

Table 3. Summary of Findings – Hydratie en complicaties

Population: Patients with impaired renal function (chronic kidney disease, chronic renal failure, CKD stage 3 or higher, eGFR <60 ml/min/1.73m²) undergoing radiological or cardiological examinations with iodine-containing contrast media.

Intervention: Hydration

Comparator: No hydration

Outcome Timeframe	Study results and measurements	Absolute effect estimates		Certainty of the evidence (Quality of evidence)	Conclusions
		No hydration	Hydration		
Post-contrast acute kidney injury (critical)	Based on data from 4 studies	Kooiman (2014) reported a risk difference of -0.02 (95%CI -0.11 to 0.07). Nijssen (2017) reported a risk difference of 0.00 (95%CI -0.02 to 0.03). Timal (2020) reported a risk difference of -0.01 (95%CI -0.04 to 0.01). Chen (2008) reported a risk difference of -0.20 (95%CI -0.33 to -0.08) for patients with moderate to severely impaired renal function and -0.00 (95%CI -0.04 to 0.04) for normal or mildly impaired renal function.		Very low Due to serious inconsistency, due to very serious imprecision ¹	The evidence is very uncertain about the effect of hydration on post-contrast acute kidney injury when compared with no hydration in patients with impaired renal function undergoing radiological or cardiological examinations with iodine-containing contrast media.
Start renal replacement therapy (RRT)					
Start renal replacement therapy (critical)	Based on data from 3 studies	Kooiman (2014), Nijssen (2017) and Timal (2020) reported that none of the patients who either received hydration or no hydration had to start RRT.		Very low Due to serious inconsistency, due to very serious imprecision ²	The evidence is very uncertain about the effect of hydration on the start of renal replacement therapy when compared with no hydration in patients with impaired renal function undergoing radiological or cardiological examinations with iodine-containing contrast media.
Start renal replacement	Based on data from 1 study	Nijssen (2018) reported a risk difference of 0.00 (95%CI -0.01 to 0.01).		Very low GRADE	The evidence is very uncertain about the effect of hydration on the start of renal replacement therapy at 1 year follow-up when compared with no hydration in patients with impaired renal

therapy at 1 year follow-up (critical)			Due to serious risk of bias, due to very serious imprecision ³	function undergoing radiological or cardiological examinations with iodine-containing contrast media.
Acute renal failure (important)	-	-	No GRADE (no evidence was found)	No evidence was found regarding the effect of hydration on acute renal failure when compared with no hydration in patients with impaired renal function (chronic kidney disease, chronic renal failure, CKD stage 3 or higher, eGFR <60 ml/min/1.73m ²) undergoing radiological or cardiological examinations with iodine-containing contrast media.
<i>Irreversible loss of kidney function</i>				
Irreversible loss in kidney function – persisting decline in renal function at 2 months follow-up (important)	Based on data from 1 study	Timal (2020) reported a risk difference of -0.43 (95%CI -0.86 to 0.00).	Very low GRADE Due to serious risk of bias, due to very serious imprecision ⁴	The evidence is very uncertain about the effect of hydration on irreversible loss in kidney function (defined as persisting decline in renal function at 2 months follow-up) when compared with no hydration in patients with impaired renal function undergoing radiological or cardiological examinations with iodine-containing contrast media.
Irreversible loss in kidney function – >10 eGFR decline (important)	Based on data from 1 study	Nijssen (2017) reported a risk difference of -0.02 (95%CI -0.05 to 0.02).	Very low GRADE Due to serious risk of bias, due to very serious imprecision ⁴	The evidence is very uncertain about the effect of hydration on irreversible loss in kidney function (defined as >10 eGFR decline) as compared with no hydration in patients with impaired renal function undergoing radiological or cardiological examinations with iodine-containing contrast media.
Irreversible loss in kidney function – >10 eGFR decline at 1 year follow-up (important)	Based on data from 1 study	Nijssen (2018) reported a risk difference of -0.00 (95%CI -0.05 to 0.05).	Very low GRADE Due to serious risk of bias, due to very serious imprecision ⁴	The evidence is very uncertain about the effect of hydration on irreversible loss in kidney function (defined as >10 eGFR decline) at 1 year follow-up when compared with no hydration in patients with impaired renal function undergoing radiological or cardiological examinations with iodine-containing contrast media.
Irreversible loss in kidney function – decline to <30 mL	Based on data from 1 study	Nijssen (2017) reported a risk difference of 0.00 (95%CI -0.02 to 0.03).	Very low GRADE	The evidence is very uncertain about the effect of hydration on irreversible loss in kidney function (defined as decline to <30 mL per min/1.73m ²) when compared to no hydration in patients with

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Richtlijn Veilig gebruik van contrastmiddelen 2025

per min/1.73m ² (important)			Due to serious risk of bias, due to very serious imprecision ⁴	impaired renal function undergoing radiological or cardiological examinations with iodine-containing contrast media.
Irreversible loss in kidney function – decline to <30 mL per min/1.73m ² at 1 year follow-up (important)	Based on data from 1 study	Nijssen (2018) reported a risk difference of 0.00 (95%CI -0.02 to 0.02).	Very low GRADE Due to serious risk of bias, due to very serious imprecision ⁴	The evidence is very uncertain about the effect of hydration on irreversible loss in kidney function (defined as decline to <30 mL per min/1.73m ²) at 1 year follow-up when compared with no hydration in patients with impaired renal function undergoing radiological or cardiological examinations with iodine-containing contrast media.
Adverse events (important)	Based on data from 2 studies	Nijssen (2018) reported a risk difference of 0.04 (95%CI 0.02 to 0.06). Timal (2020) reported that none of the patients who either received hydration or no hydration had adverse events.	Very low GRADE Due to serious risk of bias, due to serious inconsistency, due to serious imprecision ⁵	The evidence is very uncertain about the effect of hydration on adverse events when compared with no hydration in patients with impaired renal function undergoing radiological or cardiological examinations with iodine-containing contrast media.

1. **Inconsistency: serious.** Due to conflicting results and differences in the type of hydration.
Imprecision: very serious. Due to overlap of the lower and upper limit of the 95% confidence interval with the minimal clinically important difference.
2. **Inconsistency: serious.** Due to differences in the type of hydration.
Imprecision: very serious. Due to no events occurred and the optimal information size was not achieved.
3. **Risk of bias: serious.** Due to lack of blinding.
Imprecision: very serious. Due to overlap of the lower and upper limit of the 95% confidence interval with the minimal clinically important difference.
4. **Risk of bias: serious.** Due to loss to follow-up
Imprecision: very serious. Due to overlap of the lower and upper limit of the 95% confidence interval with the minimal clinically important difference.
5. **Risk of bias: serious.** Due to lack of blinding.
Inconsistency: serious. Due to conflicting results and differences in the type of hydration.
Imprecision: serious. Due to the low number of events.