinical judgment and the accomplishment of ideal BW, as calculated by the Lorenz formula and detected by bioimpedance vector analysis; [14] Compensation was defined, when the NYHA functional class reached at least class II with the accomplishment of dry weight, as detected by bioimpedance vector analysis; [15] The study did not mention the amount of HSS per day, or the amount of normal sodium diet; we assumed that patients received at least 100 mL of

HSS per day and that normal sodium diet provided at least 2.8 g/d, based on the previous assumption the research team calculated the total sodium intake per day;[16] Weight change was reported here as (-) to denote the direction of change (reduction). SD was calculated by research team as it was not reported for weight change in the study; [17] We considered bIV group as reference to compare with HSS group; [18] We calculated here the total sodium per day during the 6 days of intervention (first phase of therapy), not including the sodium from the 0.9% NaCl loading (second phase of therapy); [19] Data about HSS concentration, amount, frequency, Na diet, total fluid per day was not reported in the abstract; [20] Multiple comparison test with Bonferroni correction; [21] Repeated-measures analysis (generalized estimating equations method) for the between-group difference from baseline to the end of the study period; [22] The CCS is an instrument composed of 7 items that assess clinical signs and symptoms of congestion, including presence of rales, a third heart sound, jugular venous distension, peripheral edema, hepatojugular reflux, orthopnea, paroxysmal nocturnal dyspnea, and New York Heart Association functional class. The score ranges from 1 to 22 points, with higher scores being directly indicative of increased clinical congestion; [23] Significance determined using multiple comparison test with Bonferroni correction; [24] Difference significant at P = .002; adjusted covariance matrix for correction of different CCS at hospital day 7; [25] Determined by Student's t test; [26] Assessment of perceived thirst was performed using a visual analog scale. In this setting, patients were asked to grade their thirst on a scale of 0 to 10; [27] By mixed-effects models; [28] With 0 corresponding to marked shortness of breath and 10 to no shortness of breath; [29] With 0 representing the greatest possible malaise and 10 the maximum sensation of well-being; * For 7 days or less until hospital day 7 or until discharge in patients whose length of stay was less than 7 days; ** For 7 days or less until day 7 of admission or at hospital discharge, whichever came first; *** For 7 days 7 days (or less based on clinical indication, a clinical indication defined by the medical team responsible for the treatment of the patient based on the occurrence of hypotension, hyponatremia, or worsening of renal function, the intervention could be stopped before the 7th day of hospitalization); [α] Reported in the study; [#] At day 7 or at discharge, whichever came first; [##] Unit was not reported; [###] Research team converted the data from ng/mL to mg/L. [†] Complete unit was not reported.

Abbreviations. BNP=brain (or B-type) natriuretic peptide; BUN=blood urea nitrogen; ccs=clinical congestion score; d=day; C-HSS=Compound hypertonic saline solution; dL=deciliter; eGFR=estimated glomerular filtration rate; g=gram; GFR=glomerular filtration rate; h=hour; HSS=hypertonic saline solution; IQR=interquartile range; IV=intravenous; L=liter; Max=maximum; MD= mean difference; MDRD=Modification of Diet in Renal Disease; mEq=milliequivalent; mg=milligram; NMD=net mean difference; mL=milliliter; min=minute; m=meter; N=sample size; Na=sodium; NaCl=sodium chloride; ng=nanogram; NR=not reported; NT-proBNP=N-terminal brain (or B-type) natriuretic peptide; NYHA=New York Heart Association; pg=picogram; SD=standard deviation; TDS-HF=Thirst Distress Scale for Heart Failure (higher scores indicates more thirst distress).

APPENDIX I. PEER REVIEW DISPOSITION

Comment #	Reviewer #	Comment	Author Response
Are the objectives, scope, and methods for this review clearly described?			
1	1	Yes	Thank you.
2	3	Yes	Thank you.
3	4	Yes	Thank you.
4	5	Yes	Thank you.
Is there any indication of bias in our synthesis of the evidence?			
5	1	No	Thank you.
6	3	No	Thank you.
7	4	No	Thank you.
8	5	No	Thank you.
Are you aware of any published or unpublished studies that we may have overlooked?			
9	1	No	Thank you.
10	3	No	Thank you.
11	4	Yes - This study was published in 2023 and is an RCT of oral sodium during acute heart failure. "Oral Sodium to Preserve Renal Efficiency in Acute Heart Failure: A Randomized, Placebo-Controlled, Double-Blind Study" PMID: 37044281 DOI: 10.1016/j.cardfail.2023.03.018	The identified study was published after our search date. We have added the study to the report and updated the results and text accordingly.
12	5	Yes - https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00369-5/fulltext	The suggested study was not conducted in hospitalized heart failure patients, and does not meet our review eligibility criteria.
Additional suggestions or comments can be provided below.			
19	1	Wow. This is just amazing. Thank you.	Thank you.
20	3	There not seem to have bias on the analysis of data itself. But there seems to have a clear indication, between the lines, that the studies are "not good enough" because are made "somewhere else" outside US.	Thank you. Our intent was to note that health system related outcomes may not generalize across countries. We revised the text to clarify that studies in the US are needed to evaluate outcomes in the US context. “Limited evidence of RCT data from North

Comment #	Reviewer #	Comment	Author Response
			America suggests a unique opportunity for VA hospitals to evaluate effectiveness and implementation of this strategy in the US and to fill the gaps in evidence for VA providers and policy makers. Conducting studies in the US would be particularly informative to understand the effect of intervention on health system outcomes pertinent to the US (such as length of hospital stay), which are likely to differ substantially across different health systems and countries."
21	4	The authors appropriately point out that the HSS/furosemide data largely comes from Europe and that the findings (particularly LOS) may not apply to VA. Would it be valuable to expand on this by noting that most of the European studies are from the same research group?	Thank you for this comment. We revised the Discussion to comment that 3 research groups were responsible for conducting the majority of the European studies.
22	4	Ezekowitz et al RCT form Lancet was missed it appears which I hope is because the data cut was before 2022 otherwise would be a major oversight. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00369-5/fulltext Otherwise reads well	Thank you for sharing this study. Upon review, we found that the suggested study was not conducted in *hospitalized* heart failure patients, and, thus, does not meet our review eligibility criteria.