

MODERATE ALCOHOL INTAKE DOES NOT INFLUENCE RESTING ENERGY EXPENDITURE

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Introduction

- **Calories from alcohol (OH) do not seem to count the same as other calories. OH elicits an acute thermogenic response equal to approximately 20% of the ingested energy.**
- **The aim of this study is to find if besides the acute effect, there is any permanent effect of OH on resting energy expenditure (REE)**



Subjects

- 48 subjects (30 males - 18 females)
- Age: 40.8 ± 3.1 (M \pm SD) yr. (20 - 67)
- Moderate alcohol intake (>3 Lt. of wine weekly, 409.5 ± 150.5 gr/week of ethyl alcohol)
- Body weight: 100.7 ± 24.4 kg
- BMI: 34.4 ± 6.6

Smoking and coffee consumption, thyroid dysfunction, acute or chronic illnesses and use of drugs were noted



Methods

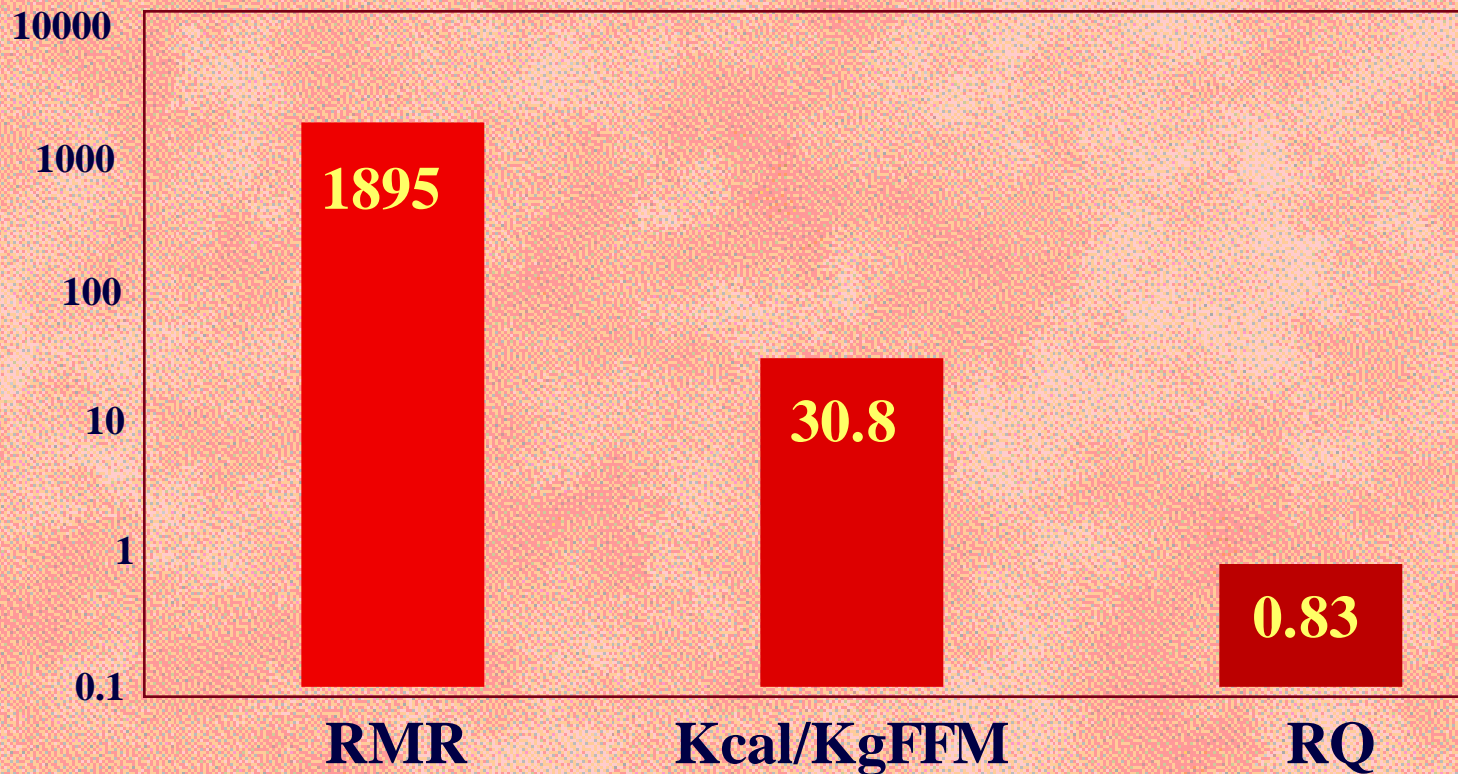
⊙ We performed a 30 min indirect calorimetry with canopy system (Deltatrak II) after 12 hours of starvation

⊙ A four skinfolds and bioelectrical impedance measurement of body composition.

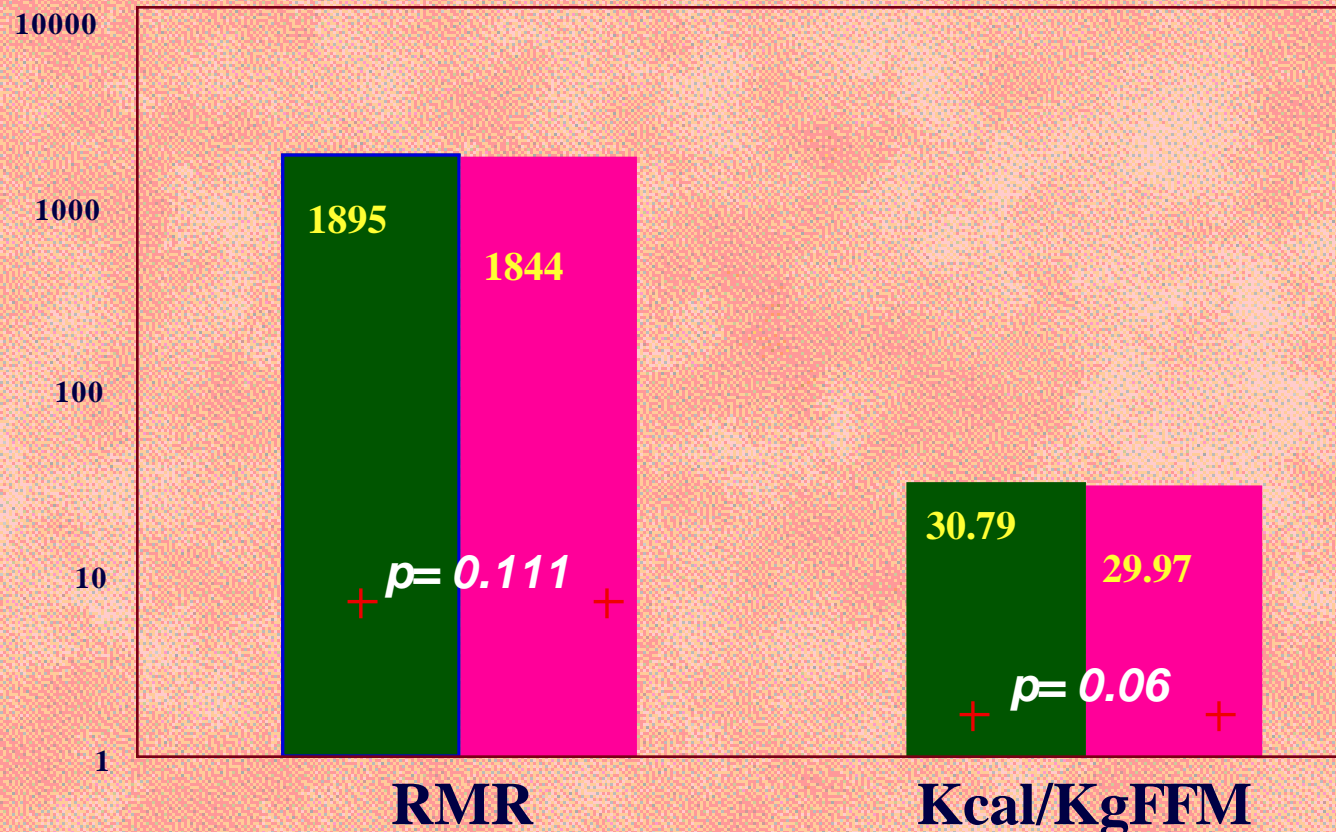
Controls: 850 non-drinkers healthy subjects



Results in 48 subjects with moderate alcohol intake



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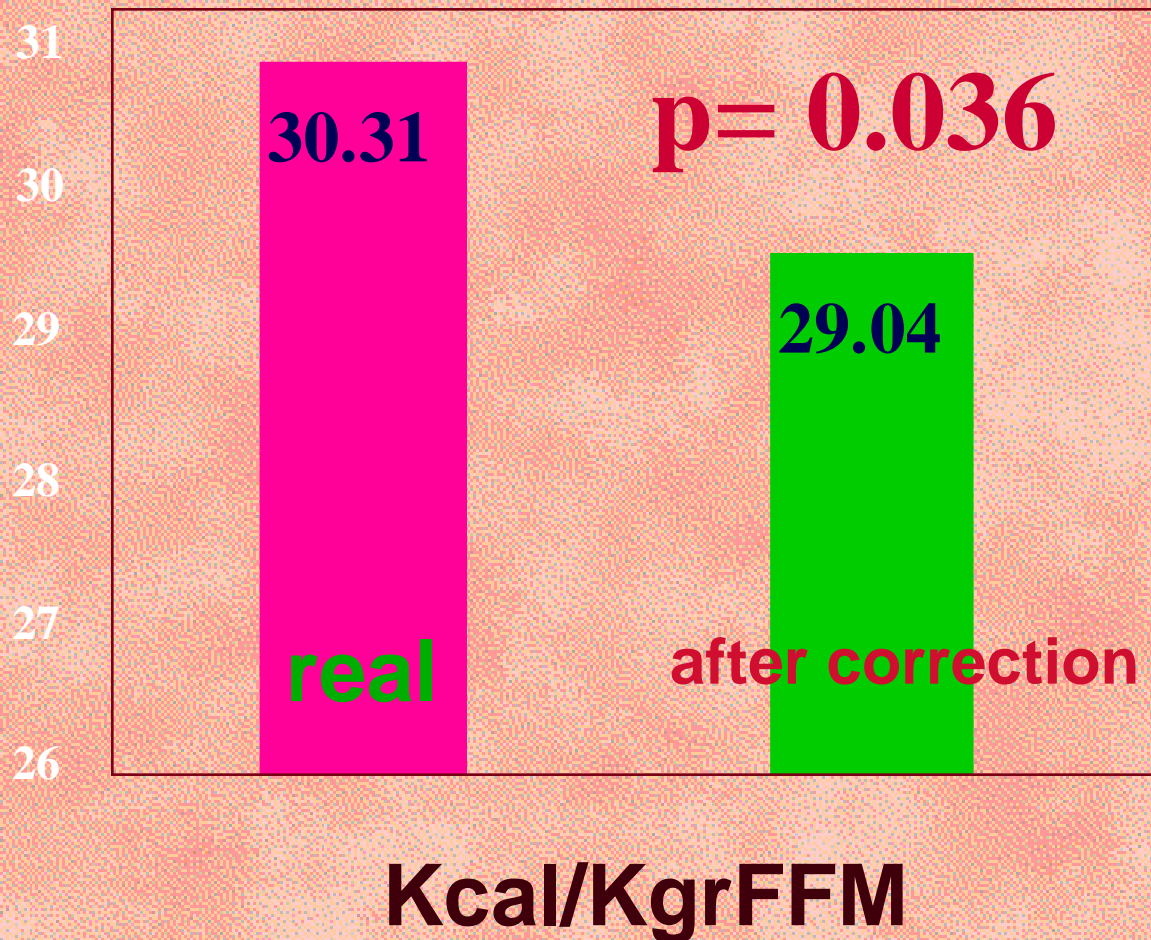


■ RMR real

■ RMR after correction for BW, age, sex



Results in 30 males with moderate alcohol intake



Results

DEP VAR: **RMR** N:48 MULTIPLE R: 0.927 SQUARED MULTIPLE R:0.859
 ADJUSTED SQUARED MULTIPLE R:0.838 STANDARD ERROR OF ESTIMATE:190.308

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
CONSTANT	680.284	197.782	0.000	.	3.440	0.001
SEX	139.720	75.989	0.144	0.558	1.839	0.073
AGE	-9.076	2.287	-0.252	0.856	-3.969	0.000
CIGAR	-4.960	2.046	-0.167	0.729	-2.424	0.020
ALCOOL	17.823	18.594	0.059	0.907	0.959	0.343
COFFE	57.075	16.076	0.238	0.767	3.550	0.001
WEIGHT	13.188	1.599	0.680	0.506	8.247	0.000

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	9040095.539	6	1506682.590	41.601	0.000
RESIDUAL	1484900.461	41	36217.084		



Conclusion

- **Moderate OH intake after its complete oxidation does not influence REE, but seems to have some positive effect on REE/FFM.**
- **This could be a possible indirect effect of OH via dehydration that occurs in drinkers compared to non-drinkers.**

