

# RESEARCH

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**RESEARCH NEWS** All you need to read in the other general medical journals Alison Tonks, associate editor, *BMJ* [atonks@bmj.com](mailto:atonks@bmj.com)

## Extra glutamine increases mortality in critically ill adults

Early glutamine supplementation looked harmful to critically ill adults in a large trial that tested the supplements in intensive care units in Canada, the US, and Europe. Participants with multiorgan failure treated with glutamine had higher mortality than placebo controls. The difference was on the cusp of statistical significance in the primary analysis (mortality at 28 days 32.4% v 27.2%; adjusted odds ratio, 1.28, 95% CI 1.00 to 1.64) and definitely significant in two secondary analyses (in-hospital mortality 37.2% v 31%;  $P=0.02$ ; 6 month mortality 43.7% v 37.2%;  $P=0.02$ ).

The authors expected the opposite. A previous meta-analysis had reported benefits, and glutamine was thought to be a key amino acid during the early days of a critical illness. Using a factorial design, the trial also tested a cocktail of antioxidants, such as selenium. These supplements made no difference to mortality or any other outcome relative to placebo.

The trial was big enough and powerful enough to rule out any benefits from either intervention, says a linked editorial (p 1549). We must readjust our intuitive assumptions about the role of glutamine in critical illness and accept that supplementation is ineffective and may even be toxic. Most of the 1223 participants in this trial were in shock. They were given extra glutamine, extra antioxidants, both, or neither on the day of admission to intensive care, then continuously for up to 28 days.

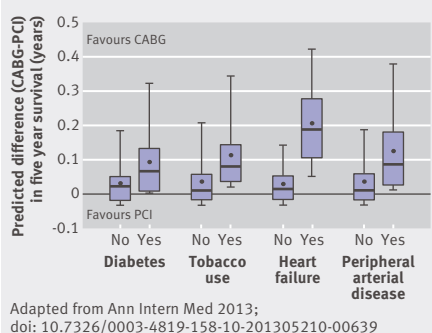
*N Engl J Med* 2013;368:1489-97

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## CABG better than PCI for smokers and those with diabetes, PAD, or heart failure

Coronary artery bypass surgery (CABG) is currently nudging ahead of percutaneous coronary intervention (PCI) as the most effective procedure for adults with multivessel coronary heart disease. The latest study from the US confirms that surgery is associated with slightly better survival over five years (hazard ratio for all cause death 0.92, 95% CI 0.9 to 0.95). In a cohort of more than 100 000 older adults, those treated

### Relative survival over five years



with CABG gained an extra 0.053 years of life over five years, but the gains weren't evenly distributed. The survival advantage associated with CABG was concentrated among those with a history of diabetes, smoking, peripheral vascular disease (PAD), or heart failure.

The authors analysed claims data from Medicare, federally funded healthcare for people aged 65 or over, to compare mortality after CABG and PCI. They used state of the art matching techniques (a propensity score) in an attempt to iron out the many baseline differences between patients choosing one or other treatment. The study identifies some important clinical factors that should help inform patient choice, say the authors.

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## The end of universal screening for intimate partner violence?

Fear of violence from an intimate partner affects women's mental health and quality of life. But universal screening followed by the offer of brief counselling by a primary care doctor didn't improve either in a cluster randomised trial. Researchers screened unselected women by mail to identify 272 who reported fear of violence. The offer of counselling from trained primary care doctors made little difference to the women's global mental health, quality of life, or safety planning and behaviour when compared with usual care, and a linked comment says it may be time to abandon this kind of intervention (doi:10.1016/S0140-6736(13)60584-X). Three trials in developed countries have now reported little benefit from universal screening of

women followed by low intensity forms of help, although the latest Australian trial did report fewer symptoms of depression in screened and counselled women. The current trial randomised doctors, not patients.

These trials should not discourage doctors from asking women about fear of violence in specific clinical contexts, including mental health and HIV services. But they do suggest that a mail shot to nearly 20 000 asymptomatic women is neither efficient nor effective, says the editorial. The focus of research should now shift towards more intensive forms of help, offered to women in more specific settings (such as antenatal clinics). We might also develop and test relationship interventions aimed at men.

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## Higher risk of diabetes after hypertensive disorders in pregnancy

Women with hypertensive disorders in pregnancy have a higher risk of diabetes later in life, according to a data linkage study of more than one million women. Canadian researchers linked five of Ontario's healthcare databases to compute risk of diabetes up to 17 years (median 8.5 years) after an index pregnancy. Women with pre-eclampsia (hazard ratio 2.08, 95% CI 1.97 to 2.19) or gestational hypertension (1.95, 1.83 to 2.07) had roughly twice the risk of women with neither condition in analyses adjusted for gestational diabetes and other confounding factors. The combination of a hypertensive disorder in pregnancy and gestational diabetes was associated with a higher risk than gestational diabetes alone.

Should all women with hypertensive disorders in pregnancy be screened for diabetes? Not yet, says a linked comment (doi:10.1371/journal.pmed.1001428). These analyses show a clear association in a very large population of women, but there is little evidence that systematic screening is cost effective even for women with a history of gestational diabetes, a condition much more powerfully associated with later diabetes. Furthermore, the authors weren't able to adjust their associations for body mass index, a key confounder.

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