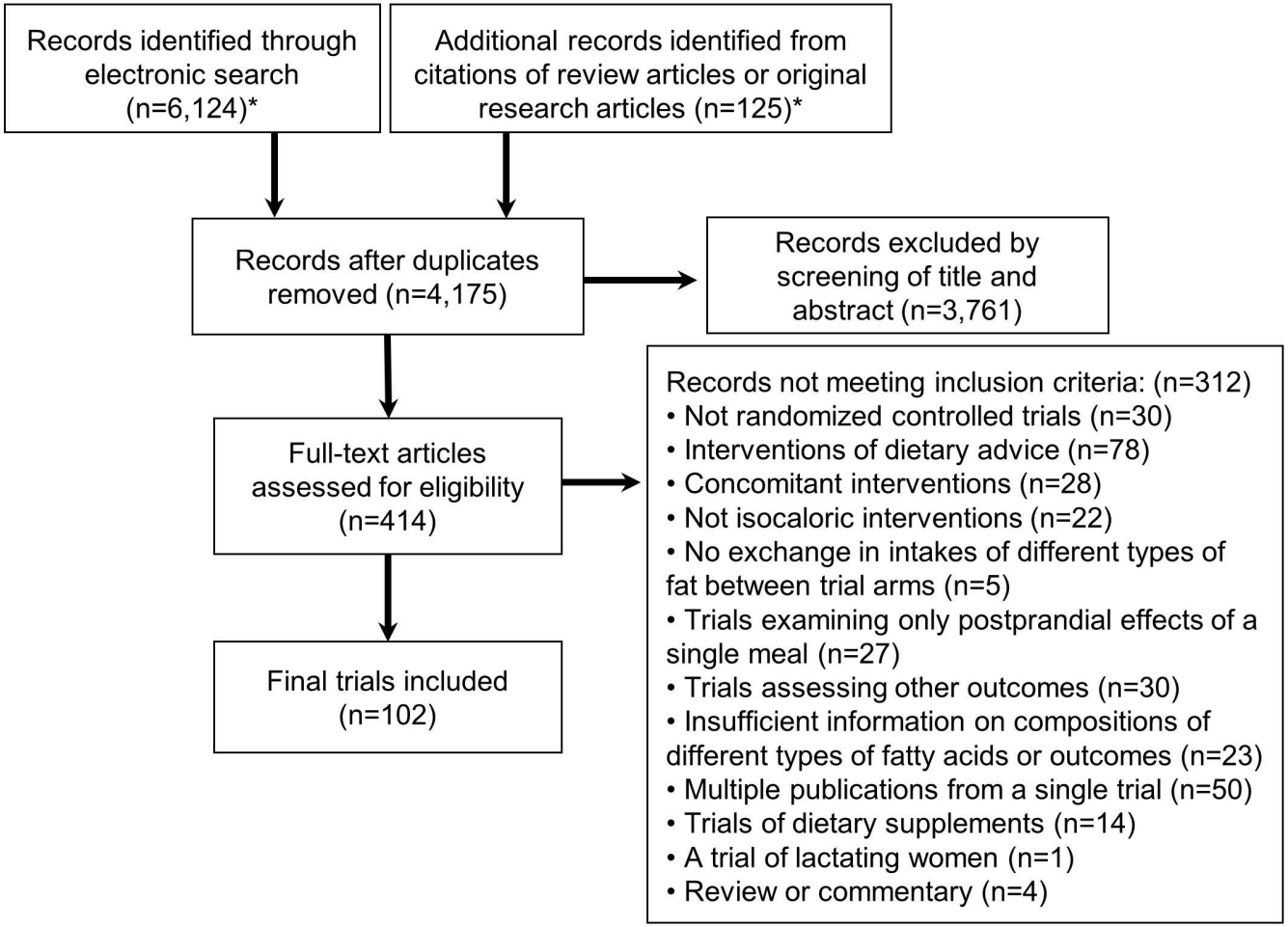
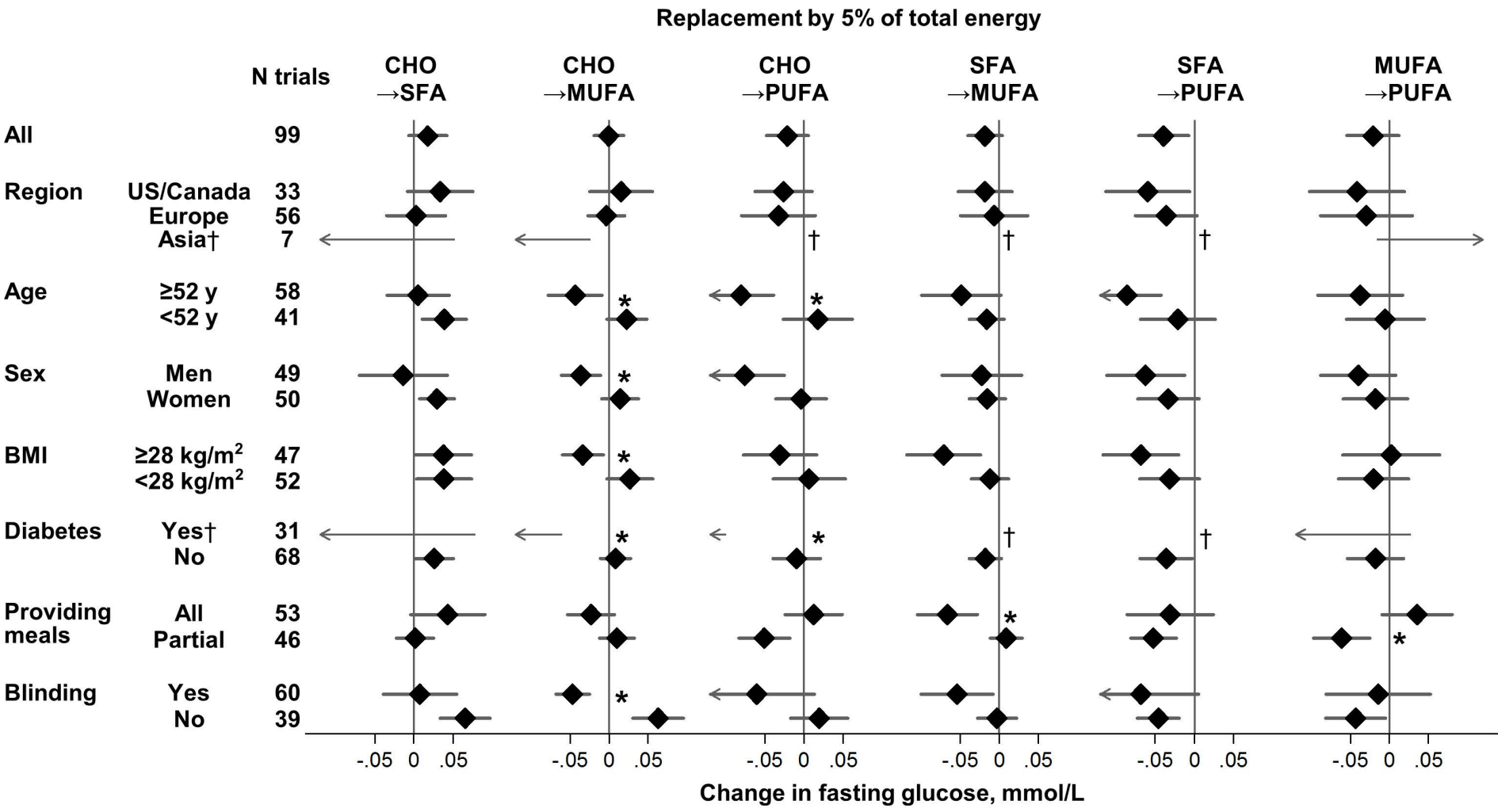
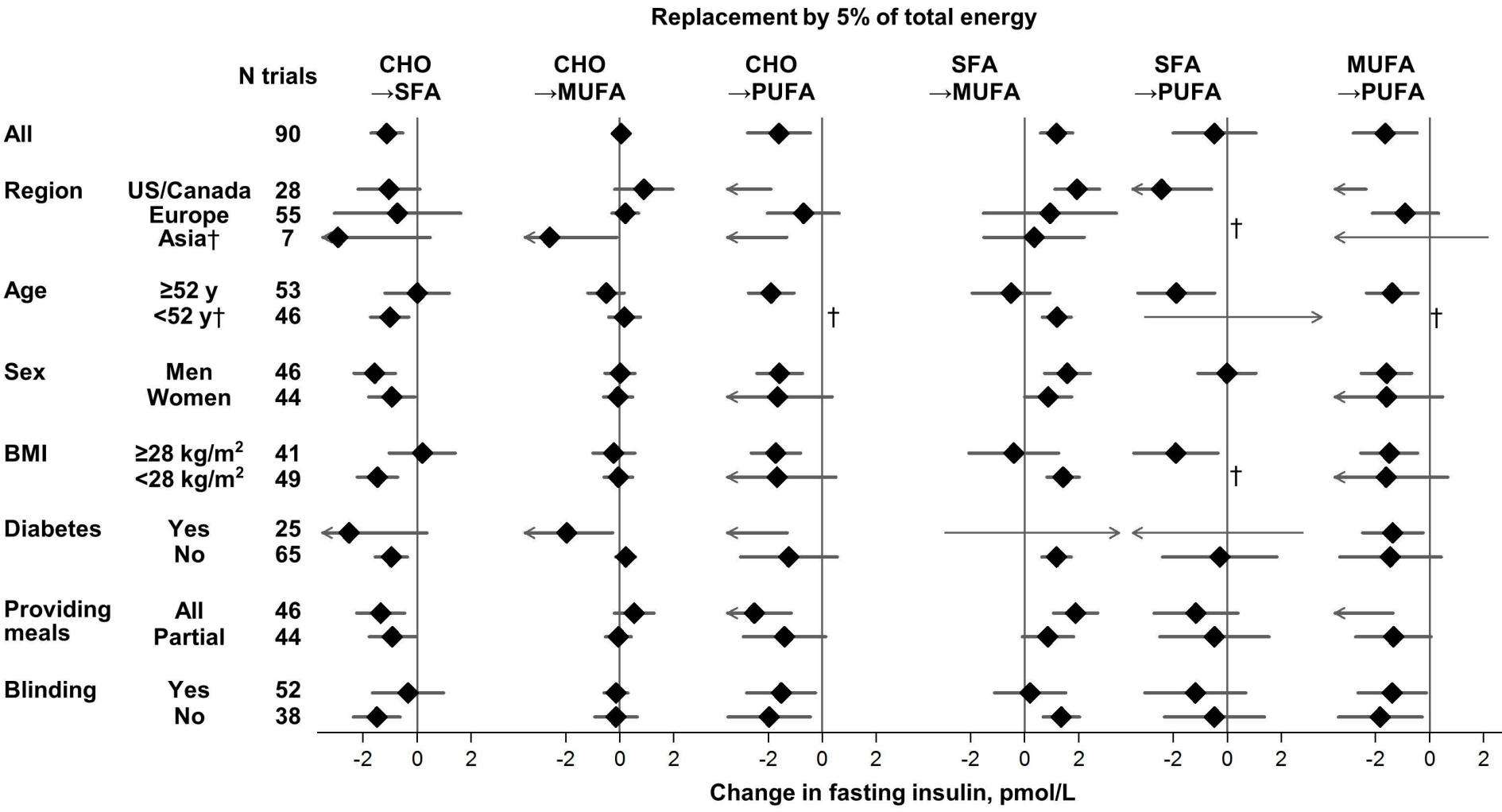

Records identified through electronic search (n=6,124)*
Additional records identified from citations of review articles or original research articles (n=125)*
Records after duplicates removed (n=4,175)
Records excluded by screening of title and abstract (n=3,761)
Full-text articles assessed for eligibility (n=414)
Records not meeting inclusion criteria: (n=312)
• Not randomized controlled trials (n=30)
• Interventions of dietary advice (n=78)
• Concomitant interventions (n=28)
• Not isocaloric interventions (n=22)
• No exchange in intakes of different types of fat between trial arms (n=5)
• Trials examining only postprandial effects of a single meal (n=27)
• Trials assessing other outcomes (n=30)
• Insufficient information on compositions of different types of fatty acids or outcomes (n=23)
• Multiple publications from a single trial (n=50)
• Trials of dietary supplements (n=14)
• A trial of lactating women (n=1)
• Review or commentary (n=4)
Final trials included (n=102)


Replacement by 5% of total energy
N trials
CHO →SFA
CHO →MUFA
CHO →PUFA
SFA →MUFA
SFA →PUFA
MUFA →PUFA
All 99
Region
US/Canada 33
Europe 56
Asia† 7
Age
≥52 y 58
<52 y 41
Sex
Men 49
Women 50
BMI
≥28 kg/m2 47
<28 kg/m2 52
Diabetes
Yes† 31
No 68
Providing meals
All 53
Partial 46
Blinding
Yes 60
No 39
-.05 0 .05
Change in fasting glucose, mmol/L


Replacement by 5% of total energy
N trials
CHO →SFA
CHO →MUFA
CHO →PUFA
SFA →MUFA
SFA →PUFA
MUFA →PUFA
All 90
Region
US/Canada 28
Europe 55
Asia† 7
Age
≥52 y 53
<52 y† 46
Sex
Men 46
Women 44
BMI
≥28 kg/m2 41
<28 kg/m2 49
Diabetes
Yes 25
No 65
Providing meals
All 46
Partial 44
Blinding
Yes 52
No 38
-2 0 2
Change in fasting insulin, pmol/L