

### D

\*

					D	:
						D
( )						:
						25-OH-D
	D3	IU/d				D
(FBS)				(BMI)	25-OH-D C	
				D	E,C	:
	(% / )	/ ± / ng/ml	25-OH-D			:
	%	(25-OH-D < 20 ng/ml)		D		
				D		
		C			D	
(P < / )			/ ± / ng/ml		/ ± / ng/ml	
	(P < / )		D			
			QUICKI			(P < / )
		D				:
		D				:
					D	:

( ).

D3 (IU/d)

D ( ).

D  
Boquist

.( )

D  
D

.( ) D

( IU/d) D

(D ) D

D

.( )

D D  
.( )  
D

( )

( )

D .( )

mg/dl

mg/dl

D

)D

( )

D

.( )

D

C E

(

D

D

C E

)

(

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(

(

)

BMI

D

D

seca

seca

(

)

/

(BMI)

(m<sup>2</sup>)

(kg)

cc

Food Processor

°C

D

°C

D

°C

(Pars Azmoon kit)

Food Processor

ELISA (IRMA)

(

) RIA

C

D

(BioSource Europe S.A)

Food Processor

(RIA)

D3

D

(Biosource Europes.A,Ò)

Krause's Food, Nutrition and Diet Therapy

D

(2004)

D

ng/ml

25-OH-D

(

D

ng/ml

SPSS

ng/ml

25-OH-D

( )

D

XP

SPSS (Version 11.05)

/ / mg/d

/ mg/dl

( )

/ ± /

BMI

t

t

)

(

(ANOVA for repeated measurement)

McNemar

D

(n = )

P-Value	D		
	(n = )	(n = )	
/	/ ± /	/ ± /	( )
/	/ ± /	/ ± /	( )
/	/ ± /	/ ± /	(kg)
/	/ ± /	/ ± /	(Cm)
/	/ ± /	/ ± /	BMI (kg/ m <sup>2</sup> )
/	( )	( / )	
/	( )	( / )	
/	( / )	( / )	( )
/	( / )	( / )	
/	( / )	( / )	
/	( / )	( / )	
/	( / )	( / )	
/	( )	( / )	
/	( )	( / )	
/	( / )	( / )	
/	( / )	( / )	
/	( )	( )	
/	( )	( )	
/	( / )	( / )	
/	( / )	( / )	

t

:†

t

)

D

(

( )

D

D,C,E

.( )

.(P&lt; / )

(n = )

گروه دارونما (n = ۲۷)			گروه مکمل ویتامین D (n = ۳۰)			
( ± )			( ± )			
‡	‡	‡	‡	‡	‡	
/ ± /	/ ± /	۹/۴۵ ± ۰/۲۱	/ ± /	/ ± /	۹/۴۶ ± ۰/۲۵	(mg/dl)
/ ± /	/ ± / *	۱۴/۲۴ ± ۱۱/۷۷	/ ± / <sup>c</sup>	/ ± / **	/ ± / <sup>a</sup>	25-OH-D (ng/ml)
/ ± /	/ ± /	۱۵۹/۴۳ ± ۵۷/۸۱	/ ± /	/ ± /	۱۸۷/۹۷ ± ۶۱/۲۴ <sup>b</sup>	( mg/dl )
/ ± /	/ ± /	۲۲/۴۳ ± ۴۱/۹۵	/ ± /	/ ± /	۲۲/۴۳ ± ۴۱/۹۵	(μU/ml)
/ ± /	/ ± /	۲/۶۹ ± ۱/۰	/ ± /	/ ± / *	۲/۴۷ ± ۰/۸۸	(ng/ml) C
/ ± /	/ ± /	۰/۳۱ ± ۰/۰۳۲	/ ± / <sup>d</sup>	/ ± / **	۰/۳۰ ± ۰/۰۳۴	QUICKI

.D

25-OH-D

25-OH-D  
QUICKI

/ P \*  
/ P \*\*  
/ P <sup>a</sup>  
/ P <sup>b</sup>  
/ P <sup>c</sup>  
/ P <sup>d</sup>

C

D

QUICKI

C

( )

D

25-OH-D

D  
(n= )

D	D	D	D
D	D	D	D
( )	( )	( / )	( / )
( )	( )	( / )	( / )
/ *	/	† (P)	† (P)

(% / )

25-OH-D

D

D

D

McNemar

/ P \*  
†

D

( )

(Clamp IR)

QUICKI

QUICKI

( )

Clamp IR QUICKI

( )

(P < × r = / )

( ) (P < / r = / )

QUICKI

QUICKI

(P < / r = / )

Clamp IR

D (IU/d)

(P < / r = / )

QUICKI

( )

)

(

( )

D3

25-OH-D

D

% /

% /

D

D

D

( )

D

( / ± / ng/ml)

D

%

25-OH-D

Quantitative Insulin Sensitivity Check Index

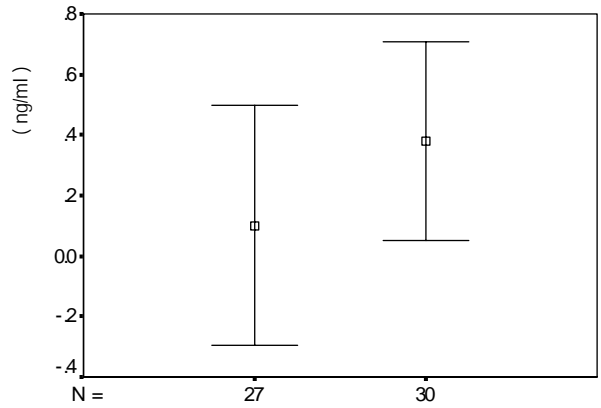
25-OH-D

( )

(QUICKI)

(gold standard)

Euglycemic Hyperinsulinemic Clamp Study



C

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			(IDDM)	25-OH-D
( )	(D )	VDR		( )
•	( )	D		25-OH-D
(CaBP) D	Calbindin C <sub>K28</sub>	( )		( )
		D	1,25-OH-D	
		D		
		D		
			25-OH-D	-
25-OH-D	D		1,25-OH-D	( )
D			25-OH-D	
	ng/ml	ng/ml	( )	1,25-OH-D
	(% )		D	
25-OH-D	(% )	ng/ml		
				D
		D	( )	
			D	
)	25-OH-D		D	
	(		IGT	
D			( )	
25-OH-D	( )		1,25-OH-D	D
			D	

( ) Orwoll

D

D

( )

( )

( )

1,25-OH-D

D

1,25-OH-D

( )

D

IU

( ) Roghuramula

( )

D

OGTT

Boucher

Boucher

D

( )

( ) Borissova

"specific insulin"

IVGTT OGTT

D

( ) Roghuramula

OGTT

( ) Borissova

IVGTT

D

C

( )

IU

C

( )

C

( ) Boucher

D

IU

IGT

( ) Orwoll

( )



(IVGTT)

% /

C

( )

%

D

D

D

D

C

QUICKI

D

D

D

( )

%

D

D

D

D

D

(

IU/d)

D

%

C

D

D

D

ng/ml

25-OH-D

%

D

D

(P= / )

%

D

D

( / ± / ng/ml)

D

( )

%

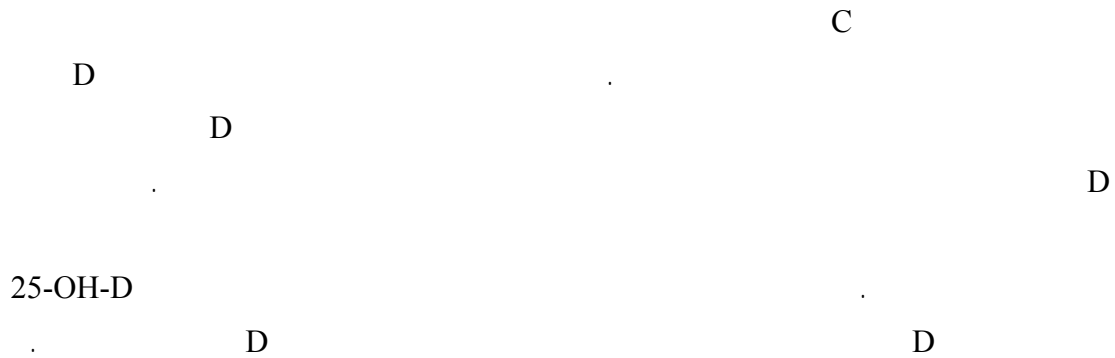
D

D

(Borissova)

D

( )



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