



# “DIABESITY” IN WOMEN: THE EEM STUDY

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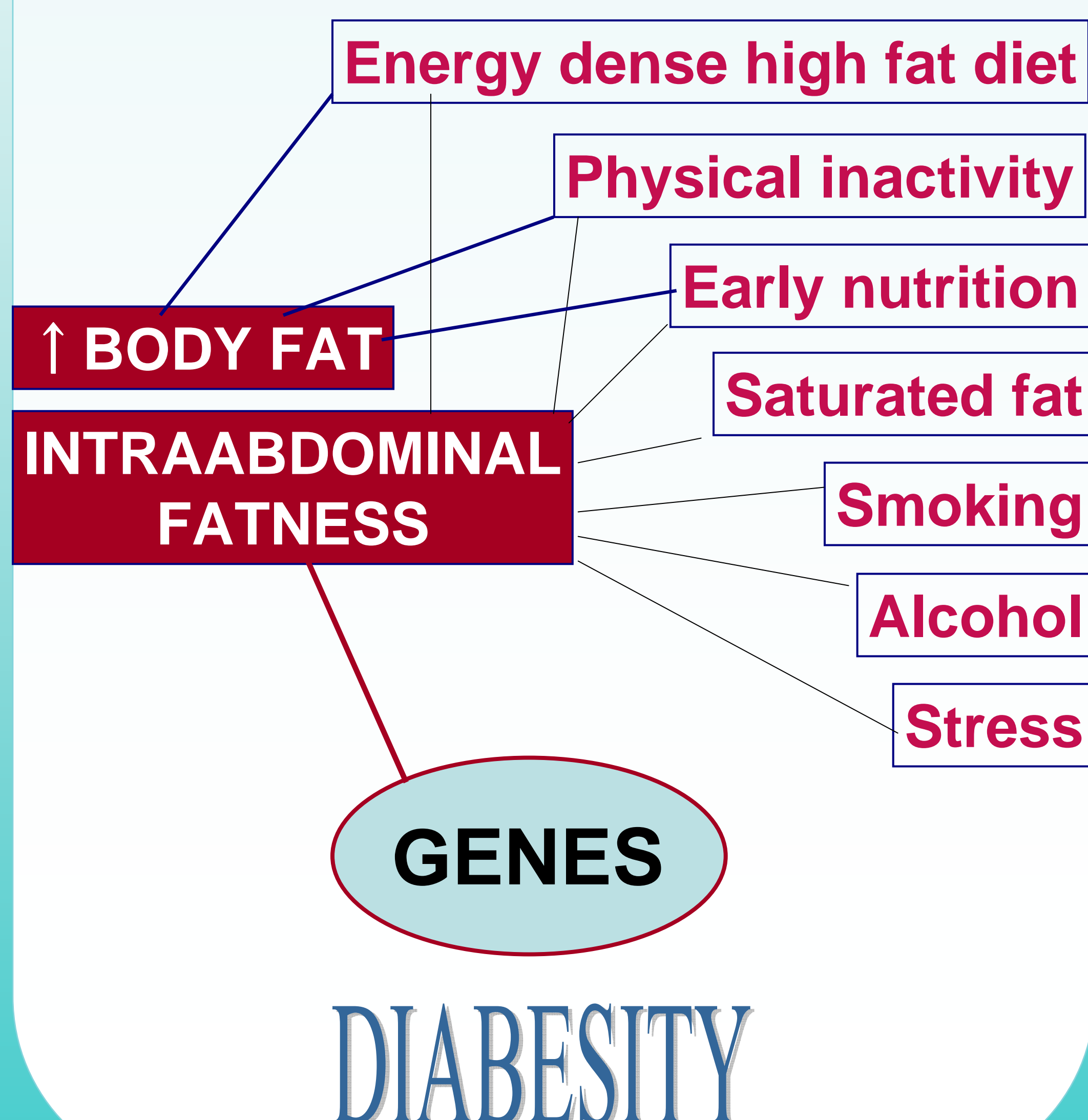
## Abstract

'Diabesity' is the term for diabetes occurring in the context of obesity. Obesity is a cardiovascular major risk factor. The National Cholesterol Education Program Adult Treatment Panel III (NCEP-ATPIII) report designated diabetes as a coronary heart disease equivalent. Cardiovascular disease is the leading cause of death in women. The “Estudio Epidemiológico de la Mujer” (EEM) study aimed to explore obesity, diabetes and diabesity in 3500 women over 18 years old. EEM is a cross-sectional epidemiological and multidisciplinary study done in seventy consulting rooms of gynecology from twenty two Venezuelan provinces. Hypertension, hypercholesterolemia and metabolic syndrome defined according to NCEP-ATPIII, were surveyed among other cardiovascular risk factors. Cardiologists, gynecologists and endocrinologists participated as investigators in this study. We present the results of 10% of the sample collected to date. Mean (SD) age of the participants was 42.25 (13.41) years. The prevalence of Obesity and Diabetes was 23.55% (IC95: 19.64 – 27.45) and 3.94% (IC95: 1.92 – 5.97), respectively. Diabetes was present in 7.14% of obese women. Obesity was detected in 42.86% of diabetic women. Patients with 'Diabesity' had higher prevalence of hypertension (83.3% p: 0.017), hypercholesterolemia (66.7% p: 0.032) and metabolic syndrome (83.3% p: 0.000). The prevalence of 'Diabesity' and its components was substantial across Venezuelan women. EEM study findings, including evidence of the association of 'Diabesity' with hypertension, hypercholesterolemia and metabolic syndrome, should inform appropriate clinical and public health interventions.

## Introduction

Diabesity (obesity-induced diabetes) is a term coined to cover a constellation of signs, including obesity, insulin resistance, metabolic syndrome, and diabetes<sup>1</sup>. Diabesity affects more than one billion people worldwide, including 100 million Americans, and 50% of Americans over the age of 65<sup>2</sup>. According to current statistics, by the year 2020 diabesity will be the leading cause of chronic disease and death in the world<sup>3</sup>.

### Model diabesity<sup>4</sup>



## OBJECTIVE

To determine the prevalence of obesity, diabetes mellitus and diabesity, as well as the prevalence other cardiovascular risk factors present in the general population (hypertension, smoking, sedentary lifestyle, hypercholesterolemia and metabolic syndrome) and in female exclusive conditions (gestational diabetes, hypertension in pregnancy) in women over 18 years of age in urban areas of Venezuela.

## Methods

The “estudio epidemiológico de la mujer” (EEM) is a cross-sectional, descriptive, epidemiological and multidisciplinary study, done in 3500 women over 18 years old from seventy consulting rooms of gynecology from twenty two Venezuelan provinces. Cardiologists, gynecologists and endocrinologists participated as investigators in this study. The first five non-pregnant patients who consulted were selected each day, to complete 50 patients per doctor. A questionnaire was applied. Weight, height, blood pressure and waist circumference were obtained. Venous blood glucose and lipid profile were measured in fasting.

## Results

Table 1. General Characteristics of the studied patients

	Mean	SD
Age (years)	42,25	13,41
Weight (kg)	67,92	13,84
Height (m)	1,58	0,07
BMI (kg/m <sup>2</sup> )	26,97	5,26
Offspring number	1,52	1,47
	Percent	IC95
Menopause	34,46	30,19 – 38,73
General Fertility	77,47	75,39 – 79,55
Reproductive age fertility	74,77	71,78 – 77,75

SD: Standar Deviation, BMI: Índice de Masa CorporBody Mass Index. IC95: Confidence interval 95%.  
Source: The EEM study -Venezuela, preliminary data based on 10,51 % from sample (n: 368).

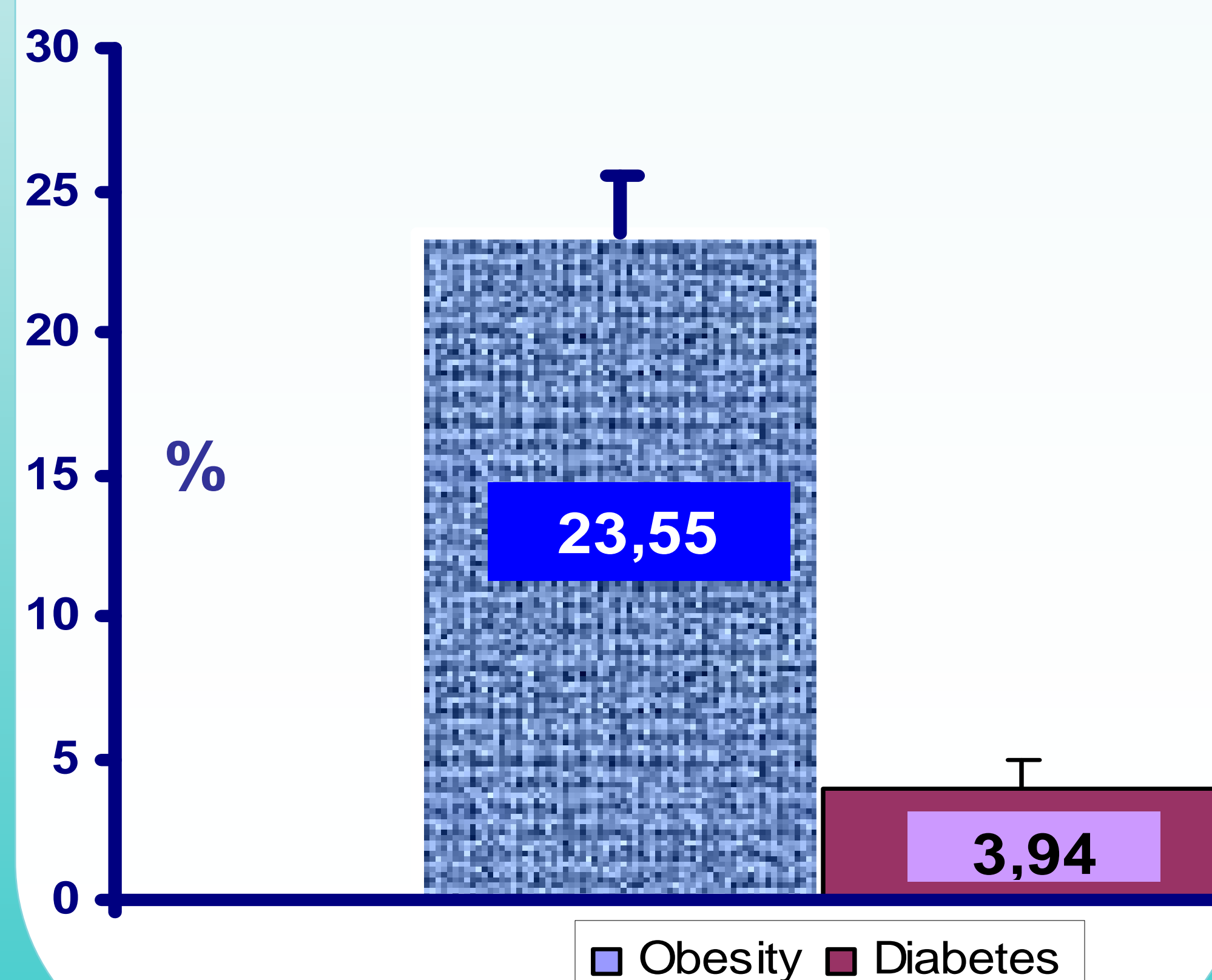
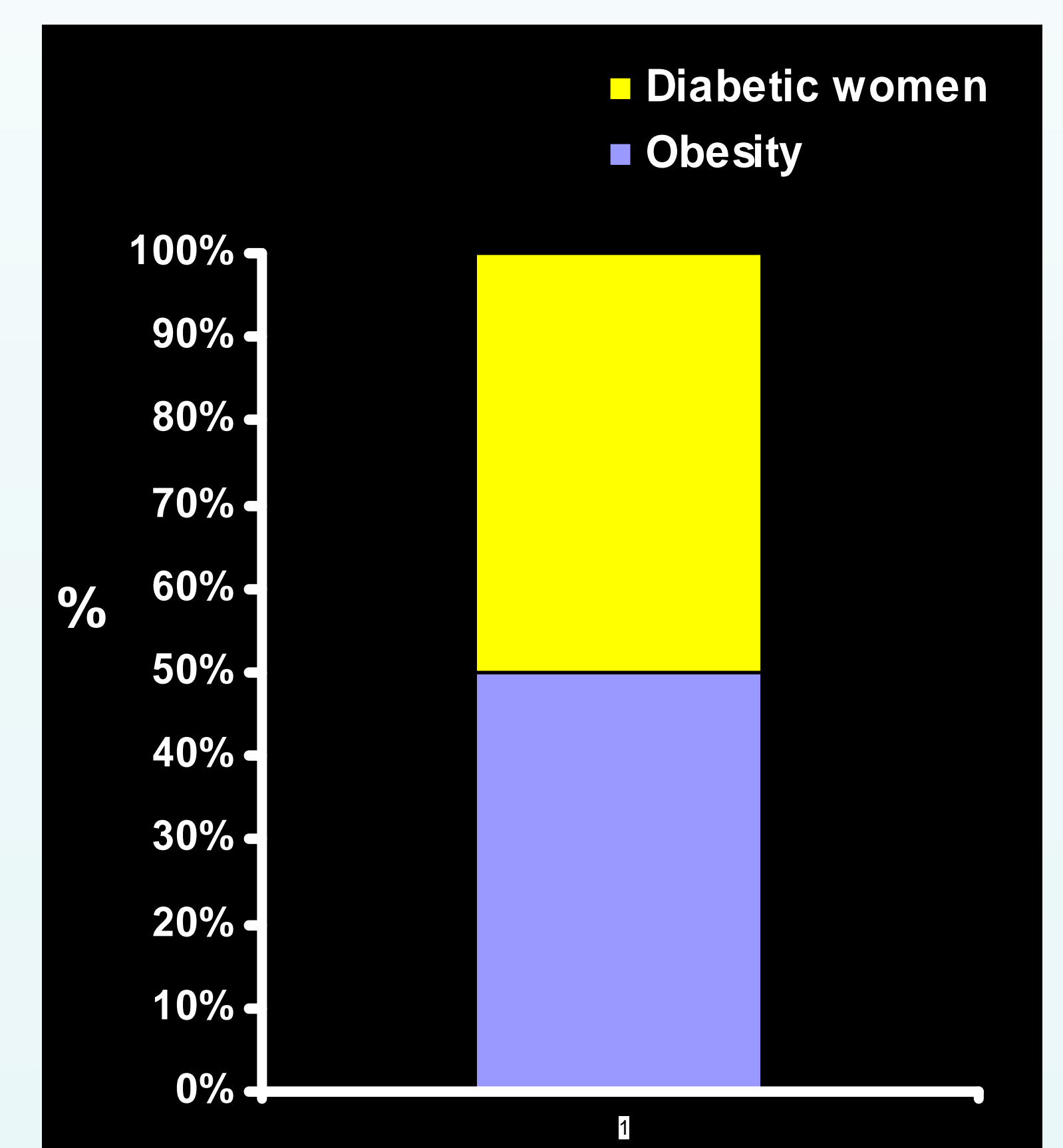


Table 2. Risk factors prevalence in the EEM study.

General population risk factors	Percent	IC95
Hypertension	27,37	23,36 – 31,39
Smoking	14,48	11,08 – 17,88
Sedentary lifestyle	50,00	46,31 – 43,98
Hypercholesterolemia	35,04	30,94 – 39,15
Female exclusive risk factors	Percent	IC95
Gestational Diabetes	6,49	3,90 – 9,08
Hypertension in pregnancy	1,50	0,18 – 2,82
Women with Diabesity	Percent	P value
Hypertension	83,3	0,017
Hypercholesterolemia	66,7	0,032
Metabolic syndrome	83,3	0,000

IC95: Confidence Interval 95%.  
Source: The EEM study -Venezuela, preliminary data based on 10,51 % from sample (n: 368).  
Value-p: Compared with Women without diabesity



Obesity in diabetic women

## Conclusions

The prevalence of 'Diabesity' and its components was substantial across Venezuelan women. EEM study findings, including evidence of the association of 'Diabesity' with hypertension, hypercholesterolemia and metabolic syndrome, should inform appropriate clinical and public health interventions.

## References

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