

Introduction

20% 59 9.95 5 (09:00 17:00) 9 (09:00) 19 19 9 q 19 e, f· 9 1, 2 . 9 1 + + 9 . + ¥ 99 .91 q 9 5.5.5 9 4 + 9+ 99 ð, 95 5,9 f 1 59 5 19 19 £ 99 199 8 9 s. sq q ſ 99.59.51 19 3, 9, 9 95 69 £, f 92 9 + R , 5 19 1 9 , 9 r 9), 9 ١¢ q 99, \$ 92 99 9 5 47. fi 1 9 1 9 . f= . f ŝ **,** -94 95 g 59 5 5 8,9 . . f ٩. r fir 99 99. Y . X ٩, **Yç ç §** 20:00 ľ 999 499 9 9 5 Fi . f 19 99 5 10. r Fi 5 q. 9,999,999 9,9-9 5-9 6 5 9 9 5 9, 95 99 5 11 . . . , r 9 - 9 r fi 9 r (), 99 9 5 _ 5 9 5 9 + 9 9 919 9 995 ç 9399 39589 9 123 95 55 5 - . 5r ľ ç F,
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4 9 , **9** 955 £ f 9 5 5 59 15 (N=4.7/ r) f. f . î 1 ٢ q 9,9,9 9,9 9 8 4 15 fi . 5- . 5 9 51 , 59 . 55 ф. q 9 -1. 1 f ľ 49 9 £, 59 9919999 . r. r. 9 r. 5 ٦. ١ ١. **9** 9 16. , 9 5 5 fi 55 9 5 1 5 59 99 119 9 79 99 9 -5 9 9 ĥ . f. f. f , t 17. 59 F1 559 S 5-599 ç 9.5 5 55 9 g f. e, r 9 9 A 24.99 595 59 9 5 5 59 f., $\lambda \lambda \rightarrow \tau$ 19. 19 995 . 9 1 9 1 1 5.59 9 **1**8, î 919 5 , **f**- , 19.5 £ 991 f f ; 19 9; ; . r 19 1 ~ f ~ ss , 9 (840) 5 k . 1 q .f. f

۲, 19 .9 9,9 20. 5 5-5 9 9 5 9 g \$919111 9-9: 9 5 ٩ . ٦ , f= , f g 5 q__ 5.99 £ 1 595 59 959691 ç 9 5-9 f f f f f ſ . 1

Methods

Study details

9995, 599-, 9, 99 -5 q ľ ┢ 995 Fi 9 (99 5 ¥ . 1). . 9 7 99 999-5ſ f. A 9 - 5-5 5f . . 1 9 99 ٩, e, 9 1.5 F, 4 1 5 qq 1 5 q q q q ٩. . 1 **99**:(1) q q ſ 5 ſ ŕ 49 ľ 9 6 . . **9** q A .A. (2) 99 5 ; . **1** 1 ſ `, 9 5 5 9 9 595 ŕ ٢ 99 1.9 1 (2019 4**r** rfg (.0000033621). 99 5 1. ľ ĥ 1 19 ſ £, ſ) _______ q 99 9 99 ١ 1. t (



91995 : 22:00 06:00 1 () 1 k + 49 94 G 9 9 (). ŕ q 9,9 \$ 9 199 , q q î ľ Ţ Å 9 95 q q q ſ ſ î 19 , r Å e, ç ç **5** 4 949 2 5 è, 9 + 9 ç 22 9 q 1 49 q 99 100 q Ŗ 9 ſ ç è, qq r 4 11 <1 g 5 9 9 (51. ł q 9, q ſ ¢ +91 59 9, ŕfi 9.) . f ٦ ç. q 9 5 99 99 î 99 9,9 q 99 q G î î ç f G. . 9 9). •9 99 5 5 59 ſ 9 \, 99 11 f 5 5 49 191199 59 ſ **ç** çç 59 q 99 £, £ 19 75 Fi . 19 2 Ş, ġ, ĥ ĥ 9 4, ſ î e, q 9 5 59 9 q 5 9.19 ٦ 9949 ſ q q F F 9 ;299, 9F , 39 99 9 F q 15(9)-19(,)8(r)2(19906:309 9 $0.9(f_1 - 9.9, f_1 f_1)125f_7 - (15.25 (.1(;999 9;f_1)9999618()18(f_1)1.9(f_1)8.1(f_1)28.2()8(f_1)9.1(f_2)1.9(f_1)8.1(f_1)8.1(f_2)1.9(f_1)8.1(f_2)1.9(f_1)8.1(f_2)1.9(f_1)8.1(f_2)1.9(f_1)8.1(f_2)1.9(f_1)8.1(f_2)1.9(f_1)8.1(f_2)1.9(f_1)8.1(f_2)1.9(f_1)8.1(f_2)1.9(f_1)8.1(f_1)8.1(f_2)1.9(f_1)8.1(f_1)8.1(f_2)1.9(f_2)1.9(f_2)1.9(f_2)1.9(f_1)8.1(f_2)1.9(f_2)$ 9 - - 9 9 1 q **1**9 25. 59 5 , 9, 9 ۲ Y 99 9 5 5 5 ſ ſ r ٦ 94 f ſ * * * 1 ſ ľ 999 ç ç ŕ ÷ Meal conditions q q 1 9 ſ ſ . \ A , 9 99 59 9 9 - 99 ٢ 99 q 99 Я q 199 q ĥ ſ 9. 40% f., 33% f, 17% ĥ 23 999 q :9 99 9 5 f 89 r), 30 **** q 1. 15 (.), 9 49 , q 9). 95 5999 45 (£ \$999 9 () 99 ĥ 9 7 9 9 9 500 G. 9 9 5) 1 199 19 9 991 + 9,9 15% + 19 . •9 99 q ſ 8 (🗡 q f). 9ff **%**.7()129 **5.9** 16 s.042 1

r (*p*=0.016, r r). f, r, q, q, q, q, q, r (p<0.001) 5 (p<0.001)9 9 f , f ... 9 _9 99 f.9 9 - f- f f (p<0.001), f ff.9 f. *r*- *r*(*p*=0.627) *r*-*r*- *r*(*p*=0.215) r 99955 99 5. 99 9 59 5 - 5-- 1- .1 .f f (p=0.001) 9 - s- s (p<0.001) s (9 2).

Responses to a breakfast meal

9 26

Diabetologia

Table

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5 9 1, 199 9,9 9. q 9 95 q 9 5 fi f. f q î q ç 999 +9 5 q ĥ F, ľ 9 * 19 1 ſ 5 ٢ f . ŕ 9 5 q 9, 9 ; f 9 A q lG, e, 5f 1 1 1 ۴, ٦. 1999 Å, 91 q 9 ç î G Ģ c, 9 î - 1 5 5 5 ſ \$ 997,9 9 1999 9. q 91 £ + ſ Я, 19 q 9,9 q 49 q 32, 33, q 9 1 î 5î î 999 9,9 ç 19 ĥ q q 1 ۶, ٢ 1 5 9 Ģ 59 q 9 g î f f 1î 5 36. q q q 199 9 f f 15 1 5-. 1. î î î ľ e, e, ĥ ç 19 ç G ŕ 5ſ ľ Ġ, 91 9 G 19 G f 5 1-. q 9 ٩ 9 99 q 99 9 5 q 5 5 î î 1. 1 1 î 49 q q G 19 G 9 ſ ٣î 1 f 1 î ľ , 199 q 91 19 q q A 1 ſ, q 37, 38 . 5 5 5 5 5 1,99 ľ 32.35. 5.9 q q q 9 7. qq, ł q 1. f 1 1 4 , 99 99,599 q :9 £1. 9 32 35 99 19 2 9 î 19 î 1. 1 q q 49 î ſ 95 9 49 ſ 99 5 î î î ġ,q ľ q e, q q ĥ ٩, ç 5 G 19991 ſ 5 q 5 99 5 99 ÷ 33. qq § . 9 5 ſ 5 ſ 1. î ٦., q 99, q q q 99 19 r 9 39; 1. ۴. ľ ľ ľ ľ



Diabetologia



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Table 4 ç qq, , 99, 3 ¢, V) 9/5 9 (9 '_ 5 ۹ (F,df)) р F9 - 5-£ - 5ŕ - 5-£ ٢ $0.926 (F_{2.98}=0.1)$ $<0.001 (F_{1.98}=25.9)$ $0.654 (F_{2.98}=0.6)$ (.) 7.2'_0.4 7.0'_0.5 7.1'_0.7 3 5.8'_1.1 6.3'_0.6 6.0'_1.1 5.8'_1.9 5.7'_1.7 5.8'_1.2 $<0.001 (F_{1.97}=25.7)^{*}$ $0.474 (F_{2.97}=0.8)$ $0.852 (F_{2.97}=0.3)$ () 17.7'_12.3 29.9'_23.1 19.3'_14.9 3 8.4'_14.7 6.0'_3.9 4.8'_3.1 52.3'_72.6 60.7**'**_55.3 44.9'_37.9 () $0.861 (F_{2.98}=0.2)$ $<0.001 (F_{1.98}=9.3)$ $0.269 (F_{2.98}=1.3)$ 29.8'_18.6 26.9'_15.9 32.7'_32.5 3 65.1**'_**57.8 34.7'_34.9 41.8'_54.2 59.4'_64.4 78.3**'_**95.2 86.4'_86.6 (%) $0.814 (F_{2.98}=0.2)$ $< 0.001 (F_{1.98} = 28.1)^{\circ}$ $0.501 (F_{2.98}=0.8)$ 89.1'_8.4 90.1'_4.7 88.1'_6.2 3 82.5'_15.7 90.3'_8.8 88.8'_12.9 72.1'_23.2 70.9'_21.2 72.7'_14.7 $0.115 (F_{1.98}=2.2)$ r 91() $0.519 (F_{2.98}=0.7)$ $0.770 (F_{2.98}=0.5)$ 5.5'_4.2 6.6'_5.2 8.1'_6.9 3 5.2'_3.5 6.7**'**_4.7 6.6'_3.8 7.2'_5.9 7.8'_5.7 7.8'_4.8 r 92() $0.823 (F_{2.98}=0.2)$ $<0.001 (F_{1.98}=24.5)$ $0.656 (F_{2.98}=0.7)$ 159.9'_34.9 161.3**'_**57.3 164.7**'_**49.9 105.7'_36.7 3 122.5'_43.6 112.4'_39.6 161.1'_46.9 148.3'_62.5 144.9'_67.1 r 93($0.827 (F_{2.98}=0.1)$ $<0.001 (F_{1.98}=19.7)$ $0.513 (F_{2.98}=0.8)$) 85.0'_33.2 79.4'_32.5 77.3'_24.6 3 54.8'_21.7 64.3'_21.5 59.9'_21.9 60.2**'**_35.7 62.8'_45.1 56.4'_23.4 \$ 94($0.760 (F_{2.98}=0.3)$ $<0.001 (F_{1.98}=98.7)^{\circ}$ $0.386(F_{2.98}=0.4)$) 86.9'_28.2 85.0'_46.2 79.9'_34.0 3 88.2'_29.4 98.8'_41.9 83.7'_41.4 47.8'_28.8 42.1'_26.8 40.8'_24.3 **r** () $0.709 (F_{2,98}=0.3)$ $0.049 (F_{1.98}=3.1)^{\circ}$ $0.933 (F_{2,98}=0.2)$ 93.6'_19.9 90.4'_20.2 96.7'_31.4 92.8'_29.6 86.4'_20.2 97.2'_33.8 3 82.6'_34.3 82.7**'**_30.6 82.7'_24.9 9 (r. F ç df q q q999; V) D *p*<0.05 9,99 3,9-> 3, ۶ î : ^{*} p<0.05 9,99 -, 9-3< 9 9< 5. : 9:99 - 9-99 *p*<0.05 3 £ ٢ : > *p*<0.05 9:99 - 9-: < 9 9 3 5 5. • *p*<0.05 9:99 -: 9-3< 9 9 £ 5 , 99; ,999,9; 9; , 99 - 91 Fi 9 91 99 9,9 . .9 9 91 45. 99 9 5 9 5 149 e, e e ις. 9,999 5 559 95 9: 9 ç 99 99 199 q 43, 44 . q 1. 119 9 9 5 q ſ 999 91 ĥ 95 ç £ 9 91 ĥ

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References

- 1. **f f** , **G f** (2001) **G f** 24- **G f f** 358(9286):999 1005. **ff** :// . /10.1016/ 0140-6736(01) 06108-6
- 2. $f = \frac{1}{2009}$ $f = \frac{1}{2000}$ $f = \frac{1}{20000}$ $f = \frac{1}{20000}$ f

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