

# The effect of obesity surgery on new-born anthropometrics in women with and without polycystic ovary syndrome.

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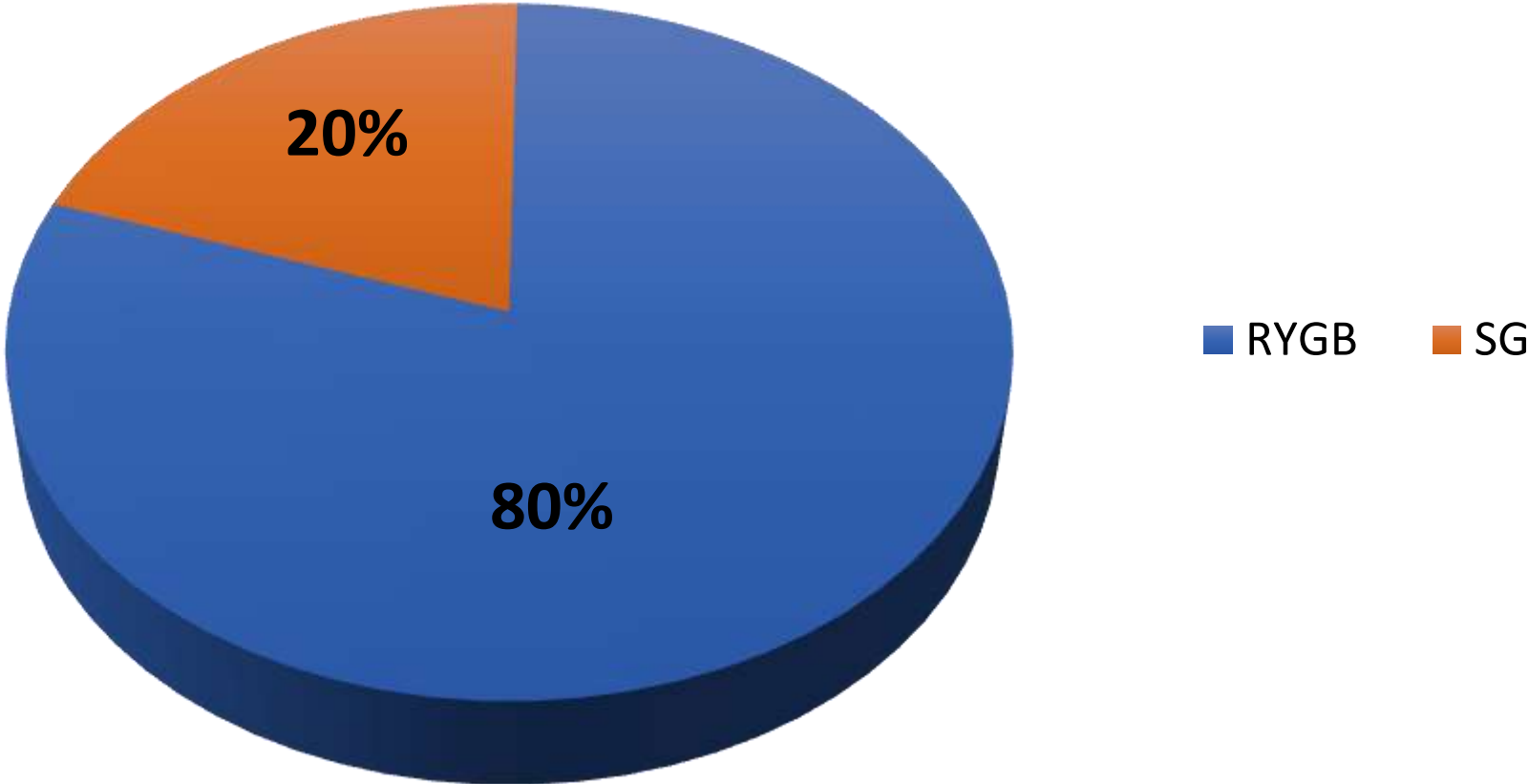
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**The authors have no potential conflict of interest  
to report**



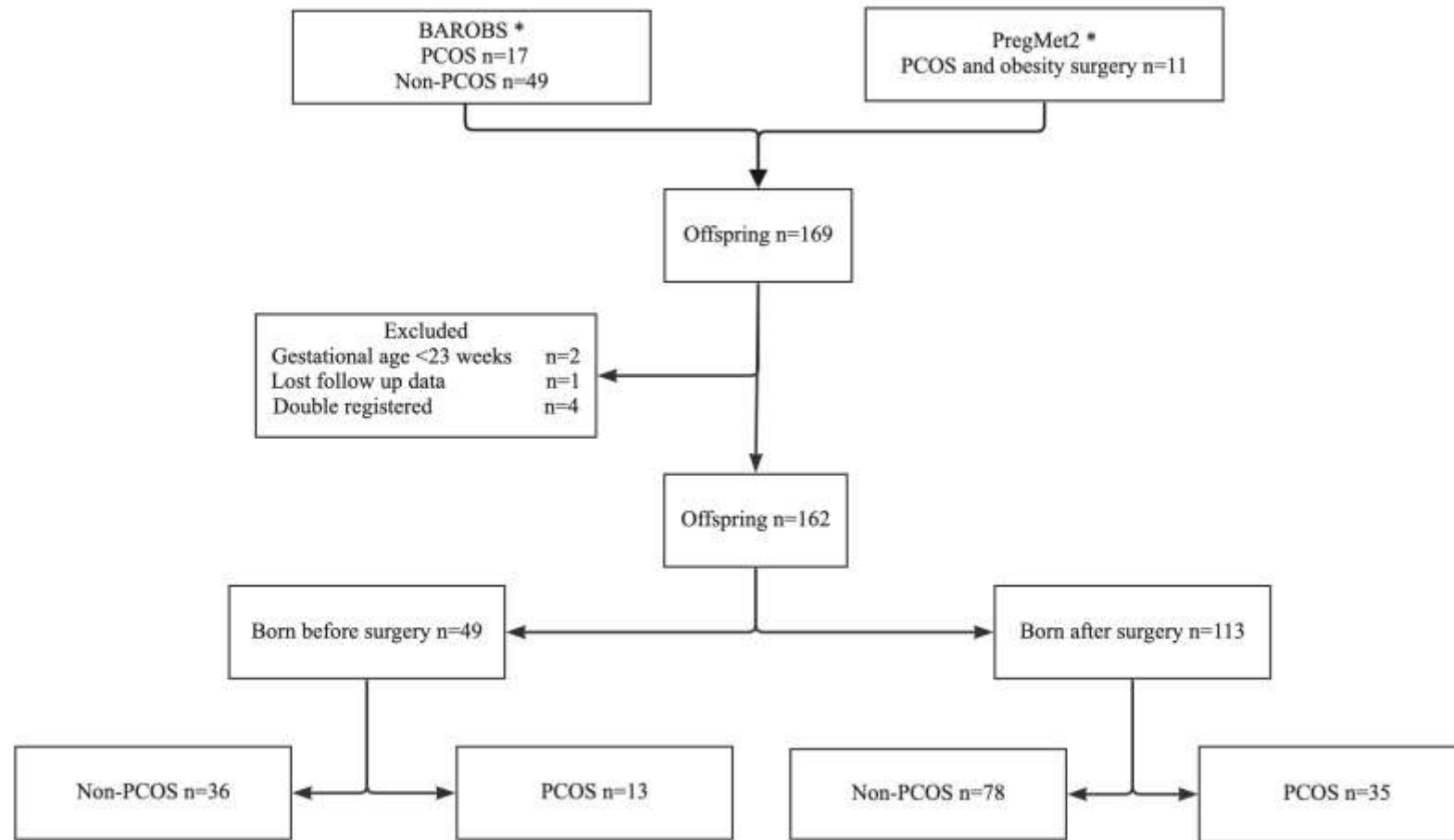
CASE MIX DISCLOSURE



- **Polycystic ovary syndrome (PCOS) & obesity surgery**
  - > **Adverse pregnancy outcomes?**
- **Aim: to investigate the effect of obesity surgery on newborn anthropometrics in women with PCOS compared to women without PCOS.”**

# METHOD

## BARIATRIC SURGERY OBSERVATION STUDY (BAROBS) AND METFORMIN IN PREGNANT PCOS WOMEN STUDY (PREGMET2)



miro

# METHOD

BEFORE SURGERY

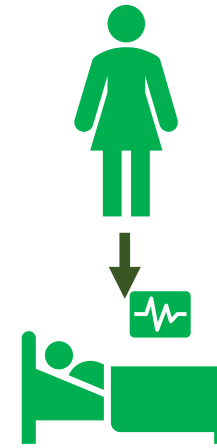
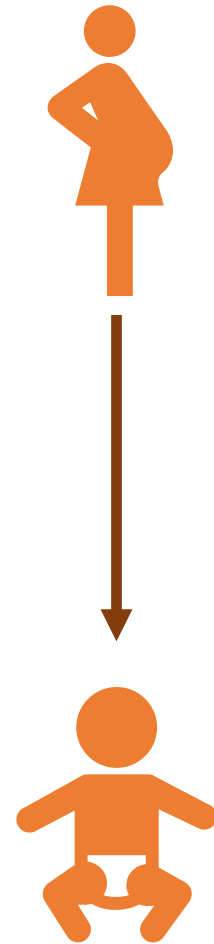
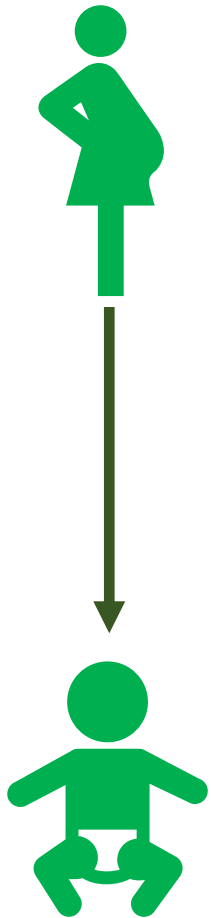
AFTER SURGERY

Non PCOS

PCOS

Non PCOS

PCOS



Obesity surgery

Pregnancy

Offspring

# METHOD

## Z-SCORES



**Birtweight**



**Birth length**



**Head circumference**

# RESULTS

Variables	Non-PCOS N=78	PCOS N=35	P-value
<b>Pre-surgery BMI (kg/m<sup>2</sup>)</b>	46.2 ± 4.8	46.1 ± 6.2	0.887
<b>Post-surgery BMI (kg/m<sup>2</sup>)</b>	36.4 ± 0.8	37.7 ± 2.3	0.584
<b>Post-surgery BMI, (kg/m<sup>2</sup>)</b>			0.789
<30	19 (24.4)	14 (40.0)	
≥30	59 (75.6)	21 (60.0)	
<b>Surgery to early pregnancy total weight loss (kg)</b>	40.0 ± 14.5	36.7 ± 13.5	0.304
<b>Surgery to LMP time interval (months)</b>	42.4 ± 5.6	42.4 ± 5.6	0.493
<24	24 (30.8)	11 (31.4)	
>24	52 (66.7)	24 (68.6)	

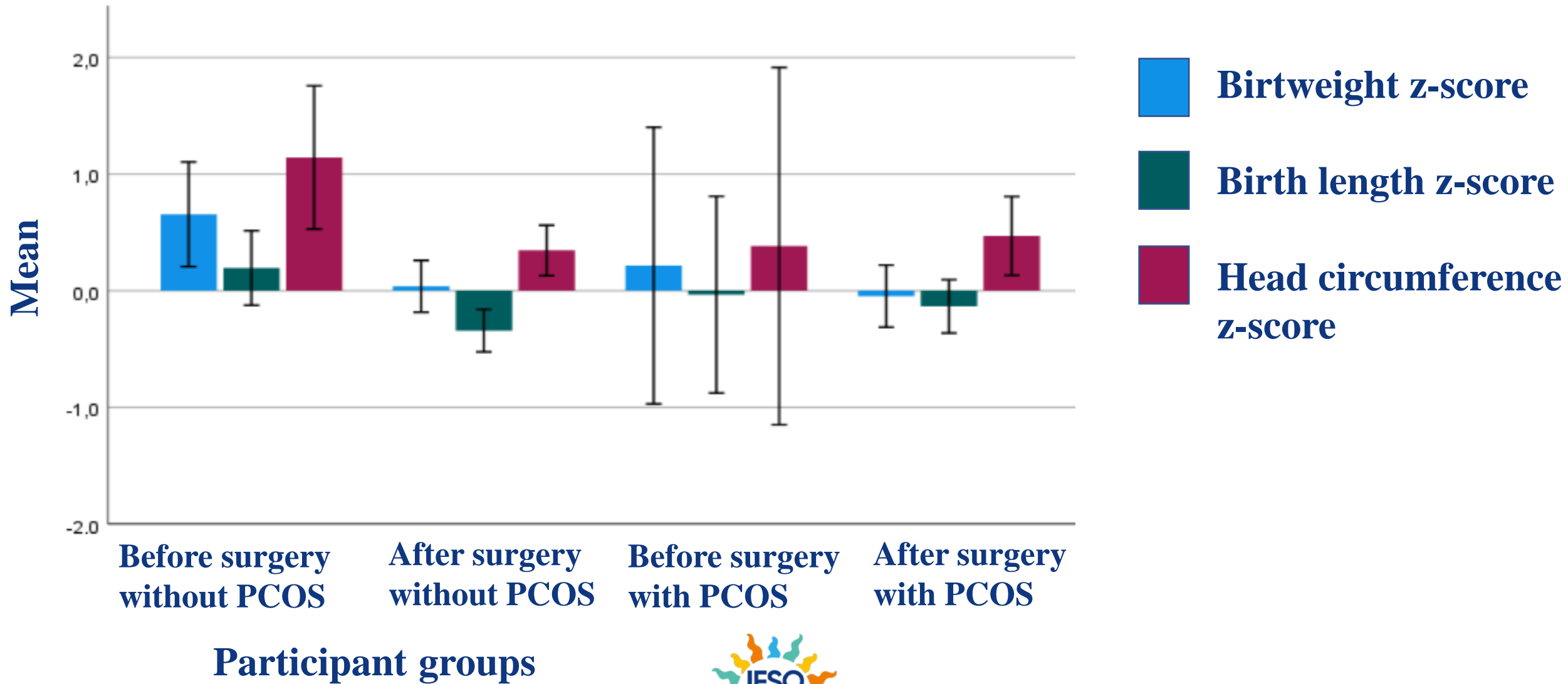
# RESULTS

Variables	PCOS			Non- PCOS		
	Pre-surgery N=13	Post-surgery N=35	P-value	Pre-surgery N=36	Post-surgery N=78	P-value
<b>Birthweight</b>						
Mean ± SD (g)	3987 ± 495	3396 ± 526	0.001 <sup>a</sup>	3859 ± 603	3490 ± 538	0.001 <sup>a</sup>
Z-score ± SD	0.49 ± 1.10	-0.05 ± 0.78	0.068	0.56 ± 0.99	0.03 ± 0.95	0.013 <sup>a</sup>
<b>Birth length</b>						
Mean ± SD (cm)	52.2 ± 1.6	50.1 ± 2.2	0.010 <sup>a</sup>	51.3 ± 2.0	49.9 ± 2.5	0.013 <sup>a</sup>
Z-score ± SD	0.13 ± 0.91	-0.13 ± 0.67	0.315	0.15 ± 0.78	-0.34 ± 0.79	0.007 <sup>a</sup>
<b>Head circumference</b>						
Mean ± SD (cm)	36.3 ± 2.0	35.3 ± 1.7	0.183	36.4 ± 2.0	35.3 ± 1.8	0.009 <sup>a</sup>
Z-score ± SD	0.38 ± 1.50	0.47 ± 0.98	0.851	1.14 ± 1.40	0.33 ± 0.94	0.002 <sup>a</sup>

# RESULTS

Variables	PCOS			Non- PCOS		
	Pre-surgery N=13	Post-surgery N=35	P-value	Pre-surgery N=36	Post-surgery N=78	P-value
<b>Percentile groups, n (%)</b>			0.443			0.261
<b>SGA</b>	1 (7.7)	2 (5.7)		2 (5.6)	7 (9.0)	
<b>AGA</b>	9 (69.2)	30 (85.7)		20 (55.6)	63 (80.8)	
<b>LGA</b>	3 (23.1)	3 (8.6)		6 (16.7)	7 (9.0)	
<b>Gestational age</b>						
<b>Mean ± SD (weeks)</b>	40.8 ± 1.2	39.1 ± 1.7	0.007	39.8 ± 1.7	39.4 ± 1.8	0.318
<b>Gestational age groups, n (%)</b>			0.011 <sup>c</sup>			0.576
<b>Preterm &lt;37 weeks</b>	0	2 (5.7)		1 (2.8)	5 (6.4)	
<b>Term 37- 41 weeks</b>	7 (53.9)	32 (91.4)	0.034 <sup>b</sup>	22 (61.1)	68 (87.1)	0.734
<b>Post-term &gt;42 weeks</b>	3 (23.1)	1 (2.9)		3 (8.3)	4 (5.1)	

# RESULTS



Participant groups

# CONCLUSION

**All birth anthropometrics after obesity surgery were comparable to the reference population with no difference between offspring born to women with or without PCOS. Obesity surgery does not seem to have any additional negative effect on birth anthropometrics in offspring born to women with PCOS compared to controls.**



# Thank you for listening

## Any questions?

