

Vitamin D Deficiency is Highly Prevalent in Obesity and is Related with BMI and Inflammation

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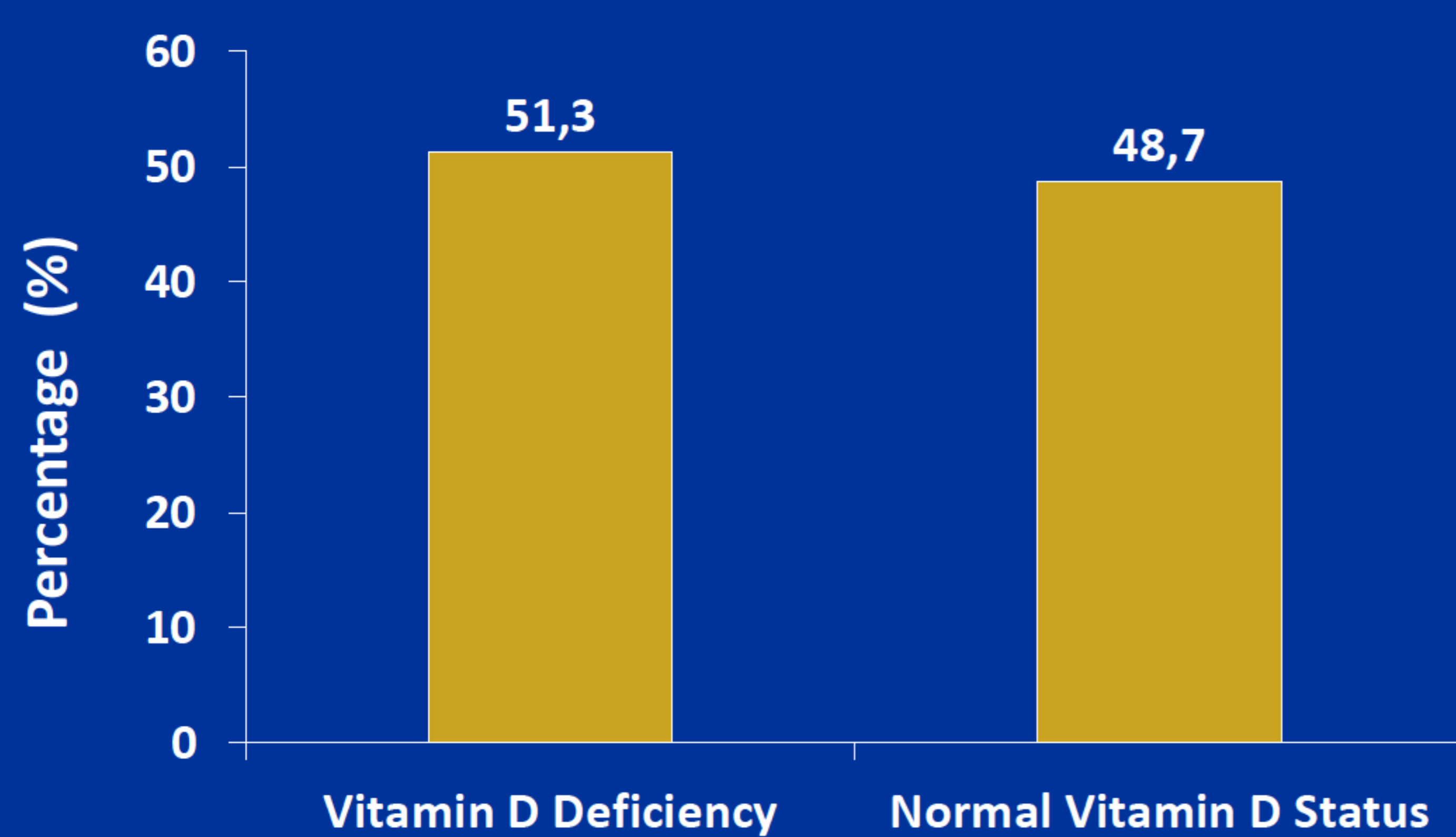
Objectives

To study vitamin D deficiency in a cohort of obese males and to evaluate associated clinical and biochemical characteristics.

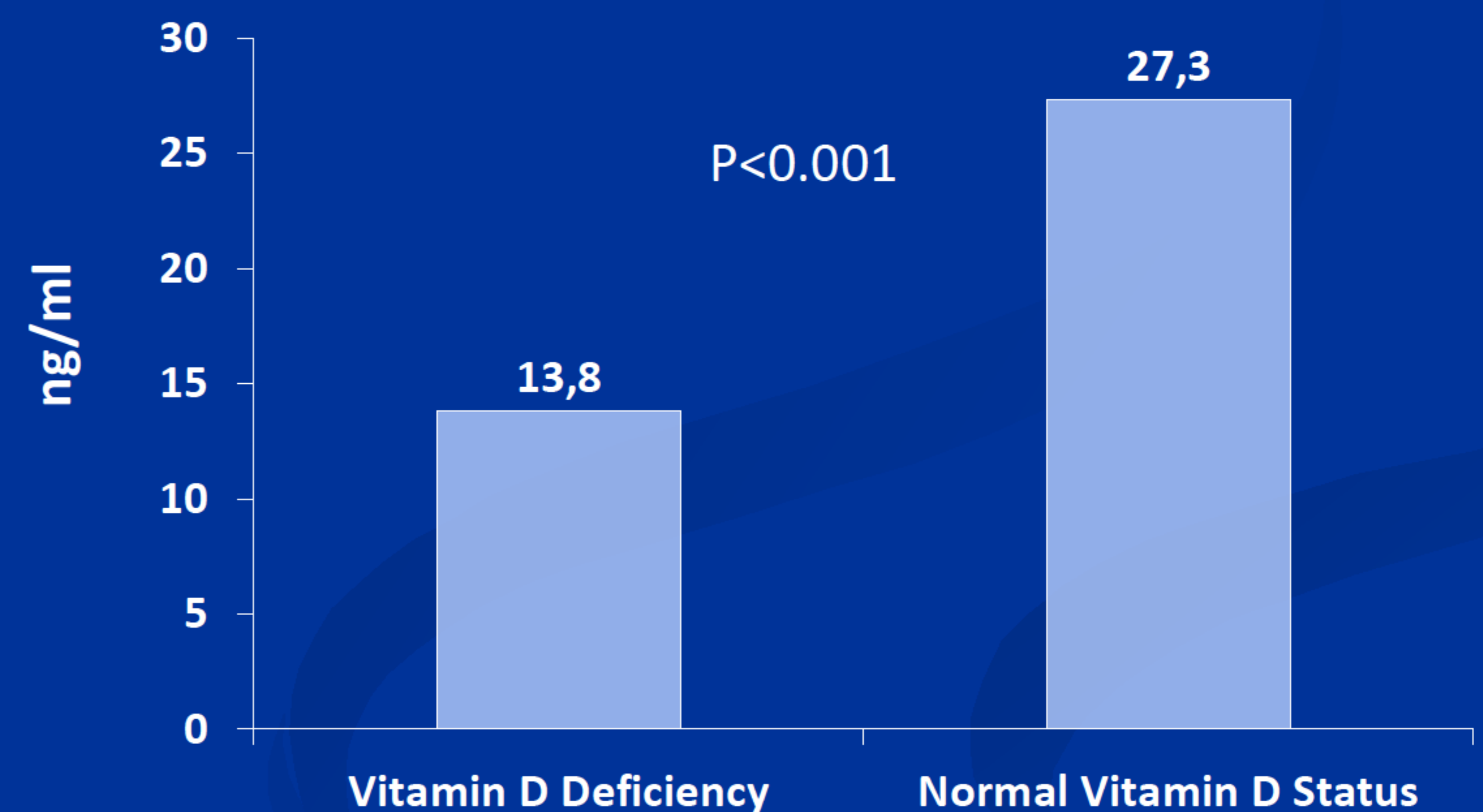
Methods

- Case-control study which included obese (defined by a body mass index (BMI) ≥ 30 kg/m²) males.
- Vitamin D deficiency was defined as vitamin D levels < 20 ng/ml.
- Estimation of vitamin D status was determined in serum using a commercially available enzyme- immuno-assay designed to measure 25-OH Vitamin D concentrations in serum or plasma (Immundiagnostik,Quantikine, Bensheim, Germany).
- Statistical analysis was performed with SPSS v 15.0 for Windows.

Vitamin D Deficiency (%) (n-225)



Vitamin D Levels (ng/ml) (n-225)



Patients characteristics by Vitamin D status

	Vitamin D Deficiency n-115	Normal Vitamin D Levels n-110	p
Age (years)	36.0 ± 7.2	37.7 ± 7.4	0.1
BMI (kg/m ²)	40.9 ± 7.1	37.7 ± 7.8	0.04
HOMA-IR	5.2 ± 4.6	4.3 ± 4.8	0.11
PCR (mg/L)	7.5 ± 5.0	5.3 ± 4.8	0.01
HbA1c (%)	5.4 ± 0.3	5.4 ± 0.3	ns
Calcium (mg/dl)	9.0 ± 0.3	9.1 ± 0.3	ns
PTH (pg/ml)	46.1 ± 16.8	44.0 ± 19.4	ns

Conclusions

- ▶ Vitamin D deficiency affects to approximately 50% of obese males.
- ▶ Patients with Vitamin D deficiency are more obese and have higher PCR levels than patients with normal concentrations of vitamin D.