

Pt L I t A t A t T R -B C t C A t

- ,¹ - C ,¹ A. ,² D s . ,² C ¹

¹D f s , B J , C , D / f s f B s f , - s C f f s,
² f s , B J , C f s s s , f s C f , B f , C f , s

C f f s : - , P RPOSE. s f f f f s
D f s , 5 s , B J f s f f f f f , s s
100871, C ; s f f s s f - s , f f
C J @ . . . s METHODS. s (22.5 f s) s f / f s f s
C , D f s , 5 , f f f f f - s- s f f (E) f .
B J 100871, C ; s f s s f s, f , f f f s f f s
@ . . . s s s s . f f s f s f f s
: D f 10, 2013 f f f f s . f s f s f f f s
A : F f 10, 2014 f (E), f F f f .
C : - , C - , A, RES LTS. f f s f s . f , f s f
D , C. f f f f s , f f s f f f f f f
f s s s f s s f f f s f . f F f f
f s - s f s s s s , f f f F f f
s . Invest Ophthalmol Vis Sci.
2014;55:2020-2030. D : s f f Fs. f f s 1.5 1.6 s (P <
10.1167/ s.13-13739 0.001) s f s s E f . s
f s f 53% (P < 0.001).
CONCL SIONS. f s f f s s s f f
f - f f s f f f s s f f s . s f s
f f s f f f s f . f f , f f
f s f s f f - s s .
f s: , f f , f

A s s s f f s f f s s s f f s s s f f s s f f s f s f s
s f) s s f (. . , s f s s s f f s s s f f s s f f s
f f s f f . s f f f , f s, s s f s s .²²
f s f s f s f s s f ss (E) s f f -s
f f f s s . f s s f f f s s f f s f s f
s f f s s f s 6 7 f s (f f s , f s f f s
f s s f) .¹ f , s s f f f f f f f f f
f f s s f f s s f s, f f f s f f s f f
s s .^{2 8} s f s s, s,^{24 26} s f f f f
f s f s s ,^{9 11} f s f f s f f s f f s -s
f s f f f s f s f s f s f f s f f f f s
f s f f s . s s s s f s s f s f
f s s f f s s s s f s s s s s s s s f f
f f 3,12,13 (s s F s. 2 4 f s s f f f . D s f
s). f s f f s s s f f s s f s f f f - s
f f f s s f f s s s f - s s, f f s
s f f s^{14 16} f f s f s s f s s f s f s
f ,^{17,18} f s ss f s ? f s f f f s
s f f s s s f s f f s f f s f f s
f s s, f ss s f f s f s s f f s f s



s

f s s s s s (F . 1).
 , D 0.7) s f 2.4 s f f
 2.7 s
 s f s f (8.2 , D=1.8)
 s f 0.9 s s
 f s s s f
 ss ss f f s s
 f s s f s s s s
 f s s f s s s s
 s f s s (F . 2). f s s
 s f s s f (f f f), -
 f s (80%), f (f f f), s
 (180°) ss f s s f - - f s-
 f f s s s f f
 f s s s f
 s s f s s f
 f s s f j f
 ±50 f (±2 s) f
 s f f s f s s ,
 s , s f s , s f

f 0° 180° f f f s s s s
 f f f (f 17°
 s 2) f f f
 s f . s s s f s f
 s f f s s s s f f f f
 j s. s s 1.6 .
 s f s f - - f s
 s f s f f s s f s
 s f s s f f s f
 s . s f (36° f 126° f)
 f s s s f f f s
 s f f (F . 4). f s f f
 s f s s 80%. s s 2 .

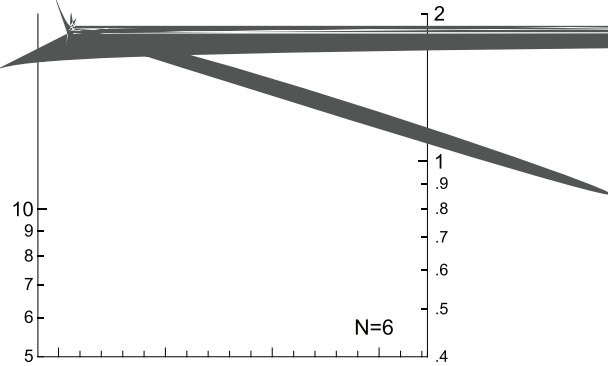
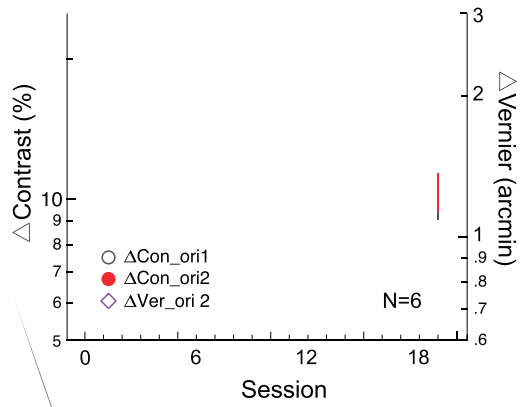
F t A t

A t . -E s s f
 f E (f) . C -E s s
 E f f s f f f s -s
 E f s f f f f s,
 - - f s . f -E
 E f s f s f . B s s
 f s -E f -E s , s
 s s s f E f , s f

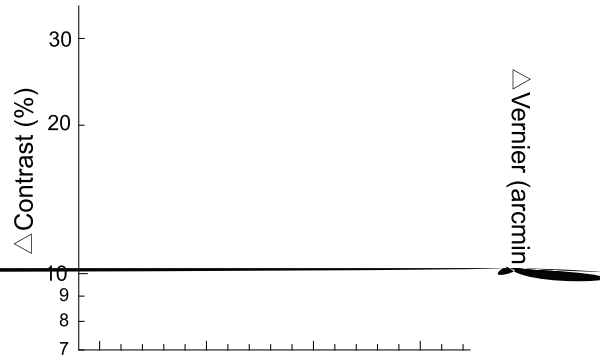
a



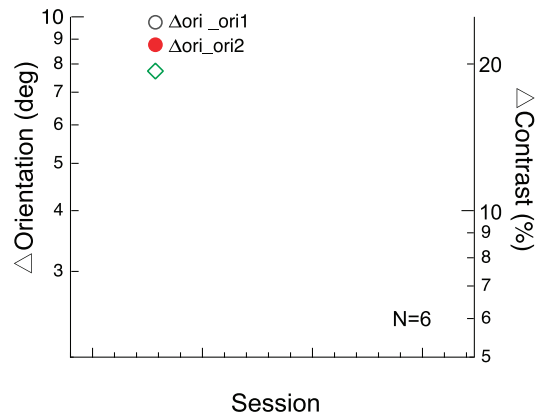
b



$0.29^\circ \times 0.29^\circ$ s f - , f s , s f - f
 $\pm 45^\circ$ f f . s s
s s s 4 .
C t t **S** t t . C f s s s s s s f s f s f
f s s (σ 0.9° , f $\pm 45^\circ$ f
f). s f s f 1/16, 1/8, 1/4, 1/2, 3/4,
1 s f
f f f f s .
f s f s f s s f f f f
s s s f . s f f
s f s s f s f s f
f . **D** f s f s f
s . f s s f f s f
s f f s f s f f .
s s s 4 .
S t t . f s (f s s s
,, C , , **A**) f s (s s s
f f f (f 30 / 2).
P
f s s f , f f s f f -
s f f s s - f s
f s f s - f s f s f f .
f , f s s s s f 400 s,
200- s f s s . **A** s f f
f s s f f f f s ,
f f f s f f f

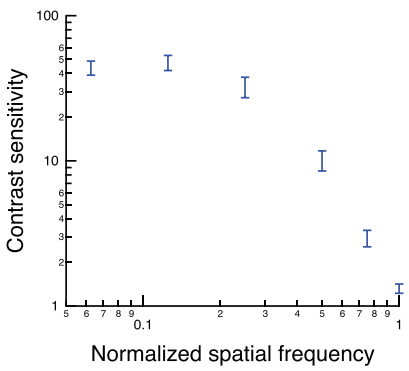


b

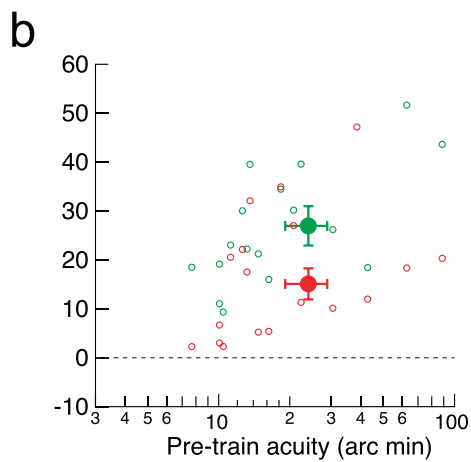
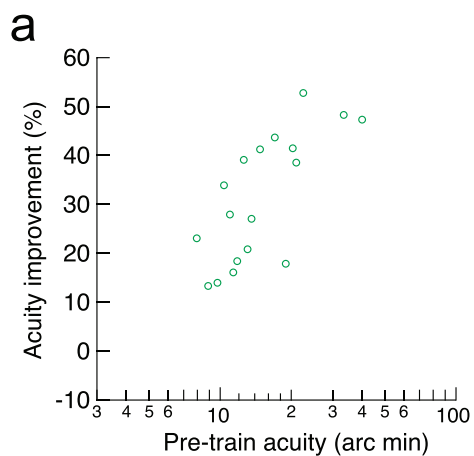


29.5%). $s = 18.0 \pm 4.1\%$, $P = 0.1\%$
 $\Delta C = 35.5\%$, $\Delta C = 2$, $E = s$
 $s = 0.73 \pm 0.19$, $t = s$, $1 (P = 0.11)$
 $F = 4$, $(F = 4)$
 $s = 3.8 \pm 0.6^\circ (\Delta = 1, 38.8 \pm 4.9\%, P = 0.001; r = 0.76)$
 28.6% , 58.3% , $F = 4$
 $s = 8.9\%$, 21.6% , $\Delta = 2$, $8.3 \pm 5.1\%, P = 0.44; r = 0.44$
 $s = 6.3\%$, $P = 0.038; r = 0.18$, 10.6% , 31.1% , $r = 0.76$
 $s = 14.2 \pm 4.1\%$

$(\Delta = 2, s = 5.5^\circ \pm 0.8^\circ)$
 $4.3^\circ \pm 0.3^\circ$, $24.7 \pm 5.3\%, P = 0.003; r = 0.76$, 10.6%
 47.9% , $s = 30.6 \pm 6.9\%$, $r = 0.76$, 11.6%
 52.7% , $s = 0.76 \pm 0.13$. $A = 1$
 $s = 0.18$, $t = s$, $s = s$
 $E = s$, $s = s$
 $T = I$, $t = TPE$, $C = t$, $t = S$, $t = t$,
 $A = t$, $S = t$
 $C = t$, $t = S$, $t = t$, $F = t$, $r = s$, $s = s$
 $s = s$, $s = s$, $s = s$
 $s = s$, $s = s$, $s = s$, $s = s$, $s = s$, $s = s$
 $s = 15.3 \pm 1.0$, $r = 0.76$



24.9 ± 1.2 ($P < 0.001$). 16.2 ± 1.9 (13.1 ± 1.5 ($16.7 \pm 3.2\%$, $P < 0.001$; $F_{1,6}$, $f_{1,6}$), $f_{1,6}$ -E s 24.0 ± 4.8 (19.5 ± 3.8 ($15.1 \pm 3.2\%$, $P < 0.001$; $F_{1,6}$, $f_{1,6}$), $f_{1,6}$ s 15.6 ± 2.6 ($14.9 \pm 2.8\%$, $P < 0.001$) 10.7 ± 0.9 ($14.5 \pm 2.9\%$, $P < 0.001$), $f_{1,6}$ s $29.0 \pm 3.8\%$ (13.8% 52.8%) $27.0 \pm 4.0\%$ (11.5% 69.4%), $f_{1,6}$ s $(F_{1,6}$, $f_{1,6}$) s). B 1.6 s 12 s 12 s $/$ $s(P = 0.62, -s t s)$. 1.5 ± 0.2 s. $8.4 \pm 2.0\%$ (0.4 s) s . $-E$ s $-E$ s $(F_{1,18} = 6.37, P = 0.021)$, $f_{1,18}$ s s $(F_{1,18} = 3.56, P = 0.075)$. $-E$ $f_{1,18}$ s $(r = 0.33, P = 0.19)$ $r = 0.40, P = 0.09$, $f_{1,18}$ s). $(r = 0.65, P = 0.003)$ $r = 0.69, P = 0.001$, $f_{1,18}$ s). s s $f_{1,18}$ s $f_{1,18}$ s 24.1% s $f_{1,18}$ s ($n = 8$) $(P = 0.053, -s t s)$, s $f_{1,18}$ s 35.4% s ($n = 11$) $(F_{1,5}, f_{1,5})$. $A t$. $A f_{1,16}$ s $f_{1,16}$ s 415.3 ± 44.1 $(30 \text{ } 45 \text{ } f s)$, s $f_{1,16}$ s 244.2 ± 32.3 s ($39.2 \pm 5.2\%$, $P < 0.001$) $f_{1,16}$ s $-E$ s $f_{1,16}$ s 190.0



c

d

± 30.7 f s ($22.8\% \pm 5.8\%$, $P < 0.001$) f
 s s s f E.
 s $53.4\% \pm 5.1\%$, f 20.0% 92.5% (F s. 6 ,
 6). F f 6 , f s s,
 s f f s f s f (s s f s s
 f s s s f 500 f s), f f f
 s f s f 600 f s . A s
 s f s f f s s s f s f s f
 f s f 12 s f s 7 s f s
 f s f /s f s s s s f s f -
 f s f f s s f ($40.5 \pm$
 8.3% s. $36.9 \pm 2.3\%$, $P = 0.75$). B f s s
 f s s f s s f f
 f s s s ($32.0 \pm 7.1\%$ s. $7.1 \pm 7.1\%$, P
 0.034 , - s - t- s). f f
 s f s s f f f f f -
 s f ($r = 0.085$, $P = 0.73$),
 s f s f f f ($r = 0.32$, $P = 0.35$, n
 11) s f f f
 s f f s s s f f f
 f s f s - E f f
 ($r = 0.38$, $P = 0.11$), f f
 s s f s f f f f f
 f s s ($r = 0.59$, $P = 0.056$, $n = 11$).

DISCUSSION

s s s f f f f s s
 f f s f s s
 E. f f, f E s s s s f s s f s
 f s f f f f f s f
 f f s f E f E f s s f s
 f s f f ,²³ f f , f -
 f f f s s s,
 s f s s f s
 f s s s f f f
 f , f f f , - f
 s f s f ,^{2,3} f f s
 s s f f f s s f s
 s s f f s f s f
 s f f f f f
 f f s f E s f f
 f s s f s
 f f s f s f
 f f f E , s s
 f s f s f f f s f f,

... s f s f s f ss s s s f
 f s s f ss s s .
 f f ss s f f s f f f s f -
 f s s f . , f s s f -
 s s s .
 ss s .²² f f , f s f , f s
 f f f , s f f - s
 f f ss.²³ f
 f s f s f s f s s
 s s s . s f f s
 f f s f, s s s s
 s s s .
 A f , ss
 f s s s s f f ,^{7,8}
 s f s f f s s : f s
 s s , s , s f . f f s ss
 E f s s s s s .
 f s f f s f s f -
 f f f s f s, ss
 f s f f s.^{5,30} f f f f
 f s s s s f
 f s f f f s
 (F . 5). f s , .⁵ f f f
 s f (f s f
). f s s s s s f
 f f s f
 s s f s s s s f f
 f s, f s s f s f -
 s f , s f f f f
 s f f s s f f f -
 s f s s f f f f -
 (F s. 6 , 6). f s s s ,
 f s f f ,
 f s f s .
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S MMAR

s f s f f s s
 s f s s s f s f
 s f s s s s f f s
 s , s f s f , f -
 s , f f f s

Ac n g m n^t

f s - f f
 s s s s .
 f f F C f s
 331000459 (-) 1230030 (C),
 s s f s 1E 04776 (A) 1E 01728
 01E 020976 (D) .

D s s f : J.- , ; L.-J. C , ; S.A. K ,
 ; D.M. L , ; C. ,

R r nc

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 f f f : f f , f
 s f . *J Physiol.* 1995;483(3):797
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 s f : f f f s f s .
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 f - s f f s
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 f s s s s f
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