



**FERTILITY,  
GESTATION. GROWTH**

WHA

T  
HOW

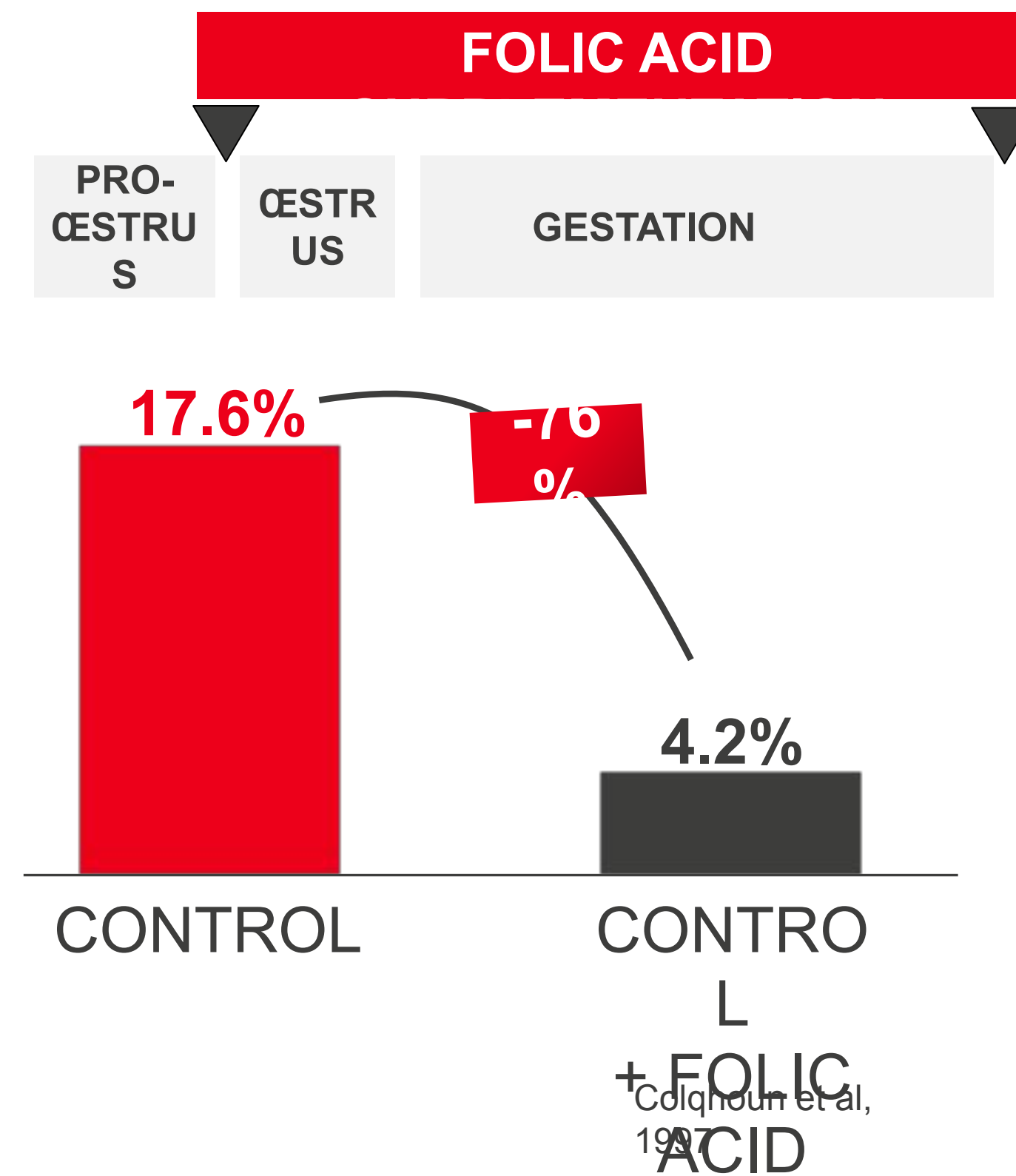
HOW  
MUCH

**SUPPLEMENTS,  
NOT ALWAYS A GOOD  
THING...  
HOWEVER...**



# FOLIC ACID

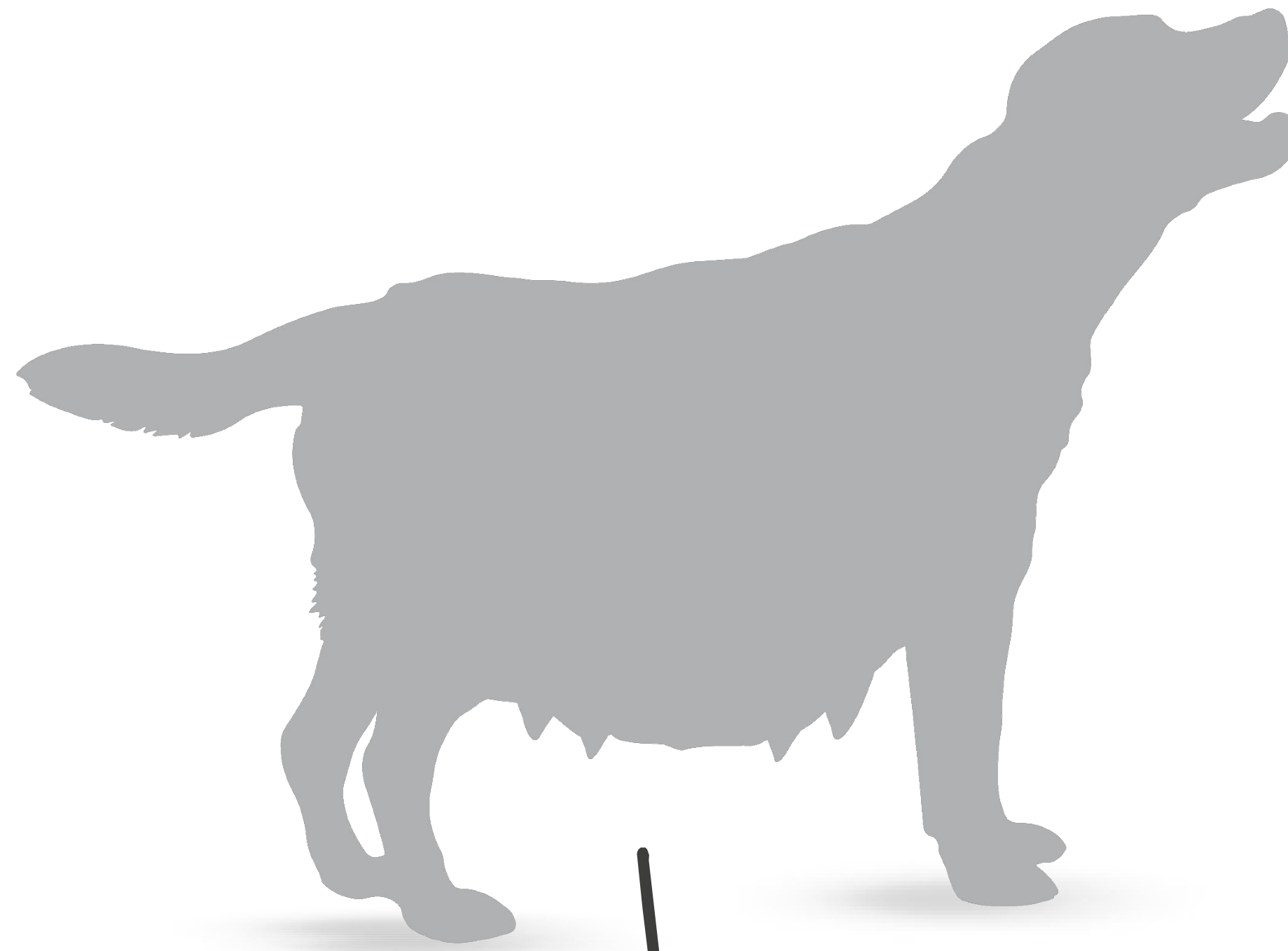
# FOLIC ACID



# FOLIC ACID

## Supplementation 101

↓  
**First  
40 days !**




↓  
**Compliance !**

↓  
**Nutrition-related only !**

**EPA-DHA**





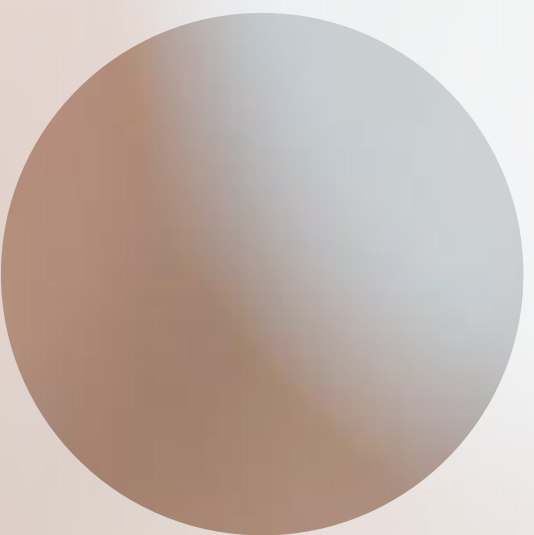


# 70%

Weight gain during last 20d of gestation

(Fontaine,  
2012)

~~42-46 days off~~  
gestation  
= ~~+40%~~ **+10% maintenance/week**





# PRACTICAL TIP



WHA  
T  
HO  
W  
HOW MUCH



**At the time  
of whelping,  
a bitch body  
weight should  
increase  
by approximately  
**15-25%****



**BACK TO  
BACK  
BREEDING**  
OPTIMAL  
BCS  
NEEDED !

**LACTATION**  
**= FREE**  
**FEEDING**





HYPOTHERMIA

HYPOGLYCEMIA

DEHYDRATION



# MUST-HAVE #4 MILK REPLACER





# PUPPY NEEDS THE RIGHT MILK REPLACER

About the use of Milk replacers

	<b>CP</b> (Case et al, 2011)	<b>CN</b> (Askins et al, 2001)	<b>CT</b> (Jacobsen et al, 2004)
Energy (kcal ME/L)	690	1400-1800	850-1600
PT (%)	4.6	6.9	8.7
Fat (%)	4.5	11.4	12.7
Lactose (%)	4.6	4.1	4.2

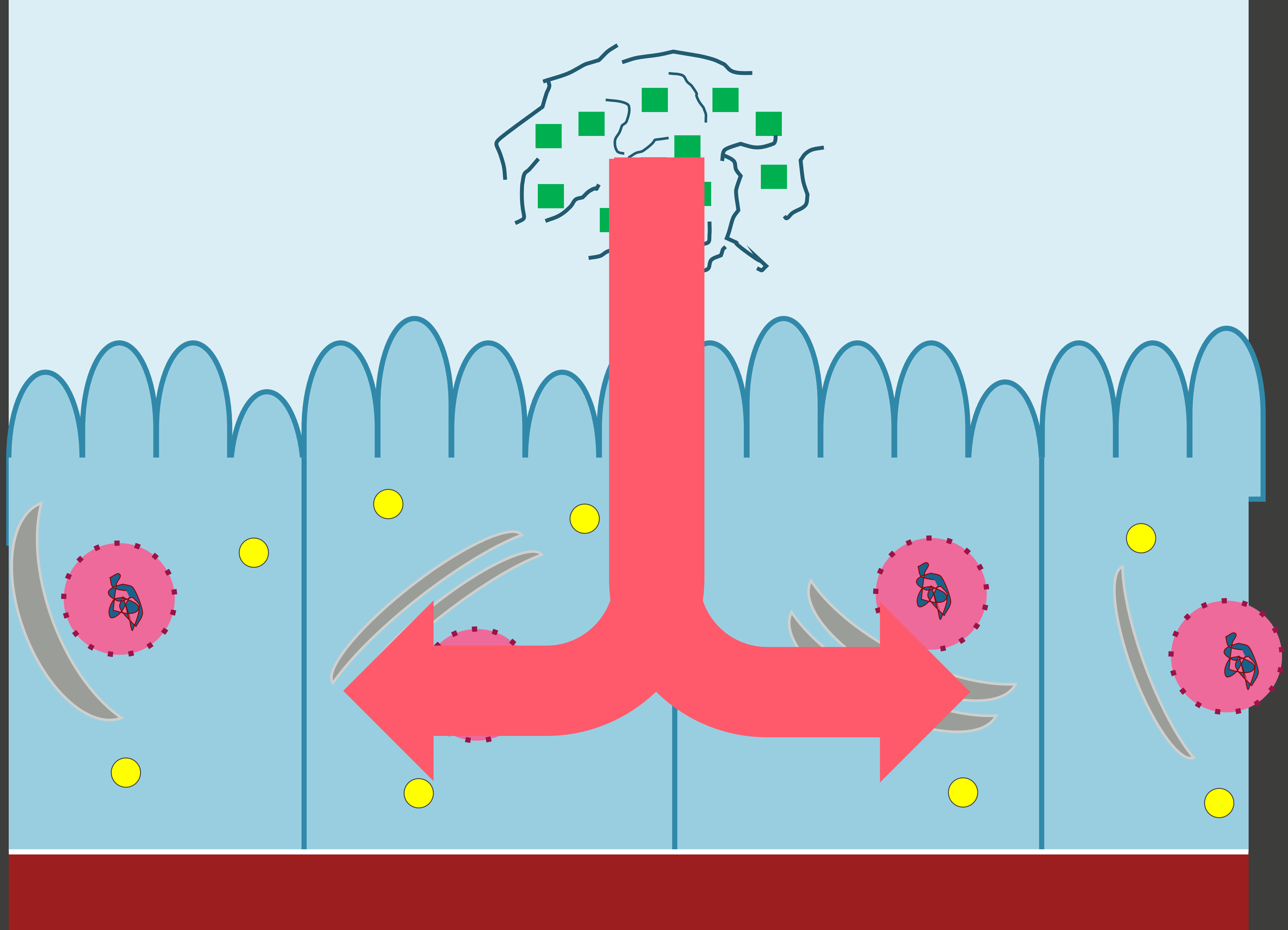
Different profiles requiring different nutritional solutions...



# OSMOLARITY: HOW TO TAKE ADVANTAGE OF IT











**COLOSTRU**  
**M**

**INTAKE**

**WEIGHT GAIN**

do not receive  
enough antibodies

(Milla et al, 2014, 2017)

**IG Y**





Antioxidants

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Beta-glucans

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Digestive safety

# NUTRITION AT WEANING

4

WEEKS OF

WEEKS

MEALS PER

# Q&A