

## Type 2 diabetes: tight control does not affect mortality

### Clinical question

In patients with type 2 diabetes, what is the effect on cardiovascular outcomes of aiming for intensive blood glucose control?

### Bottom line

Tight control of blood glucose does not protect patients from dying prematurely, whether by any cause or by cardiovascular disease. Tight control might confer some protection against the development of cardiovascular disease, but even this likelihood is tenuous. Aiming for tight control doubles the likelihood a patient will experience hypoglycemia severe enough to require medical intervention. (LOE = 1a-)

### Reference

Kelly TN, Bazzano LA, Fonseca VA, Thethi TK, Reynolds K, He J. Systematic review: Glucose control and cardiovascular disease in type 2 diabetes. *Ann Intern Med* 2009;151(6):394-403.

### Study Design

Meta-analysis (randomized controlled trials)

### Funding

Foundation

### Setting

Various (meta-analysis)

### Synopsis

To conduct this study, the researchers searched only one database to find randomized controlled trials of treatment of type 2 diabetes in adults. Two reviewers independently selected studies for inclusion and abstracted the data. They identified the 5 large trials (N = 27,802) that evaluated the role of tight blood glucose control. One problem: They excluded the University Group Diabetes Project study, which found increased cardiovascular mortality associated with treatment with sulfonylureas. The tight control of type 2 diabetes does not decrease the risk of mortality or cardiovascular-related mortality, though it may have an effect on slightly reducing the risk of cardiovascular disease (relative risk = 0.90; 95% CI 0.83 - 0.98). Including only the 3 newer studies, which enrolled older patients who had longstanding diabetes, found no benefit to tight control. Aiming for tight control doubled the likelihood that patients would experience severe hypoglycemia requiring medical attention. This analysis included enough patients to demonstrate even small benefits in intense blood glucose control, if they exist.

## Steroids beneficial, but antiviral agents are of uncertain value for Bell palsy

### Clinical question

Are both corticosteroids and antiviral agents beneficial for the treatment of Bell palsy?

### Bottom line

Corticosteroids alone are beneficial in the treatment of Bell palsy, but antiviral agents alone are not. The value of combined treatment with corticosteroids and antiviral agents compared with corticosteroids alone remains uncertain. Total corticosteroid treatment doses greater than an equivalent dose of 450 mg of prednisone are superior to lower doses. (LOE = 1a)

### Reference

de Almeida JR, Al Khabori M, Guyatt GH, et al. Combined corticosteroid and antiviral treatment for Bell palsy. A systematic review and meta-analysis. *JAMA* 2009;302(9):985-993.

### Study Design

Meta-analysis (randomized controlled trials)

### Funding

Foundation

### Setting

Various (meta-analysis)

### Synopsis

The value of both corticosteroids and antiviral agents in the treatment of Bell palsy remains uncertain. These investigators thoroughly searched multiple databases including MEDLINE, EMBASE, Web of Science, conference proceedings and abstracts, bibliographies of relevant articles, clinical trial registries, and noted experts for randomized controlled trials evaluating either corticosteroids or antiviral agents in the management of Bell palsy. No language restrictions were applied. Two individuals independently critiqued all studies for inclusion criteria and methodologic quality using standard criteria. Differences were resolved by consensus agreement. A total of 18 studies (N = 2786 patients) -- 8 evaluating corticosteroids, 7 evaluating antiviral agents, and 3 evaluating both corticosteroids and antiviral agents -- met all criteria. Follow-up occurred for a median of 6 months. Evidence quality was graded as moderate to high for the individual studies. Corticosteroids alone significantly reduced the risk of unsatisfactory facial recovery (number needed to treat [NNT] = 11; 95% CI, 8-25) and synkinesis and autonomic dysfunction (NNT = 7; 6-10). Higher doses (greater than the equivalent of 450 mg prednisone) produced a significantly greater benefit than lower doses. Antiviral agents alone were not significantly beneficial, but antiviral agents combined with corticosteroids were borderline significantly superior to corticosteroids alone (relative risk = 0.75; 0.56 - 1.00). The authors found no evidence for publication bias or significant heterogeneity in the results.