A randomised controlled clinical trial in type 2 diabetes comparing semaglutide to placebo and liraglutide

This trial was conducted in Europe, Asia and Africa. Study participants were randomised evenly to treatment with semaglutide (0.1 mg QW - 1.6 mg QW, 6 treatment arms, placebo or liraglutide (1.2 mg QD, or 1.8 mg QD). Treatment allocation to semaglutide or placebo was double-blind, whereas liraglutide treatment was administered open-label. Primary efficacy parameter was HbA1c and the treatment duration was 12 weeks.

Scientific Title
Investigation of safety and efficacy of five doses of semaglutide versus placebo and open-label liraglutide, as add on therapy, in subjects diagnosed with type 2 diabetes currently treated with metformin or controlled with diet and exercise. A 12 week multi-centre, multi-national, double-blind, placebo-controlled, randomised, nine armed parallel group, dose finding trial

<table>
<thead>
<tr>
<th>Trial IDs and acronym(s)</th>
<th>Condition</th>
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</thead>
<tbody>
<tr>
<td>Novo Nordisk Trial ID NN9535-1821</td>
<td>Diabetes</td>
</tr>
<tr>
<td>Clinical Trials.gov Registration NCT00696657</td>
<td>Diabetes Mellitus, Type 2</td>
</tr>
<tr>
<td>Other Identifier(s)</td>
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<tr>
<td></td>
<td>EudraCT Number: 2007-003956-12</td>
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</table>

<table>
<thead>
<tr>
<th>Trial dates</th>
<th>Trial phase</th>
</tr>
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<tbody>
<tr>
<td>Start date: 30.Jun.2008</td>
<td>Phase 2</td>
</tr>
<tr>
<td>Primary completion date: 28.Feb.2009</td>
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</table>

<table>
<thead>
<tr>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• semaglutide</td>
</tr>
<tr>
<td>• placebo</td>
</tr>
<tr>
<td>• liraglutide</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Arm Information with Assigned Treatment</th>
<th>No. of arms: 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Experimental):</td>
<td>Drug: semaglutide</td>
</tr>
<tr>
<td>Arm description:</td>
<td>0.1 mg, once weekly, s.c. injection</td>
</tr>
</tbody>
</table>

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http://www.novonordisk-trials.com
• B (Experimental):
  Arm description:
  Drug: semaglutide
  0.2 mg, once weekly, s.c. injection
• C (Experimental):
  Arm description:
  Drug: semaglutide
  0.4 mg, once weekly, s.c. injection
• D (Experimental):
  Arm description:
  Drug: semaglutide
  0.8 mg, once weekly, s.c. injection
• E (Experimental):
  Arm description:
  Drug: semaglutide
  0.8 mg with titration, once weekly, s.c. injection
• F (Experimental):
  Arm description:
  Drug: semaglutide
  1.6 mg with titration, once weekly, s.c. injection
• G1 (Placebo Comparator):
  Arm description:
  Drug: placebo
  0.1 mg, once weekly, s.c. injection
• G2 (Placebo Comparator):
  Arm description:
  Drug: placebo
  0.2 mg, once weekly, s.c. injection
• G3 (Placebo Comparator):
  Arm description:
  Drug: placebo
  0.4 mg, once weekly, s.c. injection
• G4 (Placebo Comparator):
  Arm description:
  Drug: placebo
  0.8 mg with titration, once weekly, s.c. injection
• G5 (Placebo Comparator):
Arm description:
Drug: placebo
0.8 mg with titration, once weekly, s.c. injection

• G6 (Placebo Comparator):
  Arm description:
  Drug: placebo
  1.6 mg, once weekly, s.c. injection

• H (Experimental):
  Arm description:
  Drug: liraglutide
  1.2 mg with titration, once daily, s.c. injection

• I (Experimental):
  Arm description:
  Drug: liraglutide
  1.8 mg with titration, once daily, s.c. injection

<table>
<thead>
<tr>
<th>Trial status</th>
<th>No. of trial participants</th>
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</thead>
<tbody>
<tr>
<td>Completed</td>
<td>415</td>
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<table>
<thead>
<tr>
<th>Age eligible for trial participation</th>
<th>Genders eligible for trial participation</th>
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<tbody>
<tr>
<td>18 years and above</td>
<td>Both</td>
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<table>
<thead>
<tr>
<th>Inclusion criteria</th>
<th>Exclusion criteria</th>
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<tbody>
<tr>
<td>• Men and women-not-of-childbearing potential diagnosed with type 2 diabetes for at least three months</td>
<td>• Treatment with insulin, GLP-1 receptor agonists (including liraglutide), dipeptidyl peptidase-4 inhibitors, sulphonylurea, thiazolidinediones, Alpha-GIs, or any investigational drug, within the last three months</td>
</tr>
<tr>
<td>• Stable treatment regimen with either metformin (at least 1500 mg) or diet and exercise alone for at least three months</td>
<td>• Impaired liver or kidney function</td>
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<tr>
<td>• HbA1c: 7.0-10.0 % (both inclusive)</td>
<td>• Proliferative retinopathy or maculopathy requiring acute treatment</td>
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<tr>
<td>• Body weight between 60 kg and 110 kg</td>
<td>• Clinically significant active cardiovascular disease and uncontrolled treated/untreated hypertension</td>
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<table>
<thead>
<tr>
<th>Trial type</th>
<th>Trial design</th>
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| Interventional | Purpose: Treatment  
Allocation: Randomized  
Masking: Double Blind  
Control: Placebo Control  
Assignment: Parallel Assignment |
<table>
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<tbody>
<tr>
<td><strong>Primary outcome</strong></td>
<td><strong>Secondary outcome(s)</strong></td>
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</tbody>
</table>
| • HbA1c  
Time frame: after 12 weeks of treatment | • Percentage of subjects with an adverse events  
Time frame: after 12 weeks of treatment  
• Percentage of subjects with hypoglycaemic episode  
Time frame: after 12 weeks of treatment  
• Change from baseline in ECG  
Time frame: week 0, week 12  
• Change from baseline in vital signs (Pulse)  
Time frame: week 0, week 12  
• Change from baseline in vital signs (blood pressure)  
Time frame: week 0, week 12  
• Change from baseline in standard safety laboratory parameters (haematology)  
Time frame: week 0, week 12  
• Change from baseline in standard safety laboratory parameters (biochemistry)  
Time frame: week 0, week 12  
• Change from baseline in standard safety laboratory parameters (urinalysis)  
Time frame: week 0, week 12  
• Change from baseline in calcitonin  
Time frame: week 0, week 12  
• Percentage of subjects developing anti-semaglutide antibodies  
Time frame: after 12 weeks of treatment |

**Participating countries**
- Austria: Completed/Suspended
- Bulgaria: Completed
- Finland: Completed/Suspended
- Former Serbia and Montenegro: Completed
- France: Completed/Suspended
- Germany: Completed
- Hungary: Completed/Suspended
- Italy: Completed/Suspended
- South Africa: Completed/Suspended

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http://www.novonordisk-trials.com
Spain: Completed/Suspended
Switzerland: Completed/Suspended
Turkey: Completed/Suspended
United Kingdom: Completed/Suspended

Central contact information
Trial sponsored by: Novo Nordisk A/S
Contact: clinicaltrials@novonordisk.com
For trials conducted in the US: (+1) 866-867-7178

Labeling information
- EU:

Information provided by Novo Nordisk A/S
PDF generation date: 06.Apr.2018

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