



<b>Title</b>	<b>Diagnostic Value of Natriuretic Peptides in Patients with Suspected Heart Failure</b>
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## Aim

To address the clinical and cost effectiveness of natriuretic peptides (NPs) as a diagnostic aid for physicians in the initial diagnostic work-up of patients with signs and symptoms suggestive of heart failure (HF).

## Conclusions and results

Plasma NP measurement has been established as a helpful aid in diagnosing HF. It is best used as a rule-out test for suspected cases of new HF in breathless patients. This has best been documented in the emergency department (ED) setting. It can be particularly helpful to improve the diagnostic performance of non-cardiologists who are less skilled in clinical examination and electrocardiography than ED physicians are. A cut-off level of 100 pg/ml for BNP or 125 pg/ml for NT-proBNP (450 pg/ml in patients aged >75 years) identifies patients who are unlikely to have acutely decompensated HF, or acute worsening chronic HF.

## Recommendations

1. Measurement of natriuretic peptides is useful as a rule-out test of heart failure (HF) in patients presenting with recent onset dyspnea in primary care and in the emergency department.
2. No formal recommendation has been formulated as regards a reimbursement strategy. Three possible options are discussed for financing NP testing in patients with new onset dyspnea: no reimbursement, restricted reimbursement in primary and acute care, and restricted reimbursement in acute care and no reimbursement in primary care.
3. The reimbursement of NP measurement should be accompanied by an information campaign on the evidence-based use of this test.

## Methods

A systematic search was limited to the literature published from July 1, 2004 onward, since previously published HTAs had covered the literature until the end

of 2004. An initial search was performed in August 2005 and repeated at the end of October 2005. Selection was limited to systematic reviews, HTA reports, and randomized trials in which the reference test was a clinical diagnosis of HF. We searched papers in the CRD database, MEDLINE, EMBASE (keywords: "heart failure" and "natriuretic peptides") and in the Cochrane Library. We used the same MeSH and textword terms for the MEDLINE search as those described in the papers by Doust et al.

## Further research/reviews required

1. Current cut-off values are relatively crude and need further refinement in the future.
2. The performance of the test in primary care is less well documented. It can be useful in ruling out HF in this setting, provided that GPs are well informed on the indications and limitations of the test and make use of them accordingly.