

## Guideline topic: Diabetes

### General comments

### Search coverage

#### Guidelines

GIN Web site	Embase (last 5 years)
National Guidelines Clearinghouse	Medline (last 5 years)
NeLH Guidelines Finder	
NICE Web site	

Total hits:

Guidelines evaluated using AGREE instrument:

#### Databases covered:

Cochrane Library

DARE

Embase

Medline

Cinahl

#### Dates covered:

2004-2008

2004-2008

2004-2008

2004-2008

2004-2008

### Search strategies

The following are listings of the main Medline strategies used for this guideline. All conventions and symbols are from the Ovid implementation of Medline. Strategies used in other databases were substantially the same, though different terminology may have been used to take account of different thesaurii used in non-Medline databases.

Search filters were added to identify studies of a particular type (guideline, systematic review, etc.) Listings of the search filters used by SIGN can be found on the SIGN Web site.

#### Systematic Reviews

- 1 exp Diabetes Mellitus/ (223553)
- 2 exp Diabetes Complications/ (77445)
- 3 diabet\$.tw. (254027)
- 4 or/1-3 (296178)

### Lifestyle subgroup – key questions not answered by systematic review

KQ 1 RCT and observational studies

1. Weight Loss/
2. (los\$ adj2 weight).tw.
3. (reduc\$ adj2 weight).tw.
4. weight management.mp.
5. or/1-4

### KQ 3 RCT

1. exp Patient Education as Topic/
2. exp Models, Educational/
3. ((educat\$ or train\$ or learn\$ or teach\$) adj3 (patient\$ or self\$ or program\$ or model\$ or system\$)).ti,ab.
4. DAFNE.tw.
5. desmond.ti,ab.
6. exp Health Education/
7. exp Self Care/
8. or/1-7

### KQ 5 and 6 RCT

1. exp Ketones/
  2. exp Amino Acid Chloromethyl Ketones/
  3. exp Ketone Bodies/ or exp Diabetic Ketoacidosis/
  4. ketone\$.tw.
  5. or/1-4
- 
38. exp Glycosuria/ or urinary glucose.mp.
  39. glucose.mp. or exp Glucose/
  40. (urin\$ adj3 monitor\$).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
  41. exp Urinalysis/
  42. exp Urine/ or urine\$.mp.
  43. 42 and 39
  44. (monitor\$ and urinary glucose).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
  45. \*"Blood Glucose Self-Monitoring"/
  46. 38 or 40 or 45 or 43 or 44 or 41

### KQ 7 NoF

7. Depression/di [Diagnosis]
8. Depressive Disorder/di [Diagnosis]
9. Depressive Disorder, Major/di [Diagnosis]
10. exp Eating Disorders/di [Diagnosis]
11. exp Anxiety/di [Diagnosis]
12. (depression or depressive or depressed).tw.
13. anxiety.tw.
14. (eating adj disorder\$).tw.
15. (anorexi\$ or bulimi\$).tw.
16. or/12-15
17. screen\$.tw.
18. 16 and 17
19. 8 or 11 or 18 or 7 or 10 or 9

### KQ 8 RCT

1. exp Motivation/
2. exp Interviews as Topic/ or exp Interview, Psychological/
3. 1 and 2
4. motivational interview\$.tw.
5. exp Adaptation, Psychological/
6. coping skills.tw.
7. psychotherapy/ or behavior therapy/ or cognitive therapy/ or psychotherapy, brief/
8. cognitive behavio\$ therapy.tw.
9. or/3-8

#### KQ 9 RCT

1. exp Exercise/ or exp Exercise Therapy/
2. exp Physical Exertion/
3. exp Physical Fitness/
4. exp Walking/
5. exp Running/
6. exp Swimming/
7. exp Jogging/
8. exp "Physical Education and Training"/
9. (exercise\$ adj2 aerobic\$.tw.
10. (train\$ adj2 aerobic\$.tw.
11. (exercise\$ adj2 strength\$.tw.
12. (train\$ adj2 strength\$.tw.
13. (exercise\$ adj2 prescri\$.tw.
14. exercise referral.tw.
15. or/1-14

#### KQ 11 RCT

1. exp Diet Therapy/
2. diet\$.tw.
3. carbohydrat\$.tw.
4. or/1-3

#### KQ 12 observational studies

1. exp Drinking/ or exp Alcohol Drinking/ or exp Drinking Behavior/
2. alcohol consumption.tw.
3. (alcoholic adj beverage\$.tw.
4. or/1-4

#### KQ 13 NoF

1. exp Smoking Cessation/
2. (smoking adj cessation).mp.
3. (smok\* or tobacco or cigar\* or nicotine).tw.
4. (stop adj smoking).tw.
5. or/1-4

## Drug therapy subgroup

KQ 1 (reduction of glucose levels to specified targets)

RCTs (2004-2009)

1. Diabetes Mellitus/
2. exp Diabetes Mellitus, Type 2/
3. (diabetes adj3 "2").tw.
4. or/1-3
5. exp Blood Glucose/
6. (glucose adj3 blood).tw.
7. or/5-6
8. 4 and 7

KQ 2a (metformin, sulphonylureas, metiglinides)

RCTs (2004-2009)

1. Diabetes Mellitus/
2. exp Diabetes Mellitus, Type 2/
3. (diabetes adj3 "2").tw.
4. or/1-3
5. exp Metformin/
6. metformin\*.tw.
7. glucophage\*.tw.
8. exp Sulfonylurea Compounds/
9. sulphonylurea\*.tw.
10. sulfonylurea\*.tw.
11. exp Chlorpropamide/
12. chlorpropamide\*.tw.
13. exp Glyburide/
14. glibenclamide\*.tw.
15. exp Gliclazide/
16. gliclazide\*.tw.
17. glimepiride\*.tw.
18. exp Glipizide/
19. glipizide\*.tw.
20. exp Tolbutamide/
21. tolbutamide\*.tw.
22. metiglinide\*.tw.
23. repaglinide\*.tw.
24. nateglinide\*.tw.
25. or/5-24
26. 4 and 26

KQ 2b (peptidase IV inhibitors, exenatide)  
RCTs (2004-2009)

1. Diabetes Mellitus/
2. exp Diabetes Mellitus, Type 2/
3. (diabetes adj3 "2").tw.
4. or/1-3
5. exp Dipeptidyl-Peptidase IV Inhibitors/
6. "ddp 4 inhibitor\*".tw.
7. (peptidase\* adj3 inhibitor\*).tw.
8. sitagliptin\*.tw.
9. vildagliptin\*.tw.
10. exp Peptides/
11. exenatide\*.tw.
12. (incretin\* adj3 mimetic\*).tw.
13. or/5-12
14. 4 and 13

KQ 2c (insulin)  
RCTs (2004-2009)

1. exp Diabetes Mellitus, Type 2/
2. Diabetes Mellitus/
3. (diabetes adj3 "2").tw.
4. or/1-3
5. exp Insulin/
6. insulin\*.tw.
7. or/5-6
8. 4 and 7

KQ 2d (alpha-glucosidase inhibitors, thiazolidinediones)  
RCTs (2004-2009)

1. Diabetes Mellitus/
2. exp Diabetes Mellitus, Type 2/
3. (diabetes adj3 "2").tw.
4. or/1-3
5. exp Dipeptidyl-Peptidase IV Inhibitors/
6. "ddp 4 inhibitor\*".tw.
7. (peptidase\* adj3 inhibitor\*).tw.
8. sitagliptin\*.tw.
9. vildagliptin\*.tw.
10. exp Peptides/

11. exenatide\*.tw.
12. (incretin\* adj3 mimetic\*).tw.
13. or/5-12
14. 4 and 13

### **Diabetes Renal Disease Group**

#### **Patient Stem**

1. exp Diabetes Mellitus/
2. exp Diabetes Complications/
3. diab\$.tw.
4. or/1-3
5. exp Kidney Diseases/
6. (nephro\$ or kidney or renal).tw.
7. exp Glomerular Filtration Rate/
8. exp Nephrology/
9. exp Proteinuria/
10. (proteinuri\$ or albuminuri\$).tw.
11. microalbumin\$.tw.
12. or/5-11
13. 4 and 12

#### **KQ2 (2002-09)**

1. (time\$ adj2 urin\$).tw.
2. (24\$ adj2 urin\$).ti.
3. 1 or 2

#### **KQ4 (1996-2009)**

1. exp Diabetes Mellitus/
2. exp Diabetes Complications/
3. diab\$.tw.
4. or/1-3
5. exp Kidney Diseases/
6. (nephro\$ or kidney or renal).tw.
7. exp Glomerular Filtration Rate/
8. exp Nephrology/
9. exp Proteinuria/
10. (proteinuri\$ or albuminuri\$).tw.
11. microalbumin\$.tw.
12. or/5-11

13. 4 and 12
14. exp Mass Screening/
15. exp Diabetic Nephropathies/di [Diagnosis]
16. exp Proteinuria/di [Diagnosis]
17. ACR.tw.
18. or/14-17
19. 13 and 18

#### KQ5 (2004-09)

1. exp Urinalysis/
2. ((first\$ or void\$) adj2 urin\$).tw.
3. ((spot\$ or time\$ or overnight\$) adj2 urin\$).tw.
4. or/1-3
5. exp Diabetes Mellitus/
6. exp Diabetes Complications/
7. diab\$.tw.
8. or/5-7
9. 4 and 8

#### KQ6

1. exp incidence/ or exp prevalence/
2. incidence\$.tw.
3. prevalence\$.tw.
4. exp Epidemiology/
5. epidemiol\$.tw.
6. exp Diabetes Mellitus/
7. exp Diabetes Complications/
8. diab\$.tw.
9. or/6-8
10. exp Kidney Diseases/
11. (nephro\$ or kidney or renal).tw.
12. exp Glomerular Filtration Rate/
13. exp Nephrology/
14. exp Proteinuria/
15. (proteinuri\$ or albuminuri\$).tw.
16. microalbumin\$.tw.
17. or/10-16

18. 9 and 17
19. exp Diabetic Nephropathies/
20. or/1-5
21. 18 and 20
22. 19 and 20
23. limit 22 to (yr="2004 - 2009" and "all child (0 to 18 years)")
24. 21 or 22

#### KQ8-spirolactone (2004-09)

1. exp Spironolactone/
2. spironolact\$.tw.
3. exp Diabetes Mellitus/
4. exp Diabetes Complications/
5. diab\$.tw.
6. or/3-5
7. exp Kidney Diseases/
8. (nephro\$ or kidney or renal).tw.
9. exp Glomerular Filtration Rate/
10. exp Nephrology/
11. exp Proteinuria/
12. (proteinuri\$ or albuminuri\$).tw.
13. microalbumin\$.tw.
14. or/7-13
15. 6 and 14
16. or/1-2
17. 15 and 16

#### KQ8e

1. exp Angiotensin-Converting Enzyme Inhibitors/
2. (angio\$ adj2 enzyme\$ adj2 inhibit\$).tw.
3. (ace\$ adj2 inhib\$).tw.
4. exp Angiotensin II Type 1 Receptor Blockers/
5. (angio\$ adj2 recep\$ adj2 (block\$ or antag\$)).tw.
6. sartan\$.tw.
7. exp Spironolactone/
8. spironolactone.tw.
9. aldactone.tw.
10. (direct\$ adj2 renin\$ adj2 inhibit\$).tw.



11. exp Renin/ai [Antagonists & Inhibitors]
12. or/1-11
13. exp Hyperkalemia/
14. hyperkalem\$.tw.
15. hyperpotassem\$.tw.
16. exp Kidney Diseases/
17. (nephro\$ or kidney or renal).tw.
18. exp Glomerular Filtration Rate/
19. exp Nephrology/
20. exp Proteinuria/
21. (proteinuri\$ or albuminuri\$).tw.
22. microalbumin\$.tw.
23. or/13-22
24. 12 and 23

#### KQ9

1. exp incidence/ or exp prevalence/
2. incidence\$.tw.
3. prevalence\$.tw.
4. exp Epidemiology/
5. epidemiol\$.tw.
6. exp Diabetes Mellitus/
7. exp Diabetes Complications/
8. diab\$.tw.
9. or/6-8
10. or/1-5
11. 9 and 10
12. exp Hyperkalemia/
13. (hyperkal\$ or hyperpot\$).tw.
14. exp Anemia/
15. anemi\$.tw.
16. exp Acidosis/
17. acidosis\$.tw.
18. exp Hyperparathyroidism, Secondary/
19. hyperparathyroid\$.tw.
20. or/12-19
21. 11 and 20

#### KQ10 (2004-9)

1. exp Dipeptidyl-Peptidase IV Inhibitors/
2. (peptidas\$ adj3 inhibit\$).tw.
3. exenatide.tw.
4. orlistat\$.tw.
5. sibutramin\$.tw.
6. or/1-5
7. exp Diabetes Mellitus/
8. exp Diabetes Complications/
9. diab\$.tw.
10. or/7-9
11. exp Kidney Diseases/
12. (nephro\$ or kidney or renal).tw.
13. exp Glomerular Filtration Rate/
14. exp Nephrology/
15. exp Proteinuria/
16. (proteinuri\$ or albuminuri\$).tw.
17. microalbumin\$.tw.
18. or/11-17
19. 10 and 18
20. 6 and 19

### **Foot Disease**

Main patient stem

1. exp Diabetic Foot/
2. ((diab\$ or ulcer\$) adj3 (foot\$ or feet\$)).tw.
3. exp Diabetic Neuropathies/
4. (diab\$ adj2 neuropath\$).tw.
5. charcot\$.tw.
6. or/1-5

KQ1 (2004-09)

1. exp Diabetic Foot/
2. ((diab\$ or ulcer\$) adj3 (foot\$ or feet\$)).tw.
3. exp Diabetic Neuropathies/
4. (diab\$ adj2 neuropath\$).tw.
5. charcot\$.tw.
6. or/1-5
7. exp Mass Screening/

8. screen\$.tw.
9. exp risk/ or exp risk factors/
10. risk\$.tw.
11. or/7-10
12. 6 and 11

KQ5AC (2004-09)

1. exp Diabetic Foot/
2. ((diab\$ or ulcer\$) adj3 (foot\$ or feet\$)).tw.
3. exp Diabetic Neuropathies/
4. (diab\$ adj2 neuropath\$).tw.
5. charcot\$.tw.
6. or/1-5
7. exp Debridement/
8. debride\$.tw.
9. 7 or 8
10. 6 and 9

KQ5BD (2004-09)

1. ("hydrojet" or versajet).tw.
2. exp Hydrotherapy/
3. exp Debridement/
4. maggot\$.mp. or larva\$.tw. [mp=title, original title, abstract, name of substance word, subject heading word]
5. or/1-4
6. exp Diabetic Foot/
7. ((diab\$ or ulcer\$) adj3 (foot\$ or feet\$)).tw.
8. exp Diabetic Neuropathies/
9. (diab\$ adj2 neuropath\$).tw.
10. charcot\$.tw.
11. exp Leg Ulcer/
12. or/6-11
13. 5 and 12

KQ6 (2004-08)

1. exp Ischemia/
2. ischemia\$.tw.
3. ischaemia\$.tw.

4. exp Diabetic Foot/
5. exp Skin Ulcer/
6. ulcer\$.tw.
7. (rest\$ adj2 pain\$).tw.
8. (tissue\$ adj2 loss\$).tw.
9. or/1-8
10. exp angioplasty/ or exp angioplasty, balloon/ or exp angioplasty, laser/ or exp atherectomy/
11. bypass\$.tw.
12. exp Vascular Surgical Procedures/
13. exp Blood Vessel Prosthesis/
14. angioplast\$.tw.
15. or/10-14
16. 9 and 15

KQ8

1. charcot\$.tw.
2. exp Arthropathy, Neurogenic/
3. ((arthro\$ or osteo\$) adj3 neuro\$).tw.
4. or/1-3

### **Diabetes Heart Disease Group**

Main stem (2004-8)

1. exp Hydroxymethylglutaryl-CoA Reductase Inhibitors/
2. statin\$.tw.
3. atorvastatin\$.tw.
4. exp Pyrroles/
5. exp Simvastatin/
6. simvastatin\$.tw.
7. exp Pravastatin/
8. pravastatin\$.tw.
9. rosuvastatin\$.tw.
10. or/1-9
11. exp Diabetes Complications/ or exp Diabetes Mellitus/
12. diabet\$.tw.
13. 11 or 12
14. 10 and 13

1. exp Diabetes Complications/ or exp Diabetes Mellitus/
2. diabet\$.tw.
3. 1 or 2
4. exp angioplasty/ or exp angioplasty, transluminal, percutaneous coronary/
5. (percut\$ adj2 coron\$).tw.
6. angioplast\$.tw.
7. ptca.tw.
8. exp Coronary Artery Bypass/
9. (coron\$ adj3 (bypas\$ or graft\$)).tw.
10. exp \*Myocardial Revascularization/
11. or/4-10
12. 3 and 11

#### KQ3&4 (2004-08)

1. exp Hydroxymethylglutaryl-CoA Reductase Inhibitors/
2. statin\$.tw.
3. atorvastatin\$.tw.
4. exp Pyrroles/
5. exp Simvastatin/
6. simvastatin\$.tw.
7. exp Pravastatin/
8. pravastatin\$.tw.
9. rosuvastatin\$.tw.
10. or/1-9
11. exp Diabetes Complications/ or exp Diabetes Mellitus/
12. diabet\$.tw.
13. 11 or 12
14. 10 and 13

#### KQ5 (2004-08)

1. exp Angiotensin II Type 1 Receptor Blockers/
2. (angio\$ adj2 (block\$ or antag\$)).tw.
3. 1 or 2
4. exp Diabetes Mellitus/
5. exp Diabetes Complications/
6. diab\$.tw.
7. or/4-6
8. 3 and 7

KQ6&7 (2004-09)

1. exp Angiotensin-Converting Enzyme Inhibitors/
2. ((angio\$ or ACE\$) adj3 inhibit\$).tw.
3. exp Calcium Channel Blockers/
4. (calcium\$ adj2 (block\$ or antag\$ or inhibit\$)).tw.
5. exp Angiotensin II Type 1 Receptor Blockers/
6. (angio\$ adj2 (block\$ or antag\$)).tw.
7. (ARB or sartan\$).tw.
8. exp diuretics/ or exp indapamide/
9. (diuretic\$ or indapamide\$).tw.
10. exp adrenergic alpha-antagonists/ or exp adrenergic beta-antagonists/
11. ((alpha\$ or beta\$) adj2 (antag\$ or block\$)).tw.
12. or/1-11
13. exp Blood Pressure/
14. ((systolic\$ or blood\$) adj2 pres\$).tw.
15. exp Hypertension/
16. hyperten\$.tw.
17. or/13-16
18. exp Diabetes Mellitus/
19. exp Diabetes Complications/
20. diab\$.tw.
21. or/18-20
22. 12 and 17 and 21

2<sup>ND</sup> search KQ6&7

1. exp Blood Pressure/
2. ((blood\$ or pulse\$ or systolic\$) adj3 pres\$).tw.
3. exp Angiotensin-Converting Enzyme Inhibitors/
4. ((angiotensin\$ or ace\$) adj2 (inhib\$ or antag\$)).tw.
5. exp Calcium Channel Blockers/
6. (calcium\$ adj2 (antag\$ or block\$)).tw.
7. exp Angiotensin II Type 1 Receptor Blockers/
8. ARB\$.tw.
9. (angiotensin\$ adj2 (block\$ or antag\$)).tw.
10. exp Diuretics/
11. diuretic\$.tw.
12. indapamide\$.tw.
13. exp adrenergic alpha-antagonists/ or exp adrenergic beta-antagonists/
14. ((beta\$ or alpha\$) adj3 (block\$ or antag\$)).tw.

15. or/1-14
16. exp Diabetes Complications/
17. exp Diabetes Mellitus/
18. diab\$.tw.
19. or/16-18
20. 15 and 19

KQ8 (2004-08)

1. exp Diabetes Complications/
2. exp Diabetes Mellitus/
3. diab\$.tw.
4. or/1-3
5. exp Aspirin/
6. aspirin\$.tw.
7. acetylsalic\$.tw.
8. clopidogrel\$.tw.
9. exp Ticlopidine/
10. ticlopidine\$.tw.
11. or/5-10
12. 4 and 11

KQ9 (2004-09)

1. exp Gemfibrozil/
2. (gemfibrozil\$ or gemfibrosil\$).tw.
3. exp Bezafibrate/
4. bezafibrat\$.tw.
5. exp Procetofen/
6. (fenofibrat\$ or procetofen\$).tw.
7. exp Niacinamide/
8. (nicotinamid\$ or niacinamid\$).tw.
9. or/1-8
10. exp Diabetes Mellitus/
11. exp Diabetes Complications/
12. diab\$.tw.
13. or/10-12
14. 9 and 13

KQ10 (2004-08)

1. exp Dipeptidyl-Peptidase IV Inhibitors/
2. (dipeptidyl\$ adj3 inhib\$).tw.
3. DPP4\$.tw.
4. gliptin\$.tw.
5. exenatide\$.tw.
6. incretin\$.tw.
7. byetta\$.tw.
8. or/1-7
9. exp Diabetes Complications/
10. exp Diabetes Mellitus/
11. diab\$.tw.
12. or/9-11
13. 8 and 12

KQ12 (2004-09)

1. exp Diabetes Complications/
2. exp Diabetes Mellitus/
3. diab\$.tw.
4. or/1-3
5. exp Angioplasty, Transluminal, Percutaneous Coronary/
6. ((percut\$ or coron\$) adj3 angioplast\$).tw.
7. (ptca or pci).tw.
8. exp stents/ or exp drug-eluting stents/
9. exp Sirolimus/
10. sirolimus\$.tw.
11. exp Paclitaxel/
12. paclitaxel\$.tw.
13. stent\$.tw.
14. or/5-13
15. 4 and 14