

Skal man bruge adrenalin?

Genoplivningskonferencen 2026

Lars Wiuff Andersen

Ja!

Adrenalin

- Naturligt hormon
- Potent effekt på hjerte og kar
- Trækker blodkar sammen og øger blodgennemstrømningen til hjertet

Guidelines

Resuscitation, 24 (1992) 111–121
Elsevier Scientific Publishers Ireland Ltd.

111

Guidelines for advanced life support

A Statement by the Advanced Life Support Working Party
of the European Resuscitation Council, 1992

Douglas Chamberlain (England) Chairman, Leo Bossaert (Belgium), Pierre Carli (France), Erik Edgren (Sweden), Lars Ekstrom (Sweden), Svein Hapnes (Norway), Stig Holmberg (Sweden), Rudy Koster (Netherlands), Karl Lindner (Germany), Vittorio Pasqualucci (Italy), Narciso Perales (Spain), Martin von Planta (Switzerland), Colin Robertson (Scotland), Petter Steen (Norway)



Available online at [ScienceDirect](#)

Resuscitation

journal homepage: www.elsevier.com/locate/resuscitation



Practice Guideline

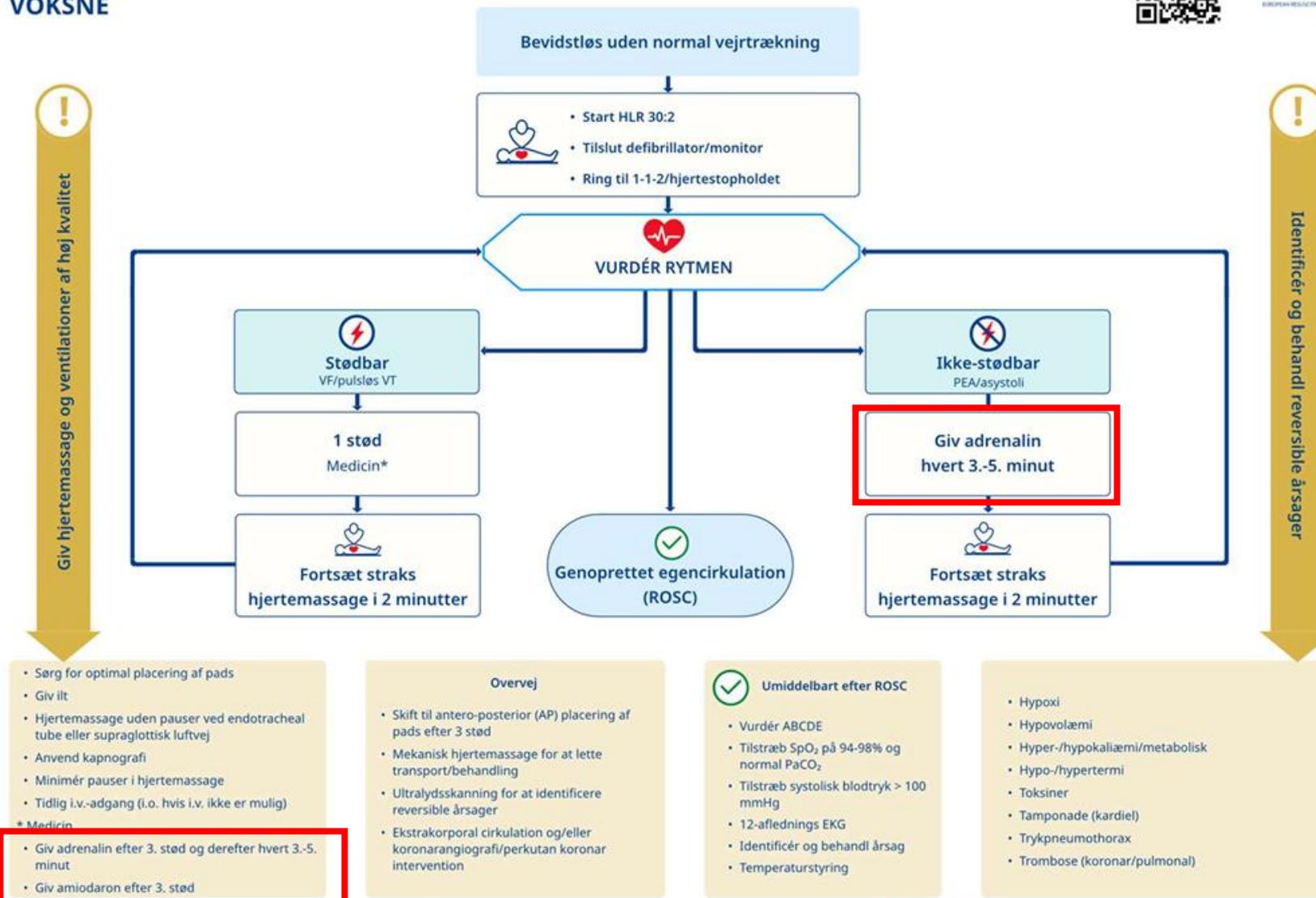
European Resuscitation Council Guidelines 2025 Adult Advanced Life Support

Jasmeet Soar^{a,}, Bernd W. Böttiger^{b,c,d}, Pierre Carli^e, Francesc Carmona Jiménez^{f,g}, Diana Cimpoesu^{h,i}, Gareth Cole^j, Keith Couper^{k,l}, Sonia D'Arrigo^m, Charles D. Deakin^{n,o}, Jacqueline Eleonora Ek^p, Mathias J. Holmberg^q, Aurora Magliocca^r, Nikolaos Nikolaou^s, Peter Paal^t, Helen Pocock^{u,v}, Claudio Sandroni^m, Tommaso Scquizzato^w, Markus B. Skrifvars^x, Francesca Verginella^y, Joyce Yeung^{z,aa}, Jerry P. Nolan^{ab,ac}*

AVANCERET GENOPLIVNING VOKSNE



GUIDELINES
2025
EUROPEAN RESUSCITATION COUNCIL®



Myte?

Contents lists available at ScienceDirect



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Clinical paper

Effect of adrenaline on survival in out-of-hospital cardiac arrest: A randomised double-blind placebo-controlled trial[☆]

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Prehospital Epinephrine Use and Survival Among Patients With Out-of-Hospital Cardiac Arrest

Akihito Hagihara, DMSc, MPH
Manabu Hasegawa, MD
Takeru Abe, MA
Takashi Nagata, MD
Yoshifumi Wakata, MD
Shogo Miyazaki, PhD

Context Epinephrine is widely used in cardiopulmonary resuscitation for out-of-hospital cardiac arrest (OHCA). However, the effectiveness of epinephrine use before hospital arrival has not been established.

Objective To evaluate the association between epinephrine use before hospital arrival and short- and long-term mortality in patients with cardiac arrest.

Design, Setting, and Participants Prospective, nonrandomized, observational propensity analysis of data from 417 188 OHCA occurring in 2005-2008 in Japan in which

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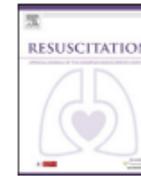
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Effect of adrenaline on survival in out-of-hospital cardiac arrest: A randomised double-blind placebo-controlled trial[☆]Ian G. Jacobs^{a,c,*}, Judith C. Finn^{a,c}, George A. Jelinek^b, Harry F. Oxer^c, Peter L. Thompson^{d,e}

- Randomiseret forsøg i Australien
- 534 patienter med hjertestop

Table 2

Outcomes for patients receiving placebo versus adrenaline.

Outcome	Placebo (n = 262), n (%)	Adrenaline (n = 272), n (%)	OR (95% CI)	p-Value
ROSC achieved pre-hospital	22 (8.4%)	64 (23.5%)	3.4 (2.0–5.6)	<0.001
Admitted to hospital	34 (13.0%)	69 (25.4%)	2.3 (1.4–3.6)	<0.001
Survived to hospital discharge	5 (1.9%)	11 (4.0%)	2.2 (0.7–6.3)	0.15
CPC 1 or 2	5 (100%)	9 (81.8%)	n/a	0.31

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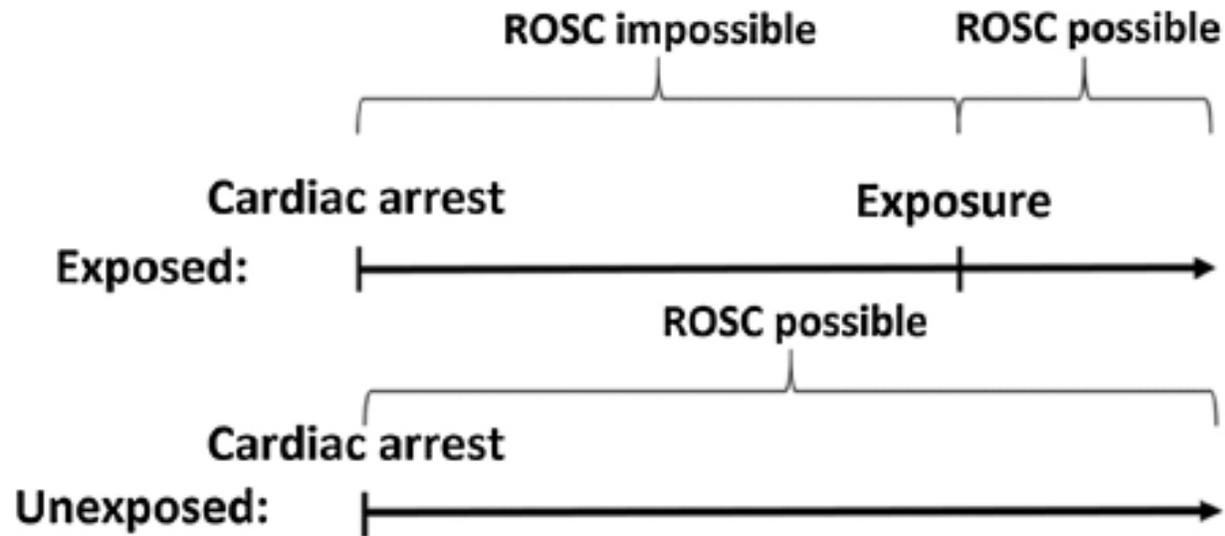
- Observationsstudie fra Japan
- Sammenligner adrenalin (4%) med ingen adrenalin (96%)

Table 2. Unconditional Logistic Regression Analyses of Outcomes in Epinephrine Group (vs No-Epinephrine Group) Among All Patients With Out-of-Hospital Cardiac Arrest

Analysis	Odds Ratio (95% CI) ^a			
	ROSC	1-Month Survival	CPC 1 or 2	OPC 1 or 2
Unadjusted (n = 417 155)	3.75 (3.59-3.91)	1.15 (1.07-1.23)	0.61 (0.53-0.70)	0.63 (0.55-0.73)
Adjusted for selected variables (n = 412 078) ^b	3.06 (2.93-3.21)	0.43 (0.39-0.46)	0.21 (0.18-0.24)	0.22 (0.19-0.25)
Adjusted for all covariates (n = 391 046) ^c	2.36 (2.22-2.50)	0.46 (0.42-0.51)	0.31 (0.26-0.36)	0.32 (0.27-0.38)

Problem?

- “Resuscitation time bias”



Commentary and concepts

“Resuscitation time bias”—A unique challenge for observational cardiac arrest research[☆]

Lars W. Andersen^{a,b,*}, Anne V. Grossestreuer^b, Michael W. Donnino^{b,c}

Evaluation of pre-hospital administration of adrenaline (epinephrine) by emergency medical services for patients with out of hospital cardiac arrest in Japan: controlled propensity matched retrospective cohort study

OPEN ACCESS

Shinji Nakahara *assistant professor*¹, Jun Tomio *assistant professor*^{2,3}, Hideto Takahashi *associate professor*⁴, Masao Ichikawa *professor*⁴, Masamichi Nishida *director*⁵, Naoto Morimura *professor*⁶, Tetsuya Sakamoto *professor*⁷

Myte?

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- Randomiseret forsøg i UK
- 8014 patienter med hjertestop
- Adrenalin vs. placebo

Table 3. Primary and Secondary Outcomes.*

Outcome	Epinephrine	Placebo	Odds Ratio (95% CI) [†]	
			Unadjusted	Adjusted
Primary outcome				
Survival at 30 days — no./total no. (%) [‡]	130/4012 (3.2)	94/3995 (2.4)	1.39 (1.06–1.82)	1.47 (1.09–1.97)
Secondary outcomes				
Survival until hospital admission — no./total no. (%) [§]	947/3973 (23.8)	319/3982 (8.0)	3.59 (3.14–4.12)	3.83 (3.30–4.43)
Median length of stay in ICU (IQR) — days				
Patients who survived	7.5 (3.0–15.0)	7.0 (3.5–12.5)	NA	NA
Patients who died [¶]	2.0 (1.0–5.0)	3.0 (1.0–5.0)	NA	NA
Median length of hospital stay (IQR)				
Patients who survived	21.0 (10.0–41.0)	20.0 (9.0–38.0)	NA	NA
Patients who died	0	0	NA	NA
Survival until hospital discharge — no./total no. (%)	128/4009 (3.2)	91/3995 (2.3)	1.41 (1.08–1.86)	1.48 (1.10–2.00)
Favorable neurologic outcome at hospital discharge — no./total no. (%)	87/4007 (2.2)	74/3994 (1.9)	1.18 (0.86–1.61)	1.19 (0.85–1.68)
Survival at 3 mo — no./total no. (%)	121/4009 (3.0)	86/3991 (2.2)	1.41 (1.07–1.87)	1.47 (1.08–2.00)
Favorable neurologic outcome at 3 mo — no./total no. (%)	82/3986 (2.1)	63/3979 (1.6)	1.31 (0.94–1.82)	1.39 (0.97–2.01)

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Resuscitation

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EUROPEAN
RESUSCITATION
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Clinical paper

Long term outcomes of participants in the PARAMEDIC2 randomised trial of adrenaline in out-of-hospital cardiac arrest



*Kirstie L. Haywood^{a,1}, Chen Ji^{b,1}, Tom Quinn^g, Jerry P. Nolan^{b,f},
Charles D. Deakin^{d,e}, Charlotte Scomparin^b, Ranjit Lal^b, Simon Gates^h, John Long^b,
Scott Regan^b, Rachael T. Fothergill^{b,g,i}, Helen Pocock^{b,d}, Nigel Rees^j,
Lyndsey O'Shea^j, Gavin D. Perkins^{b,c,*}*

En (for) lille effekt?

- 3.2% vs. 2.4%
 - Absolut forskel: 0.8%
 - Relativ forskel: 35%
- Samme i DK?
 - Overlevelse $\approx 10\%$
 - Absolut forskel $\approx 3\%$ (≈ 150 overlevende i DK årligt)

Skal man bruge adrenalin?

- Ja, følg guidelines!
- Stor effekt på opnåelse af egencirkulation (“ROSC”)
 - Værdi i sig selv?
- Lille, men relevant, effekt på overlevelse
- Formentlig også lidt bedre neurologisk outcome