

Appendix 1 (as supplied by the authors): Literature search strategy used in the original CADTH Technology Reports^{1,2}

Published literature was obtained by searching Medline, BIOSIS Previews, PASCAL, PubMed, and the Cochrane Database of Systematic Reviews from 1990 onwards. The search was constructed using controlled vocabulary (e.g., the National Library of Medicine's Medical Subject (MeSH)) and keyword terminology. Publication filters were used to identify specific publication types, namely controlled trials, meta-analyses, and systematic reviews. Please see below for details of the search strategy.

The original search was performed in August 2005. Alert searches were run from August onward. Alert search results from August 2005 to February 2006 were incorporated into the systematic review. Grey literature was obtained by searching the web sites of regulatory agencies and health assessment and near-technology assessment agencies. Specialized databases such as the University of York NHS Centre for Reviews and Dissemination and the Latin American Caribbean Center on Health Sciences Information were also searched. The Internet was searched using the Google and Dogpile search engines, and additional information was found on the web sites of professional associations such as the American Association of Clinical Endocrinologists, the Canadian Diabetes Association, the American Diabetes Association, and the European Association for the Study of Diabetes, along with their associated conference sites.

Reports

1. Banerjee S, Tran K, Li H, et al. Short-acting insulin analogues for diabetes mellitus: meta-analysis of clinical outcomes and assessment of cost-effectiveness [report]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2007. Available: www.cadth.ca/media/pdf/341A_Insulin_tr_e.pdf (accessed 2008 Dec. 2).
2. Tran K, Banerjee S, Li H, et al. Long-acting insulin analogues for diabetes mellitus: meta-analysis of clinical outcomes and assessment of cost-effectiveness [report]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2007. Available: www.cadth.ca/media/pdf/341b_Long-acting-insulin_tr_e.pdf (accessed 2008 Dec. 2).

Guide to Search Syntax (Dialog)

- ! Explode the search term. Retrieve the search concept plus all narrower terms.
- ? Truncation symbol, single character. Retrieve plural and variant ending of search terms.
- " " Search phrases.
- () Proximity operator. Words must be adjacent.
- (l) Proximity operator. Links descriptors and subheadings.
- (n) Proximity operator. Words must be near each other in any order.
- (w) Proximity operator. Words must be adjacent.
- ab Search in article abstract.
- de Descriptor i.e., subject heading (a controlled, thesaurus term).
- dt Document type.
- id Identifier (includes CAS Registry Number and natural language indexing terms).
- rn CAS Registry Number.
- ti Search in titles.
- tn Brand name.
- tw Text word.

DATABASES	DATES/ LIMITS	SUBJECT HEADINGS/KEYWORDS
Dialog OneSearch Medline BIOSIS Previews EMBASE PASCAL	HUMAN 1990-	<p>Insulin Long-Acting(l)aa/de <i>[MeSH heading for Medline]</i></p> <p>OR</p> <p>(Insulin Glargine OR Insulin Detemir)/de <i>[EMTREE terms for EMBASE]</i></p> <p>OR</p> <p>TN=(Lantus OR Levemir) <i>[Brand names in EMBASE]</i></p> <p>OR</p> <p>(glargine OR Lantus OR HOE()901 OR 160337()95()1)/ti,ab,id OR RN=160337-95-1 OR (detemir OR Levemir OR NN()304 OR 169148()63()4)/ti,ab,id OR RN=169148-63-4 <i>[Textwords searched in title, abstract, identifier, registry number]</i></p> <p>OR</p> <p>(long()acting()insulin? OR slow?()acting()insulin? OR long()acting()analog? OR slow?()acting()analog?)/ti,ab <i>[Textwords searched in title, abstract]</i></p> <p>OR</p> <p>Insulin(l)aa/de <i>[MeSH heading for Medline]</i></p> <p>OR</p> <p>(Insulin Derivative OR Insulin Aspart OR Insulin()B28()Lysine()B29()Proline)/de <i>[EMTREE terms for EMBASE]</i></p> <p>OR</p> <p>TN=(Humalog OR NovoLog OR NovoRapid OR NovoMix OR Apidra) <i>[Brand names in EMBASE]</i></p> <p>OR</p>

DATABASES	DATES/ LIMITS	SUBJECT HEADINGS/KEYWORDS
		<p>Insulin Lispro/de [BIOSIS Previews thesaurus term]</p> <p>OR</p> <p>(insulin?(1n)analog? OR insulin?(1n)derivat? OR new()insulin? OR novel()insulin?)/ti,ab</p> <p>OR</p> <p>(133107()64()9 OR insulin?(2n)(Lys?()28()B) OR (28()B)Lys?()29()B)(2n)insulin? OR Lispro? OR Humalog? OR B28 OR 28()B()lysine()29()B()prolineinsulin?)/ti,ab,id OR Lyspro?/ti,ab OR insulin()Lys()B28()Pro()B29/id OR RN=133107- 64-9</p> <p>OR</p> <p>(116094()23()6 OR insulin?()aspart? OR B28()asp? OR Asp()B28 OR NovoLog OR NovoRapid OR NovoMix?)/ti,ab OR insulin()Asp()B28/id OR RN=116094-23-6</p> <p>OR</p> <p>(insulin()glulisine OR apidra OR 207748()29()6 OR insulin()Lys()B3()Glu()B29 OR insulin()lysyl()B3()glutamyl()B29 OR B3()lysyl()B29()glutamylinsulin)/ti,ab,id OR RN=207748-29-6</p> <p>OR</p> <p>(quick()acting()insulin? OR rapid()acting()insulin? OR rapidly()acting()insulin? OR short()acting()insulin? OR fast()acting()insulin? OR quick()acting()analog? OR rapid()acting()analog? OR rapidly()acting()analog? OR short()acting()analog? OR fast()acting()analog?)/ti,ab</p> <p>AND</p> <p>Diabetes Mellitus!/de [MeSH heading for Medline]</p> <p>OR</p> <p>(Insulin-Dependent Diabetes OR Insulin-Dependent Diabetes Mellitus OR Diabetes OR Diabetes Insipidus OR Diabetes Mellitus OR "Maturity-Onset Diabetes of the Young" OR Non-Insulin- Dependent Diabetes Mellitus OR "Gestational Diabetes" OR</p>

DATABASES	DATES/ LIMITS	SUBJECT HEADINGS/KEYWORDS
		<p>"Gestational Diabetes Mellitus")/de <i>[BIOSIS Previews thesaurus terms]</i></p> <p style="text-align: center;"><i>OR</i></p> <p>(Diabetes Control OR Diabetes Insipidus! OR Diabetes Mellitus! OR Experimental Diabetes Mellitus! OR Pregnancy Diabetes Mellitus!)/de <i>[EMTREE terms for EMBASE]</i></p> <p style="text-align: center;"><i>OR</i></p> <p>(diabet? OR IDDM OR NIDDM OR MODY OR "type 1" OR "type I" OR "type 2" OR "type II" OR insulin(depend?)DM OR matur?(onset)DM OR late(life)DM OR gestational()DM OR juvenile(onset)DM OR juvenile()DM OR ketosis(prone)DM OR sudden(onset)DM OR non(insulin(depend?)DM OR adult(onset)DM)/ti,ab</p> <p>AND</p> <p>(Controlled Clinical Trials OR Multicenter Studies OR Randomized Controlled Trials OR Double-Blind Method OR Random Allocation OR Single-Blind Method OR Placebos)/de <i>[MeSH headings for Medline]</i></p> <p style="text-align: center;"><i>OR</i></p> <p>dt=(Multicenter Study OR Randomized Controlled Trial OR Controlled Clinical Trial) <i>[Document type in Medline]</i></p> <p style="text-align: center;"><i>OR</i></p> <p>(Multicenter Study OR Randomized Controlled Trial OR Randomized Clinical Trial OR Randomized Trial OR Evidence- Based Medicine)/de <i>[BIOSIS Previews thesaurus terms]</i></p> <p style="text-align: center;"><i>OR</i></p> <p>(Major Clinical Study OR Multicenter Study OR Controlled Study! OR Randomized Controlled Trial)/de <i>[EMTREE terms for EMBASE]</i></p>

DATABASES	DATES/ LIMITS	SUBJECT HEADINGS/KEYWORDS
		<p style="text-align: center;"><i>OR</i></p> <p>(random? OR sham? OR placebo? OR singl?)(blind? OR dumm? OR mask?) OR doubl?)(blind? OR dumm? OR mask?) OR tripl?)(blind? OR dumm? OR mask?) OR trebl?)(blind? OR dumm? OR mask?) OR control?)(study OR studies OR trial?) OR RCT? ? OR (multicent? OR multi()cent?)(study OR studies OR trial?))/ti,ab</p> <p style="text-align: center;">OR</p> <p>(Meta-Analysis OR Technology Assessment, Biomedical)/de <i>[MeSH headings for Medline]</i></p> <p style="text-align: center;"><i>OR</i></p> <p>dt=Meta-Analysis <i>[Document type in Medline]</i></p> <p style="text-align: center;"><i>OR</i></p> <p>Meta-Analysis/de <i>[BIOSIS Previews thesaurus term]</i></p> <p style="text-align: center;"><i>OR</i></p> <p>(Meta Analysis OR Systematic Review OR Biomedical Technology Assessment)/de <i>[EMTREE terms for EMBASE]</i></p> <p style="text-align: center;"><i>OR</i></p> <p>(meta()analy? OR metaanaly? OR met()analy? OR metanaly? OR health()technology()assessment? OR meta()regression? OR metaregression? OR mega()regression? OR systematic?)(literature()review? OR review? OR overview?) OR methodologic?)(literature()review? OR review? OR overview?) OR quantitative()(review? OR overview? OR synthes?) OR research()(integration? OR overview?) OR integrative(2w)(review? OR overview?) OR collaborative()(review? OR overview?) OR pool?()analy? OR data()synthes? OR data()extraction? OR data()abstraction? OR handsearch? OR hand()search? OR mantel()haenszel OR peto OR der()simonian OR dersimonian OR fixed()effect? OR latin()square?)/ti,ab</p> <p><i>Search performed on 3 August 2005; monthly alerts set up on Medline, EMBASE and BIOSIS Previews and were ongoing until 1</i></p>

DATABASES	DATES/ LIMITS	SUBJECT HEADINGS/KEYWORDS
		<p>January 2006.</p> <p><i>Total Hits=850 Records (817 “clinical results”+33 systematic review / meta-analysis results), 442 unique records after comparison with PubMed records (423 “clinical results”+19 systematic review / meta-analysis results)</i></p>
COCHRANE LIBRARY Issue 3 2005	1990-	<p>Same MeSH and keywords as per Medline search, excluding study design filter. Appropriate syntax used.</p> <p><i>Initial search performed on 2 August 2005 and updated with subsequent database updates. Last update performed on 6 February 2006.</i></p> <p><i>Total Hits=</i> <i>Cochrane Database of Systematic Reviews=2 Records, 1 Unique</i> <i>DARE=2 Records, 0 Unique</i> <i>CENTRAL=276 Records, 13 Unique</i> <i>Abstracts by INAHTA and other HTAs=6 Records, 3 Unique</i></p>
PUBMED	HUMAN 1990-	<p>SAME MESH AND KEYWORDS AS PER MEDLINE SEARCH. APPROPRIATE SYNTAX USED.</p> <p><i>Total Hits=407 Unique Records</i></p>
Web sites of health technology assessment (HTA) and related agencies; trial registries; other databases		AHRQ; National Research Register; University of York NHS Centre for Reviews and Dissemination – CRD databases; LILACS, etc.