



Banner
University Medicine

Patient Information Seminar

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Impact of Preoperative Teaching on Surgical Procedure Chosen by the Patient

	Uncertain	AGB	RYGBP
Before Teaching	23%	34%	43%
After Teaching	1% (3)	20%	70%
After Teaching	15% (45) changed their surgical option	9% (27) declined to have surgery	

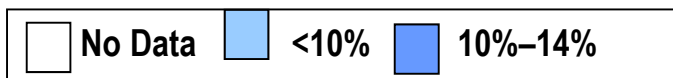
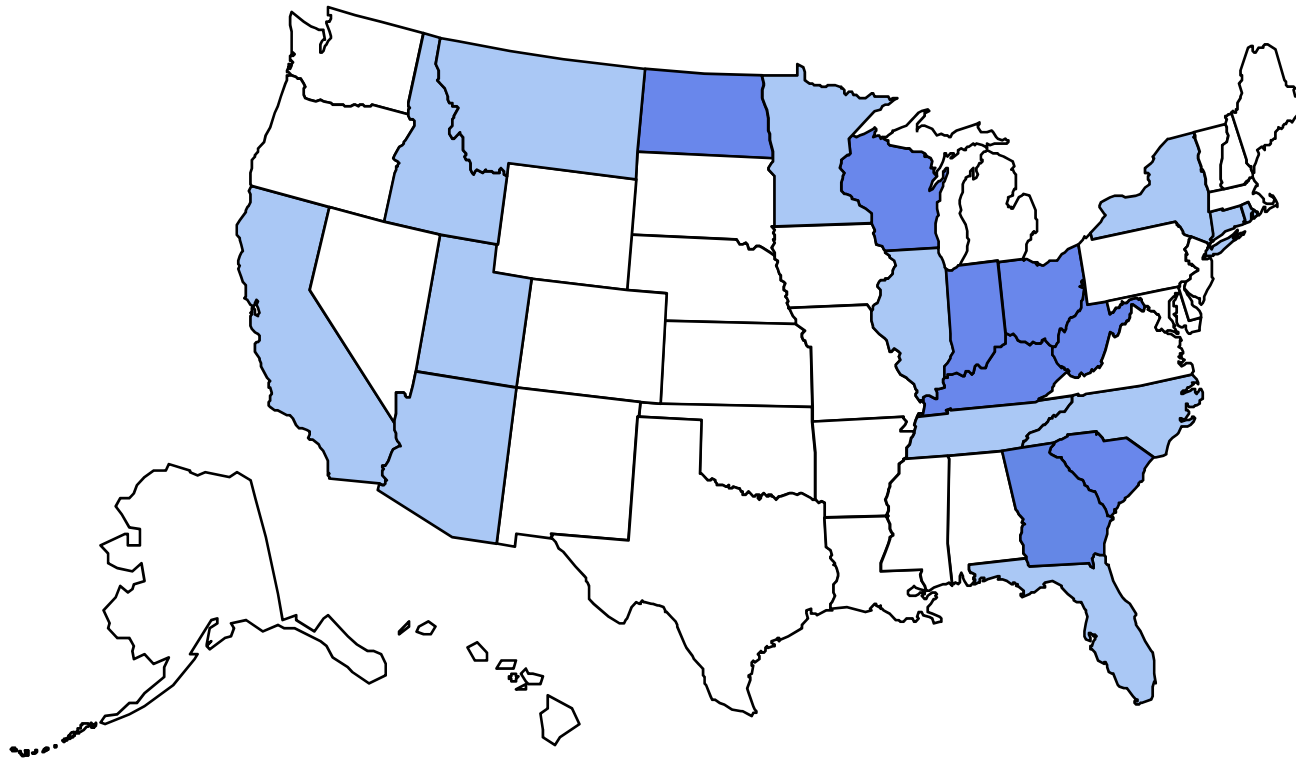
Conclusion: Preoperative teaching provides an informed and better patient selection in Direct to Consumer Advertising

Giusti V et al. Impact of preoperative Teaching on Surgical Option of Patients Qualifying for Bariatric Surgery Obesity Surgery (2004) 14:1241-1246.

Obesity Trends* Among U.S. Adults

BRFSS, 1985

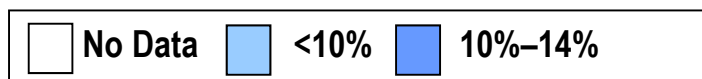
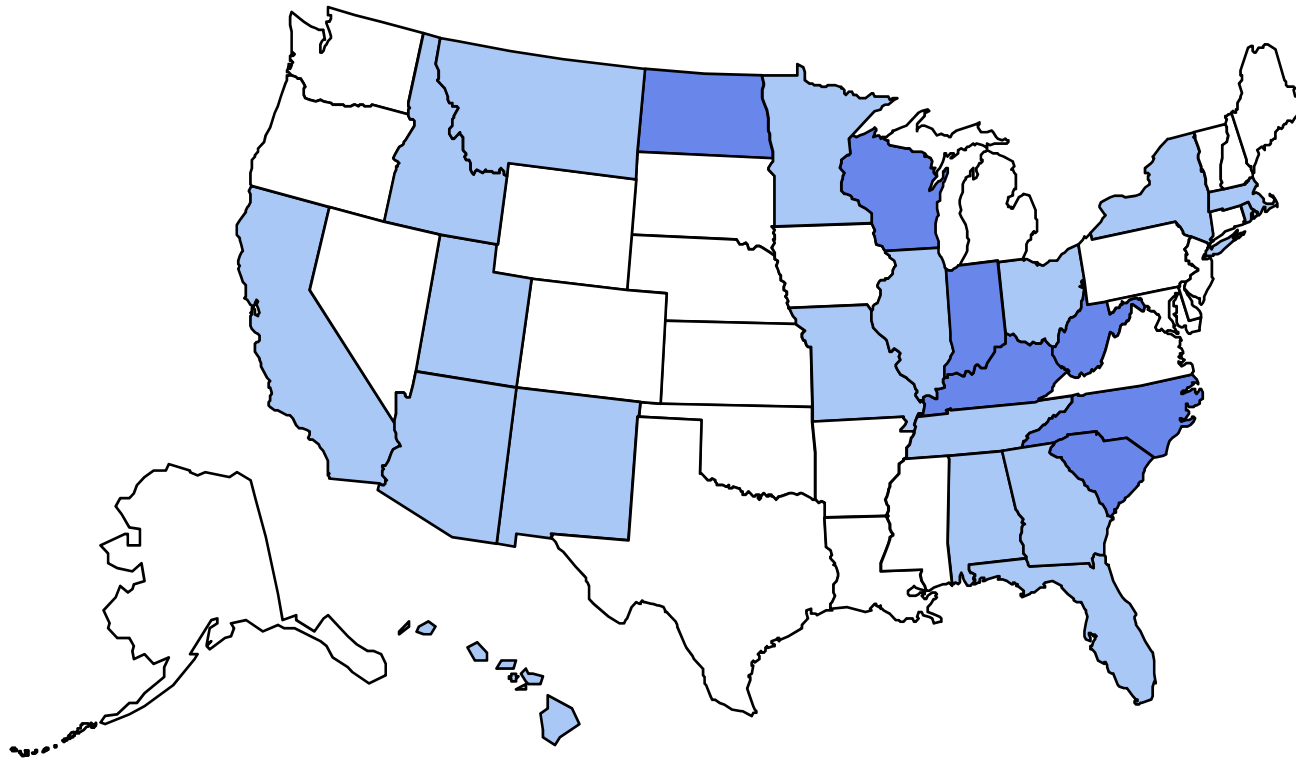
(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



Obesity Trends* Among U.S. Adults

BRFSS, 1986

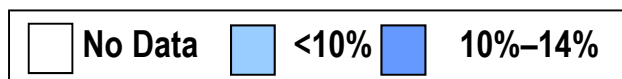
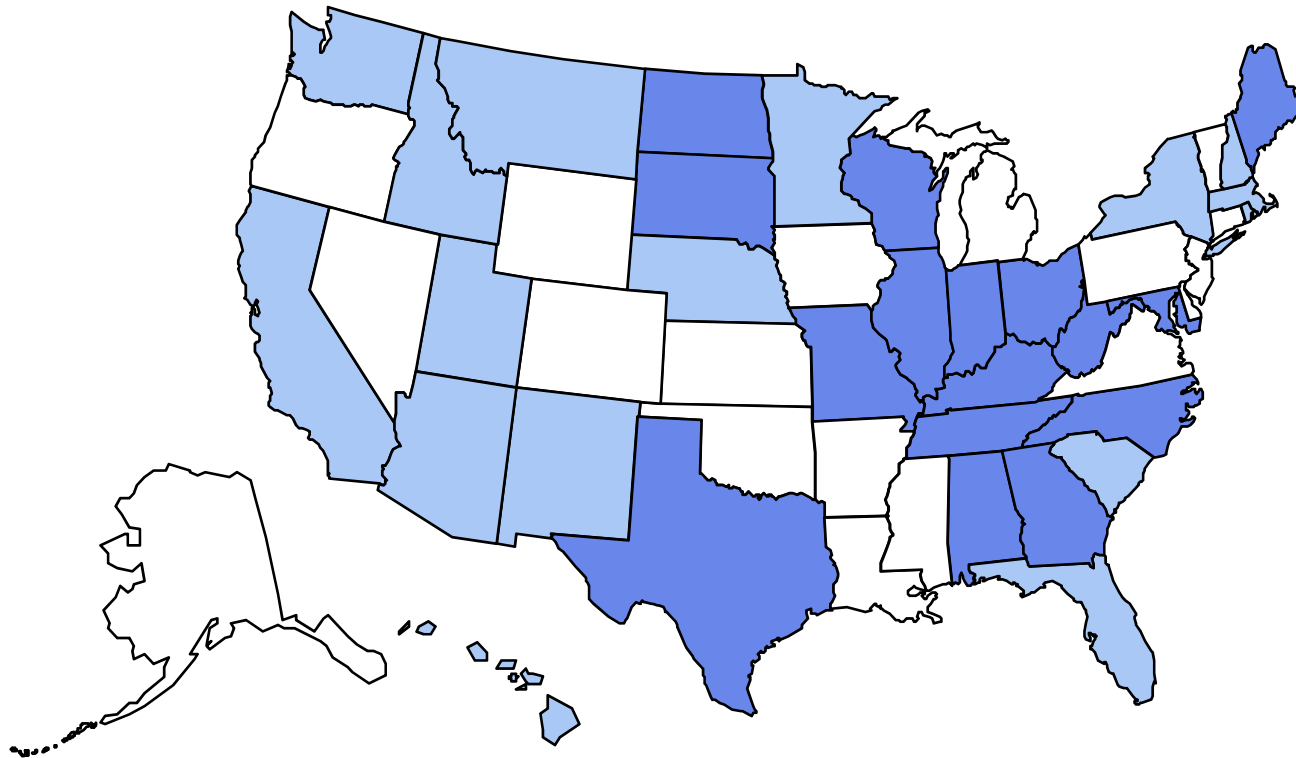
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Obesity Trends* Among U.S. Adults

BRFSS, 1987

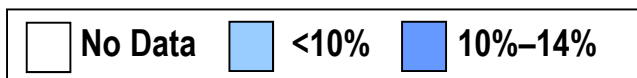
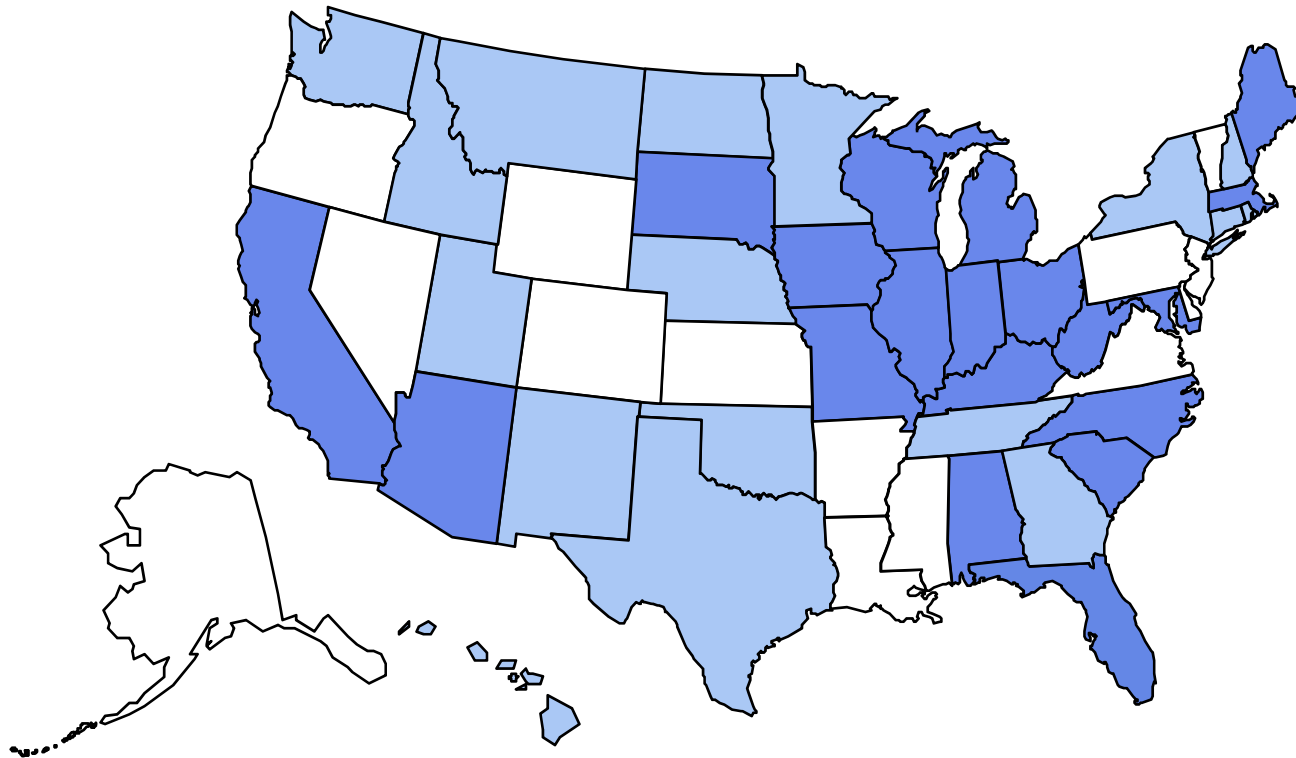
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Obesity Trends* Among U.S. Adults

BRFSS, 1988

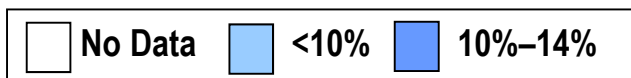
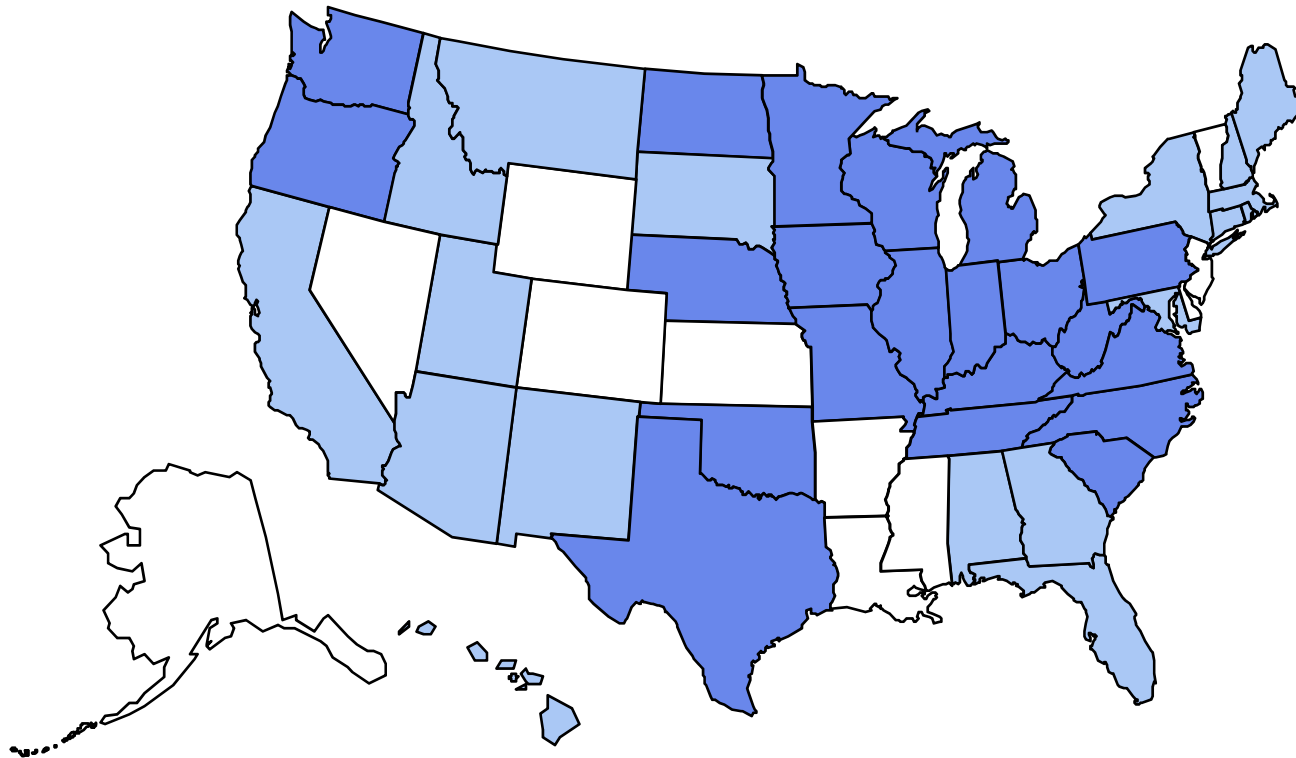
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Obesity Trends* Among U.S. Adults

BRFSS, 1989

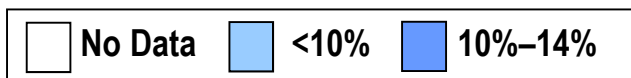
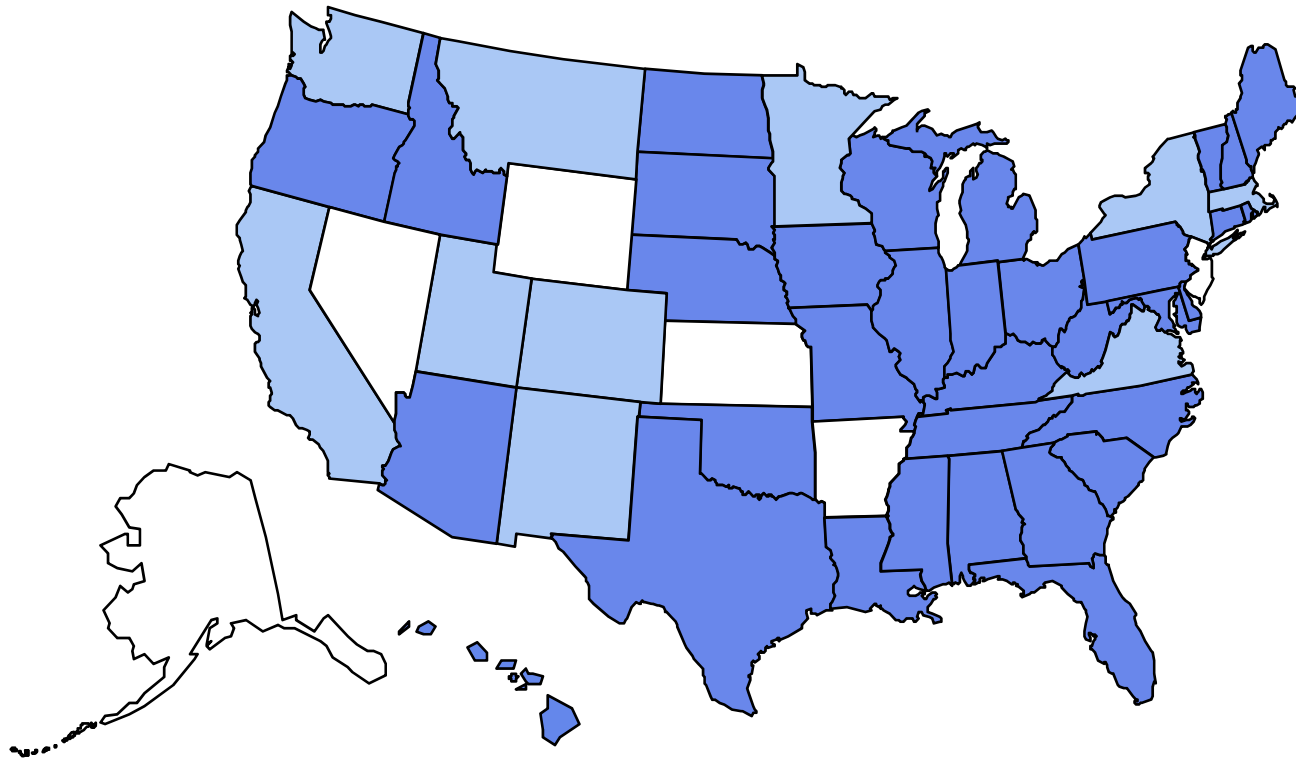
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Obesity Trends* Among U.S. Adults

BRFSS, 1990

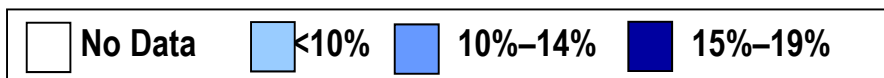
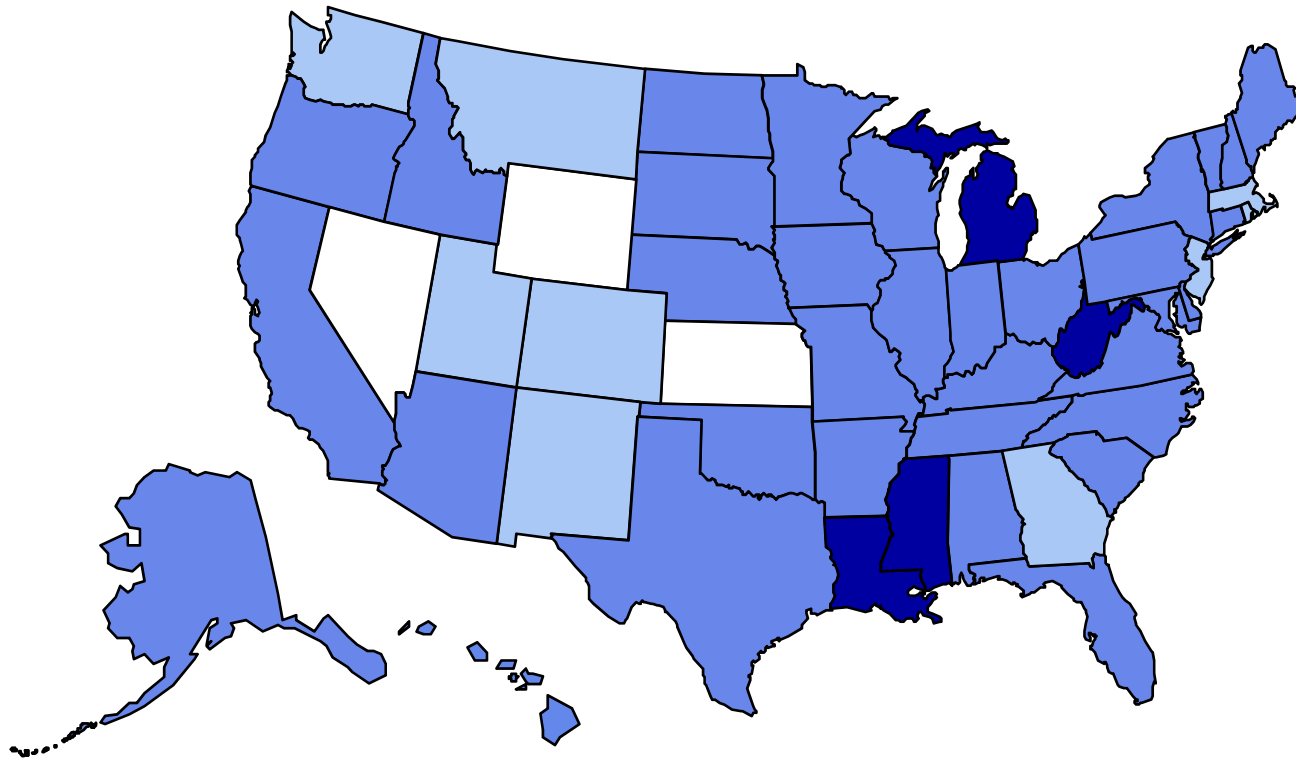
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Obesity Trends* Among U.S. Adults

BRFSS, 1991

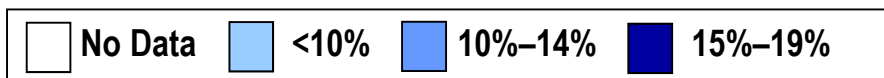
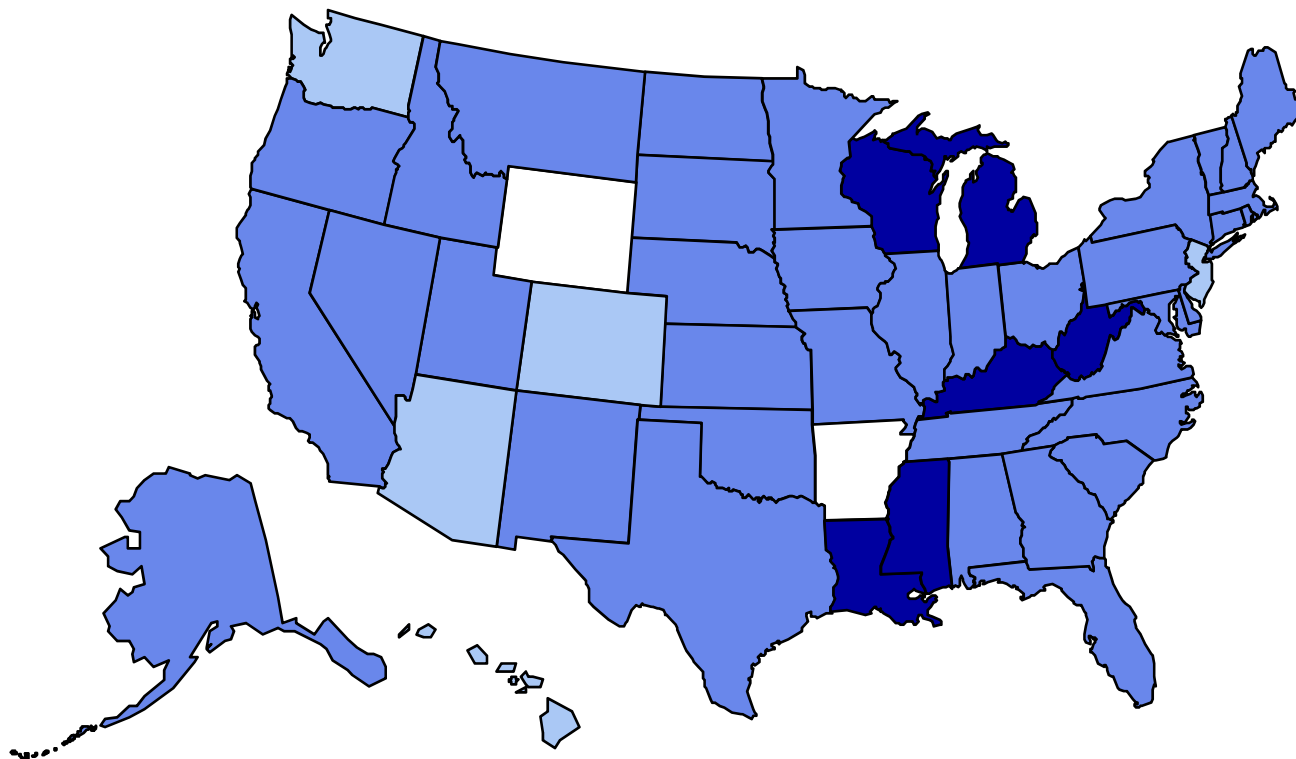
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Obesity Trends* Among U.S. Adults

BRFSS, 1992

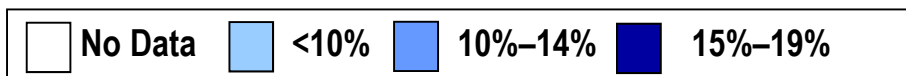
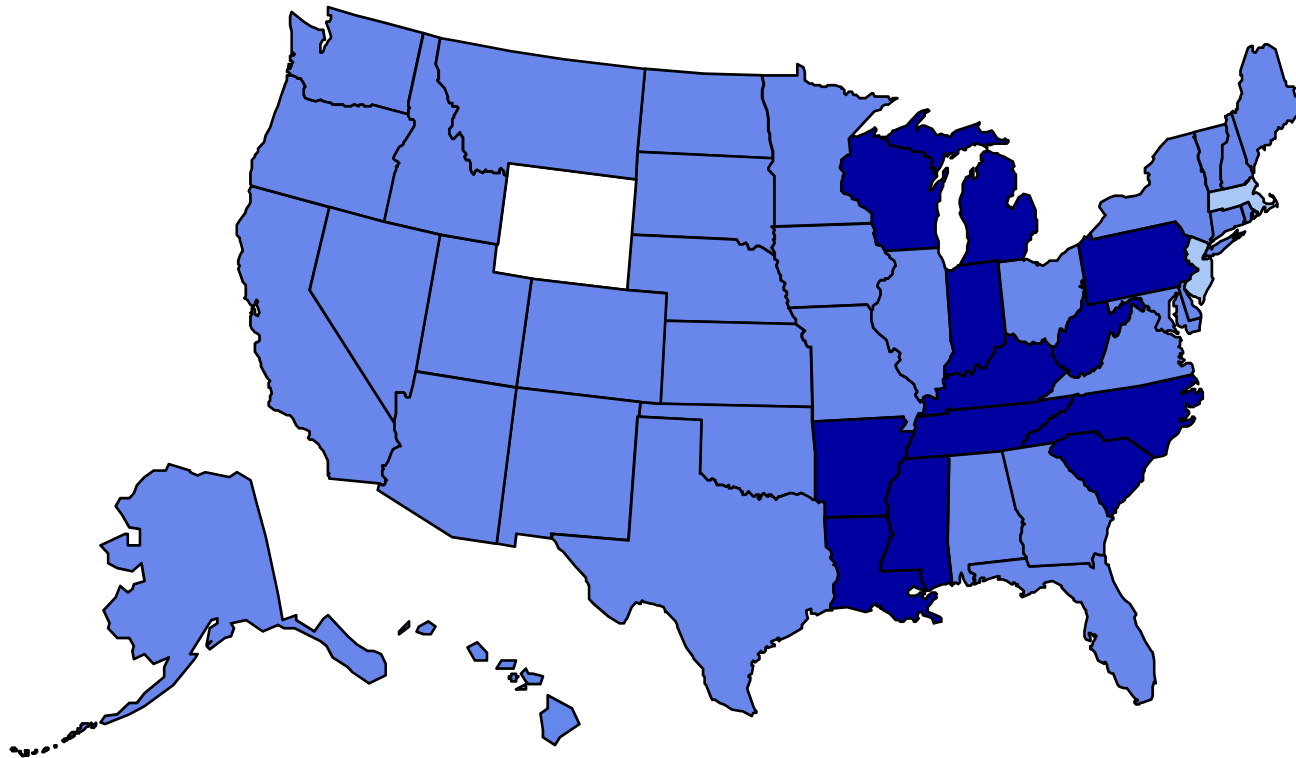
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Obesity Trends* Among U.S. Adults

BRFSS, 1993

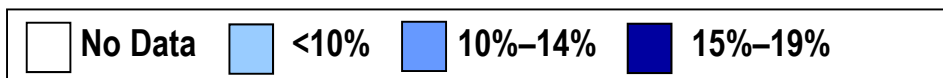
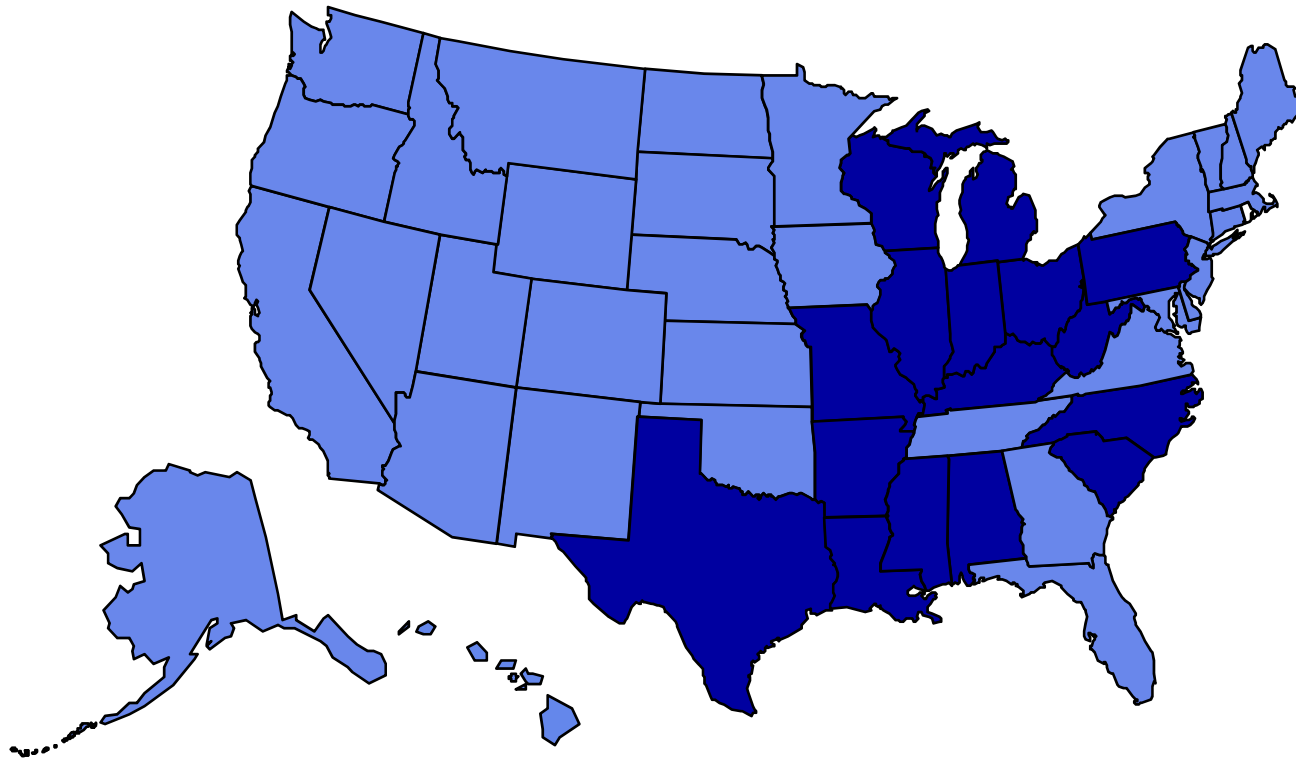
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Obesity Trends* Among U.S. Adults

BRFSS, 1994

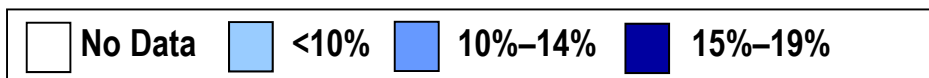
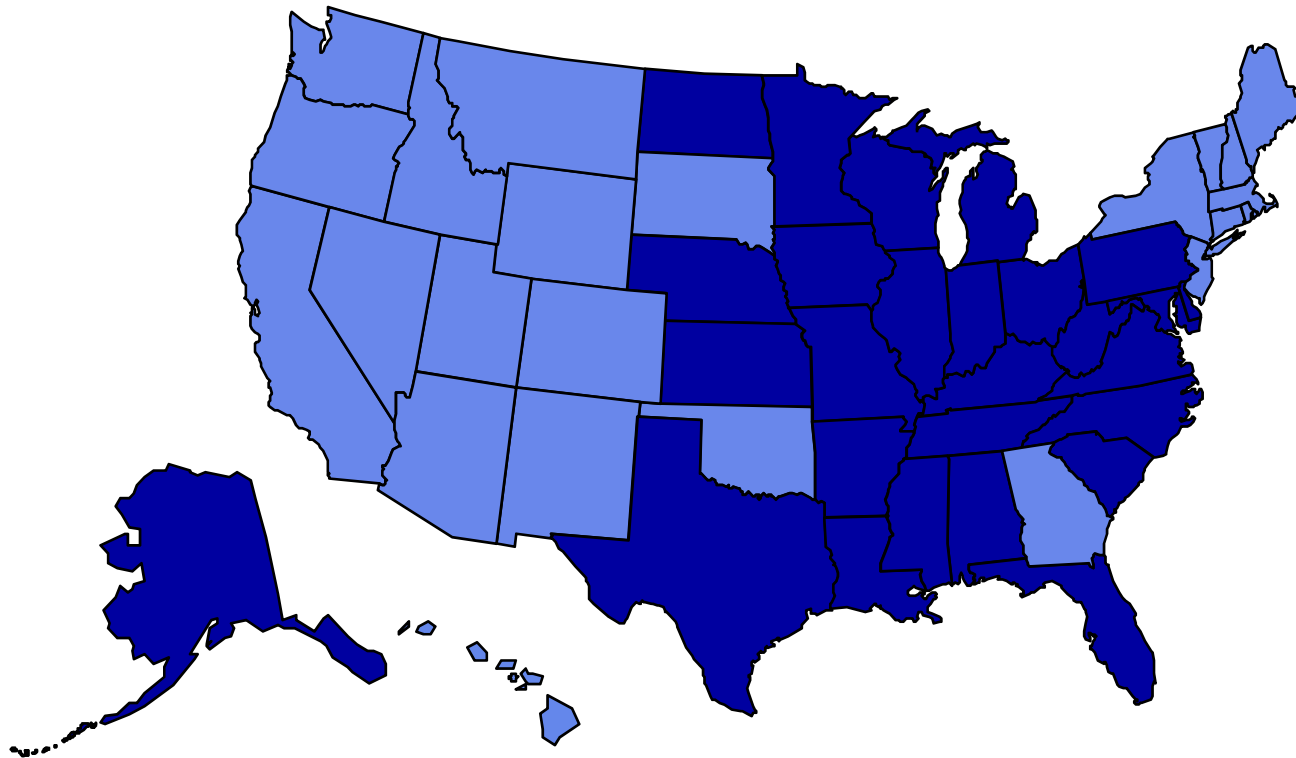
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Obesity Trends* Among U.S. Adults

BRFSS, 1995

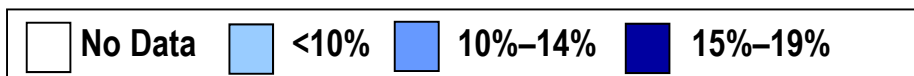
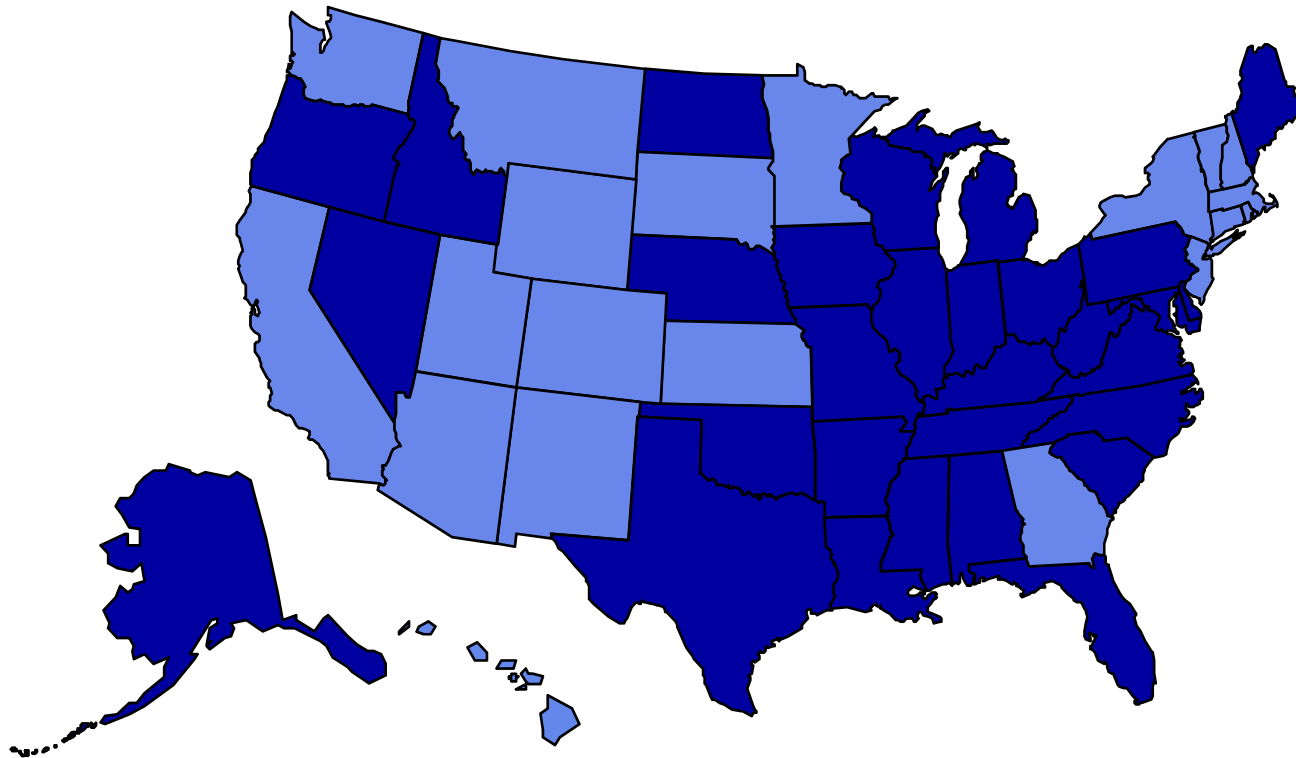
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Obesity Trends* Among U.S. Adults

BRFSS, 1996

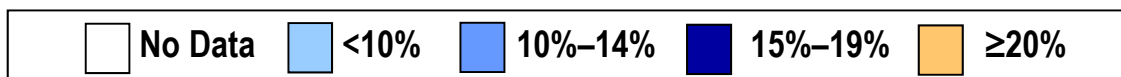
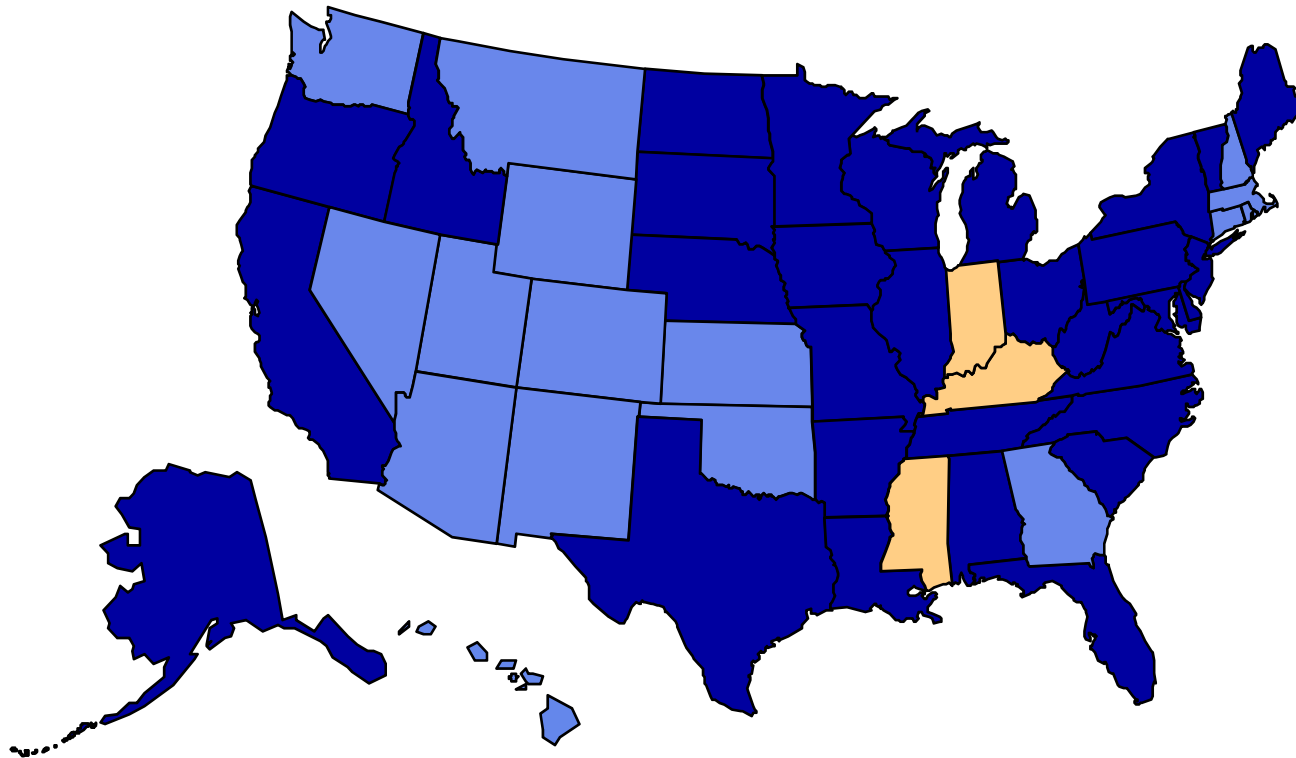
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Obesity Trends* Among U.S. Adults

BRFSS, 1997

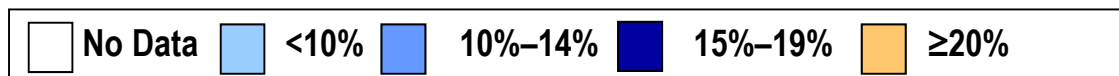
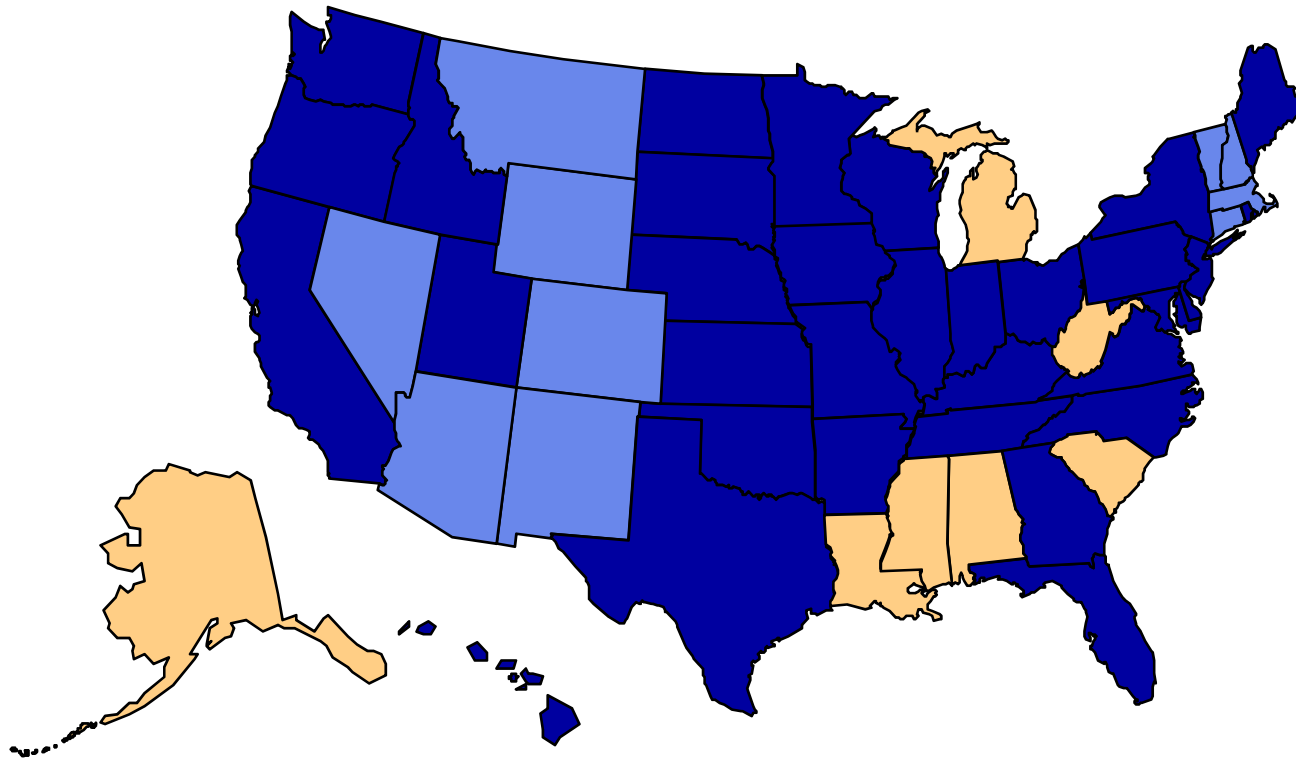
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Obesity Trends* Among U.S. Adults

BRFSS, 1998

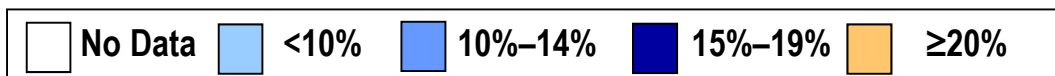
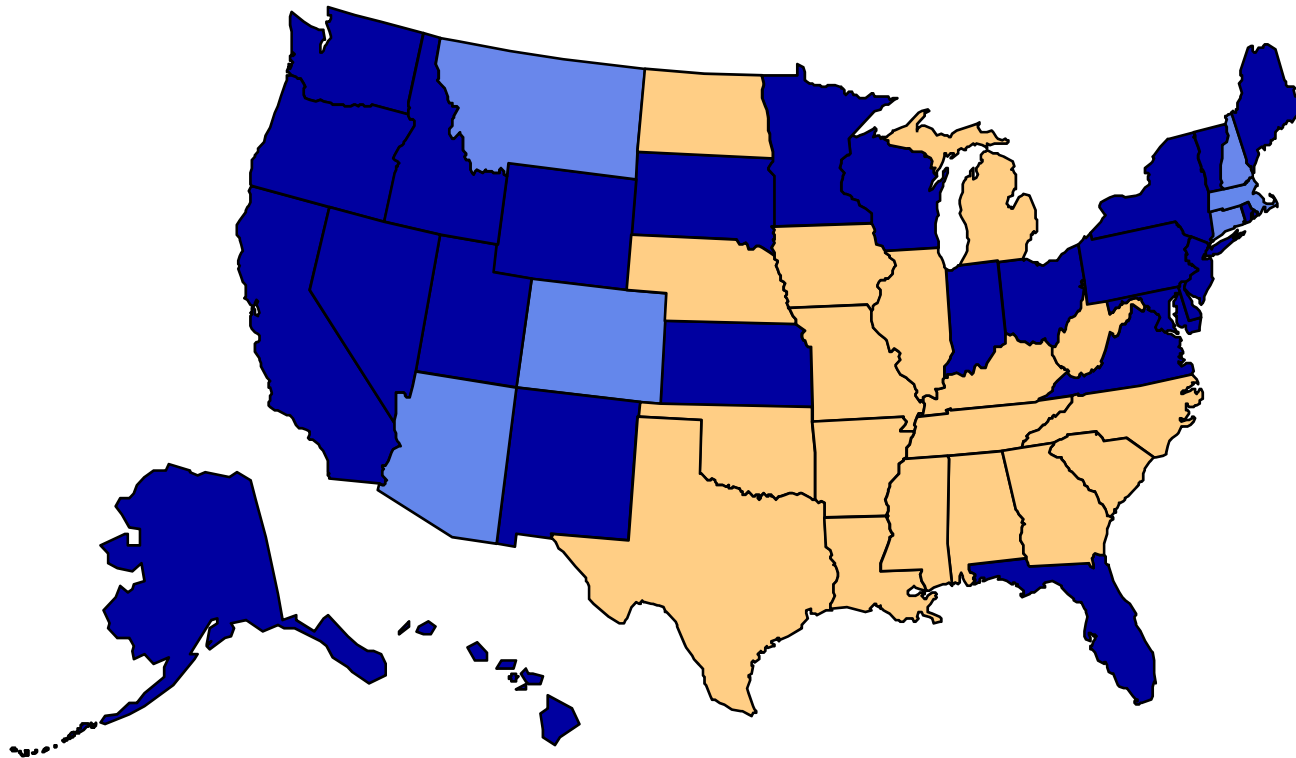
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Obesity Trends* Among U.S. Adults

BRFSS, 1999

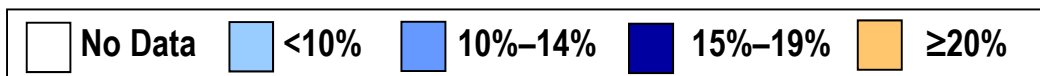
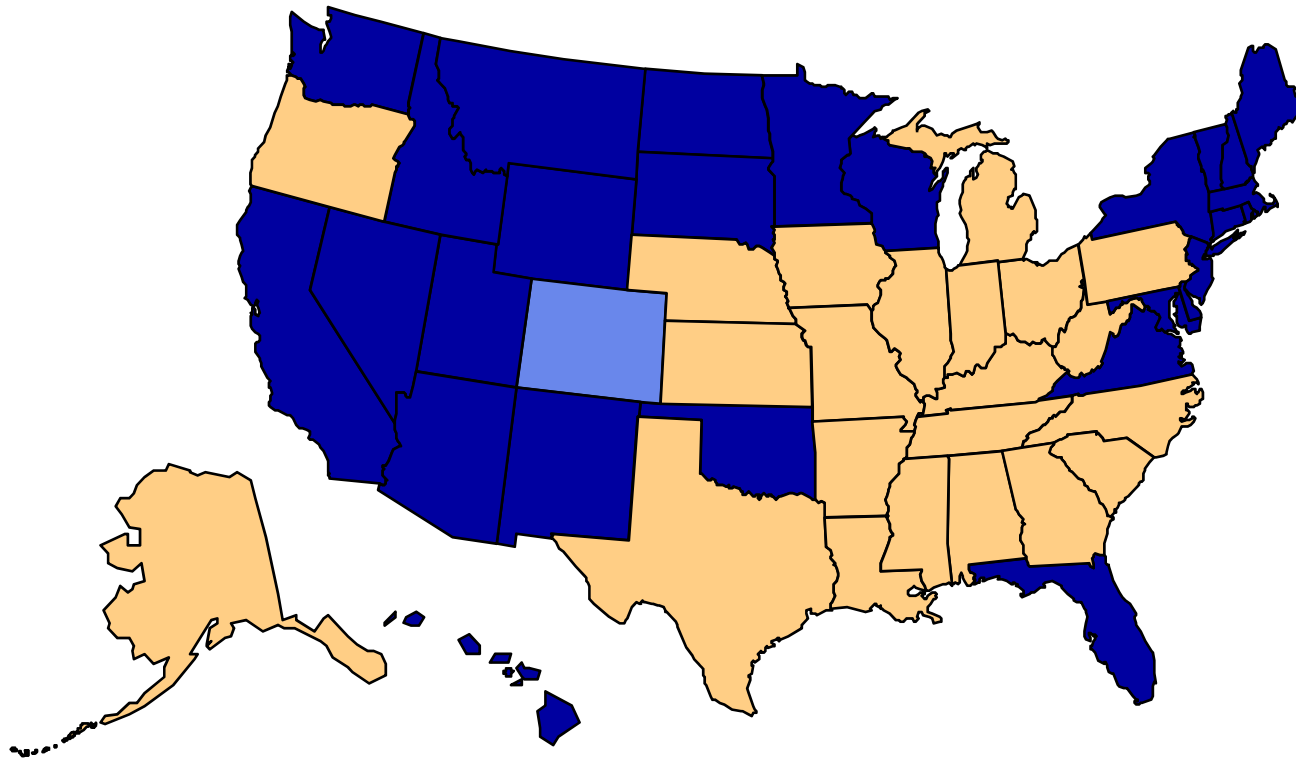
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Obesity Trends* Among U.S. Adults

BRFSS, 2000

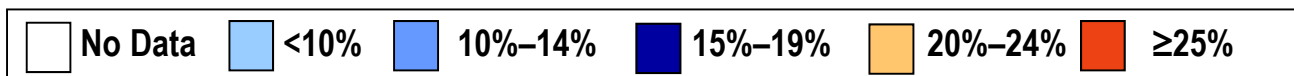
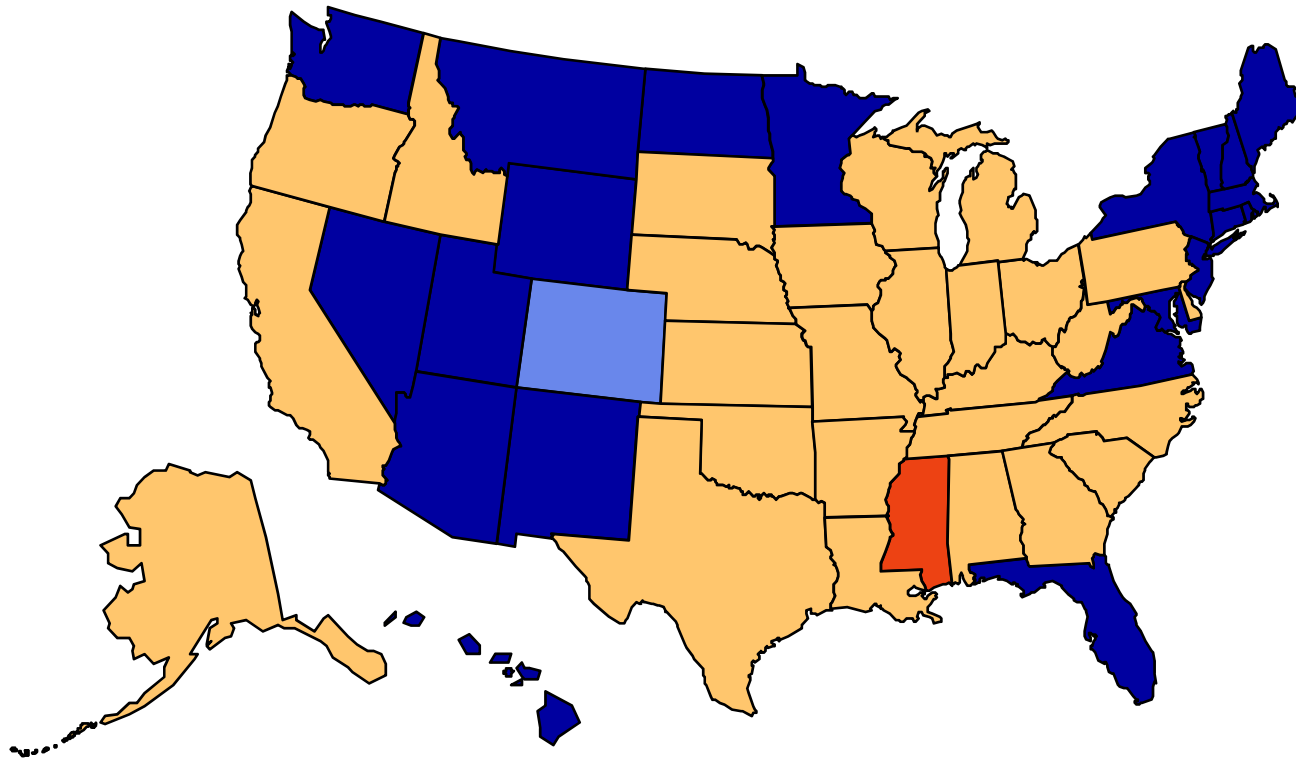
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Obesity Trends* Among U.S. Adults

BRFSS, 2001

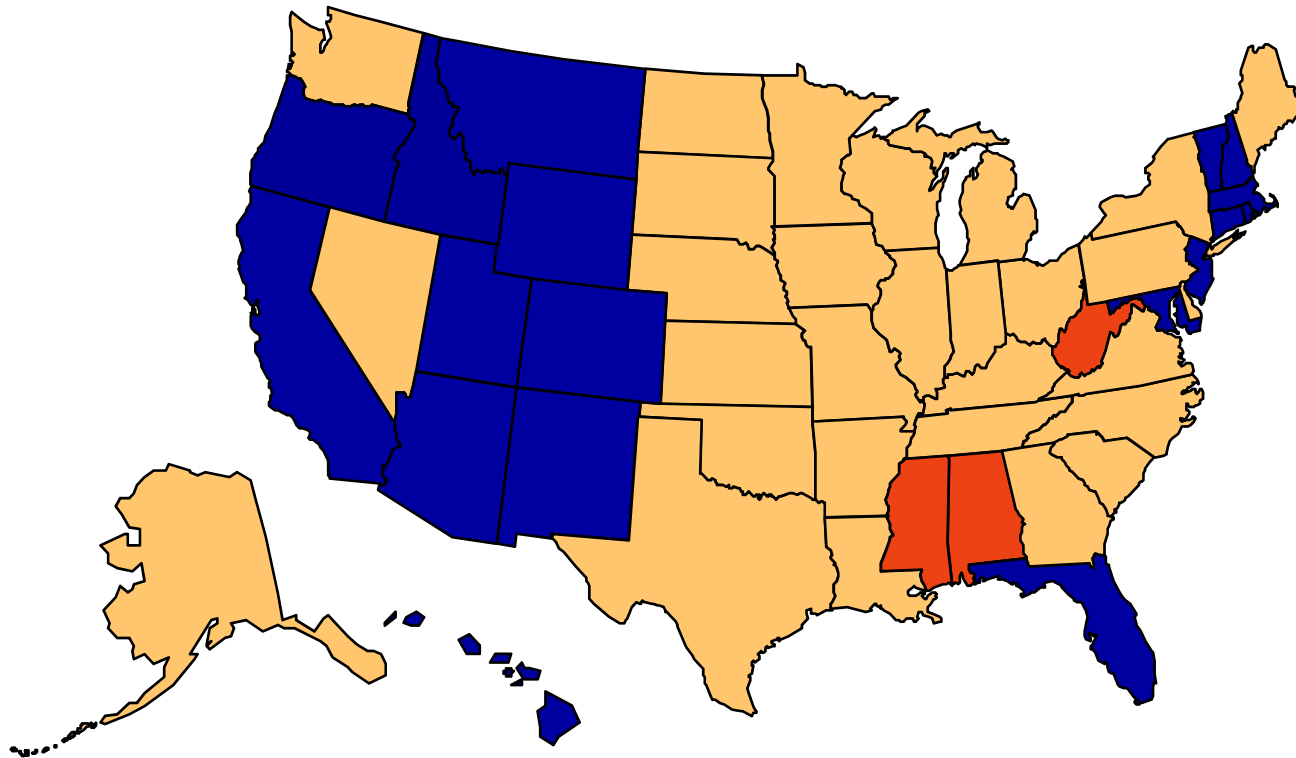
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Obesity Trends* Among U.S. Adults

BRFSS, 2002

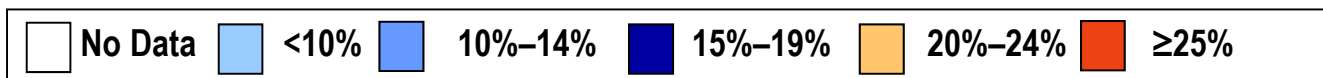
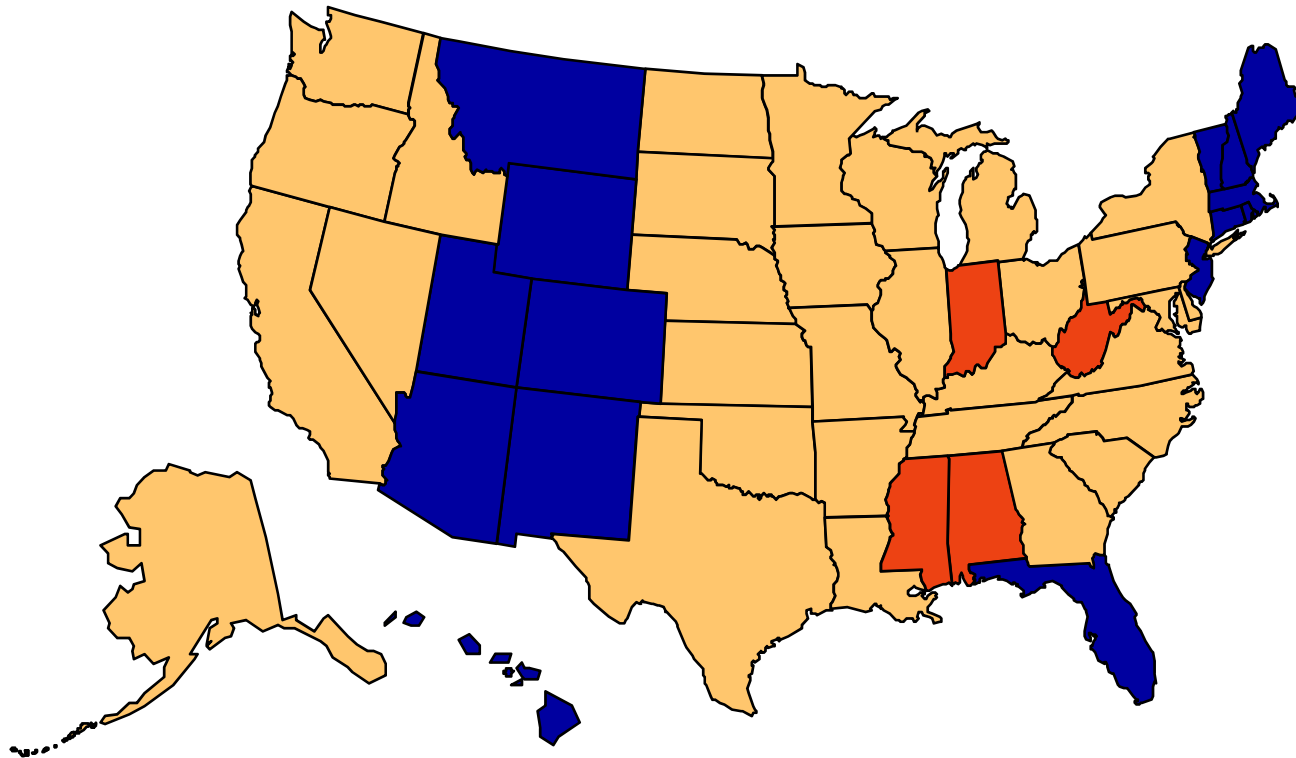
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Obesity Trends* Among U.S. Adults

BRFSS, 2003

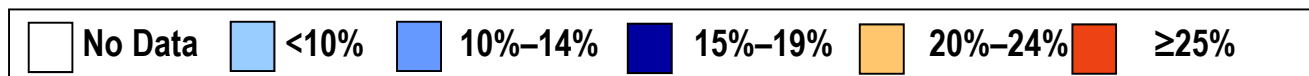
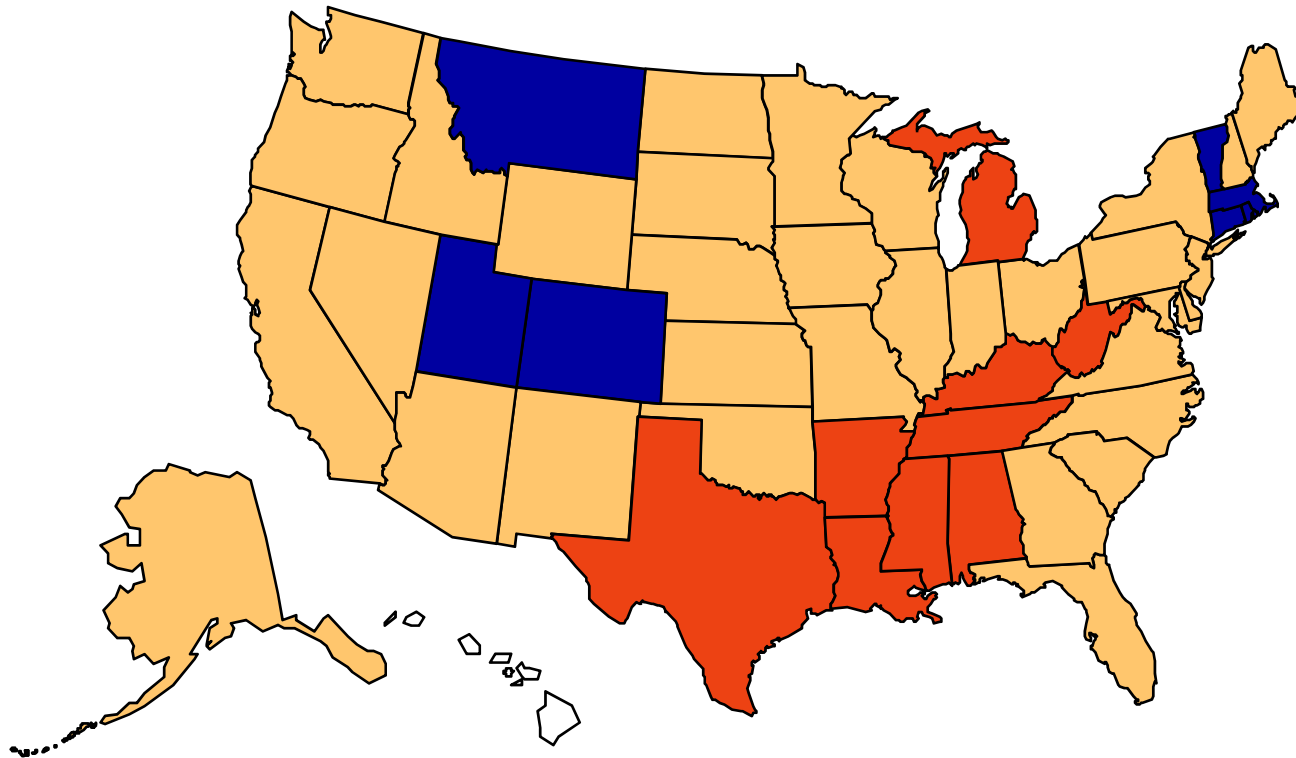
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Obesity Trends* Among U.S. Adults

BRFSS, 2004

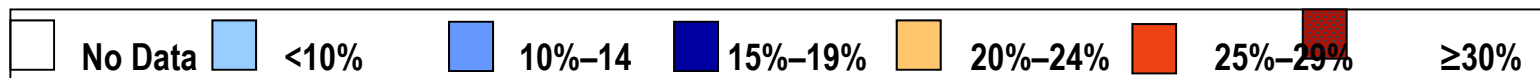
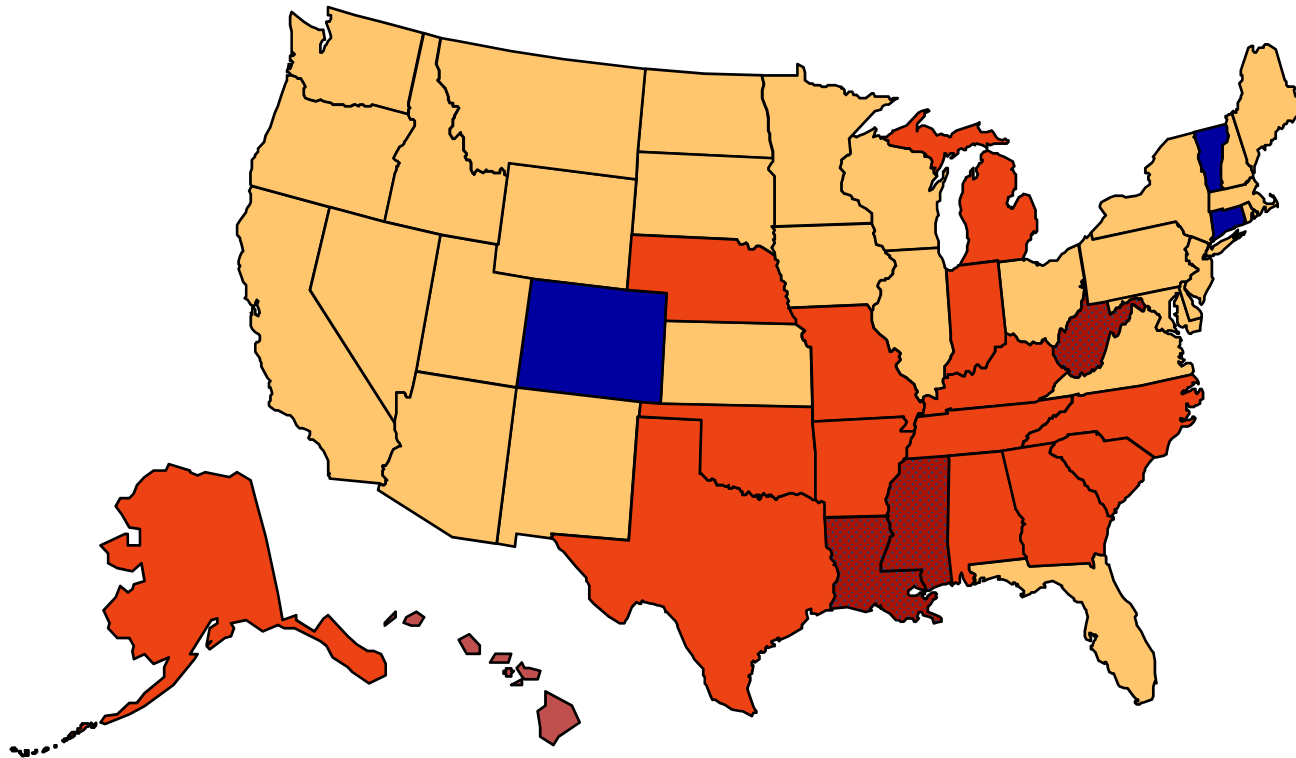
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Obesity Trends* Among U.S. Adults

BRFSS, 2005

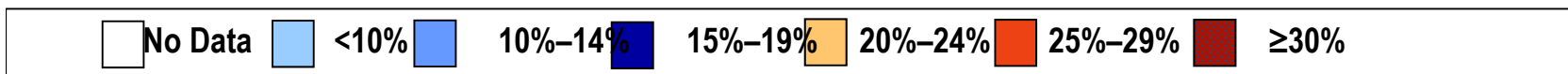
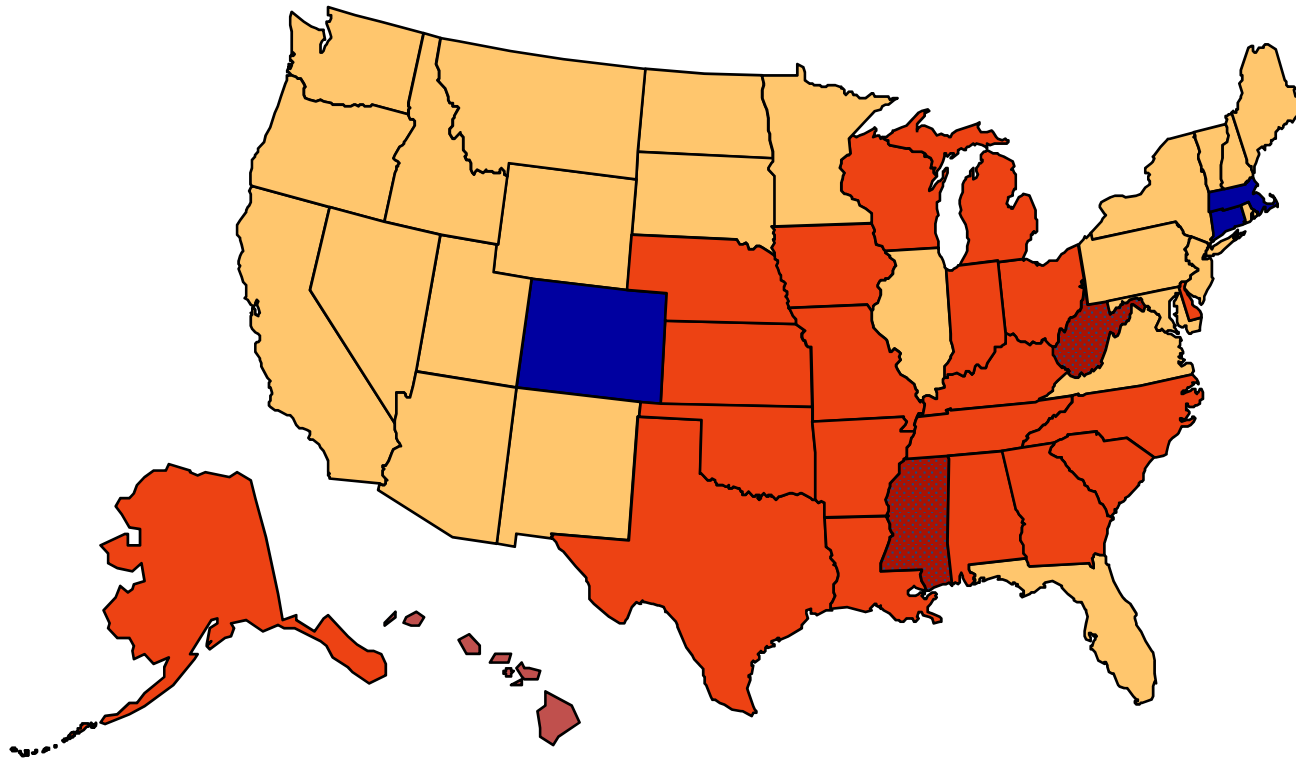
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Obesity Trends* Among U.S. Adults

BRFSS, 2006

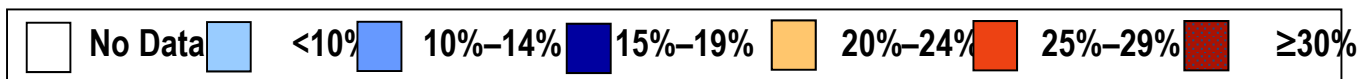
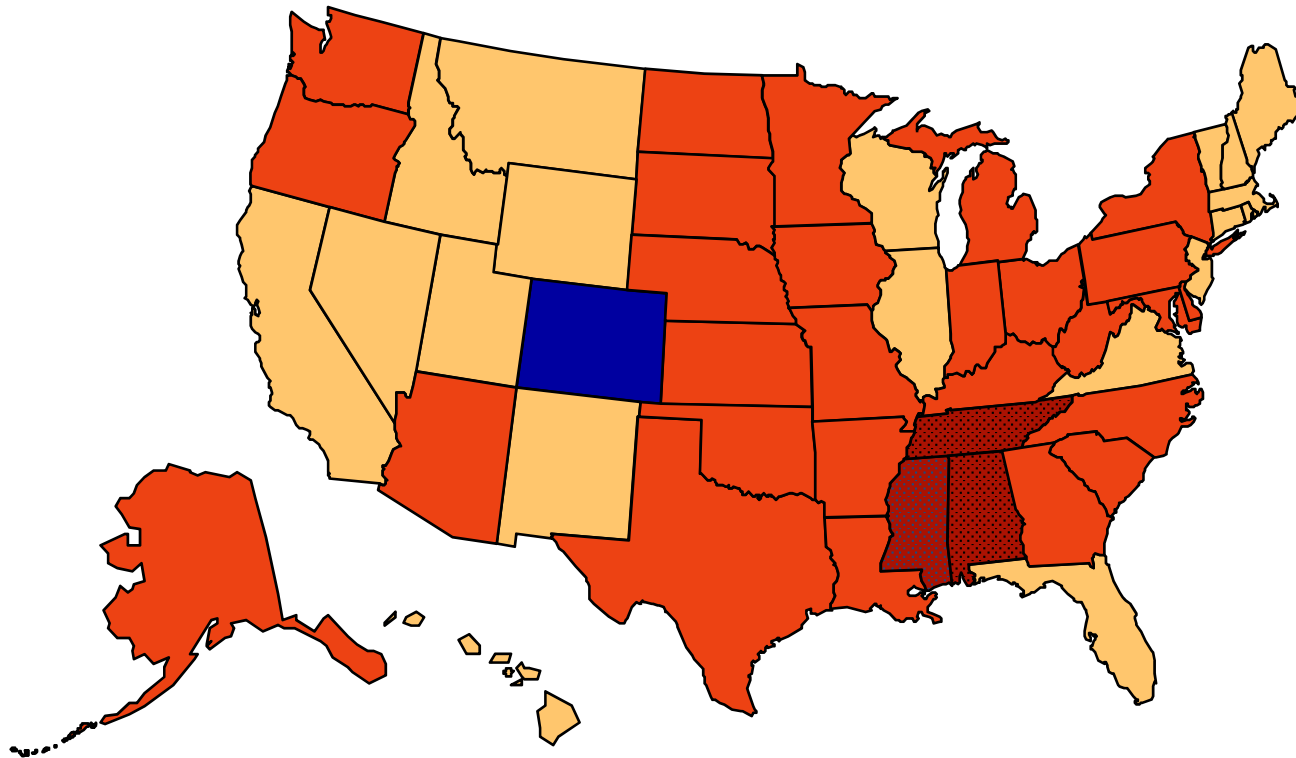
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Obesity Trends* Among U.S. Adults

BRFSS, 2007

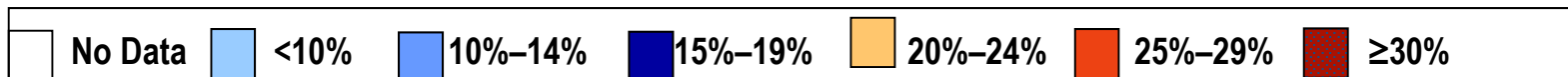
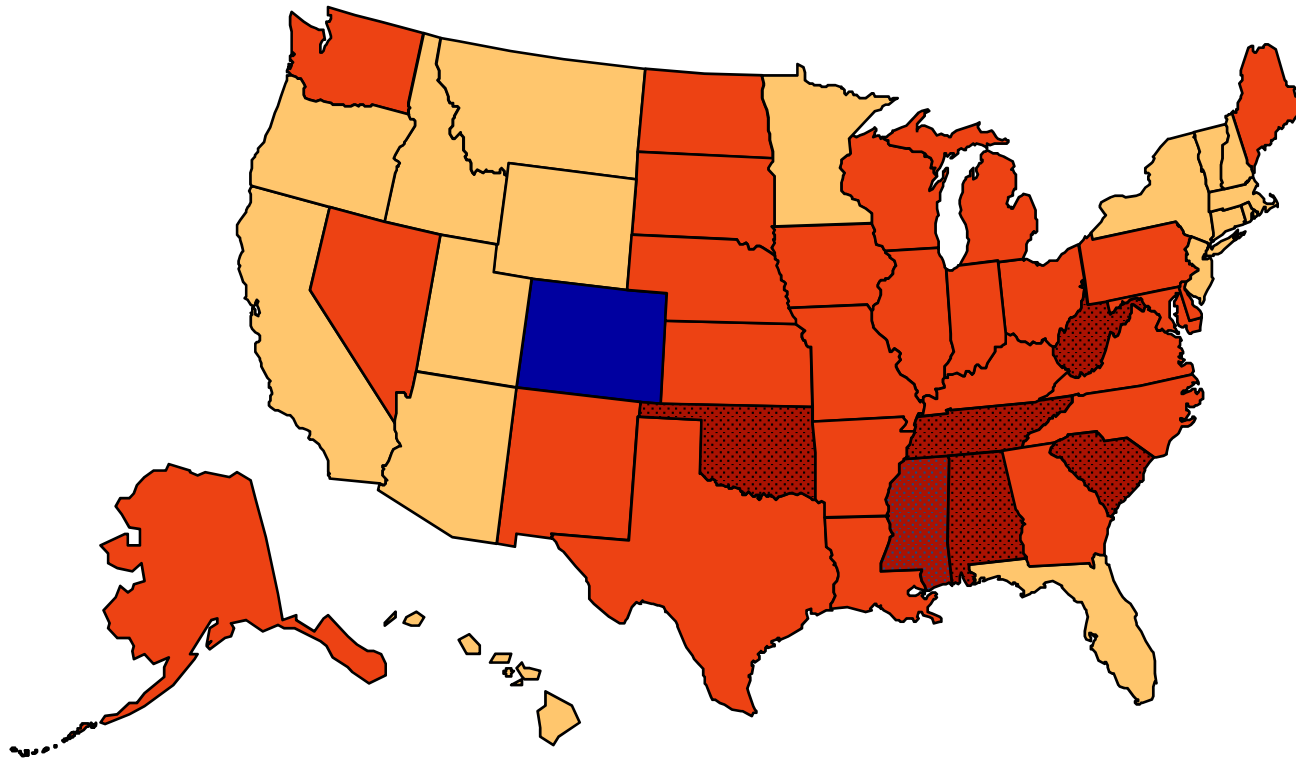
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Obesity Trends* Among U.S. Adults

BRFSS, 2008

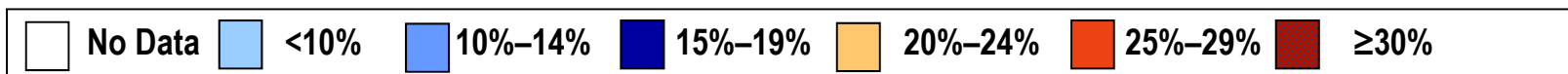
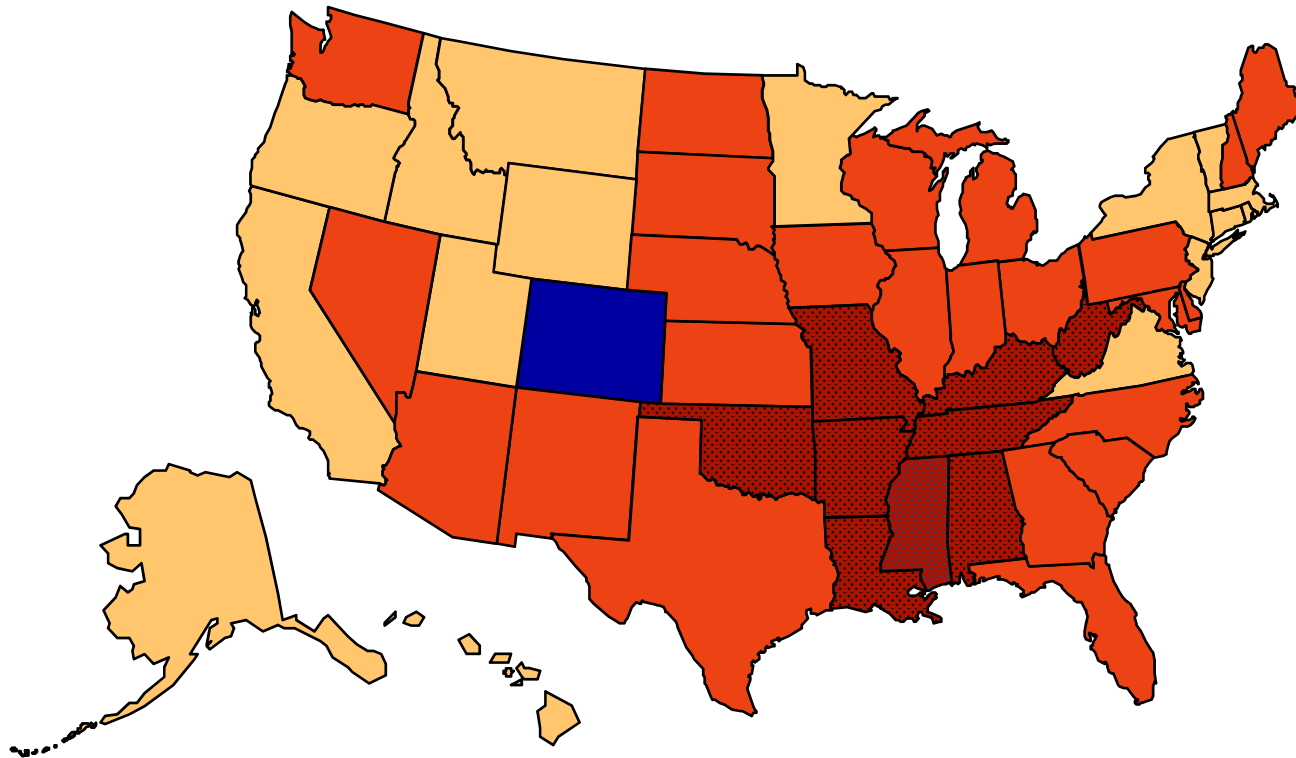
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Obesity Trends* Among U.S. Adults

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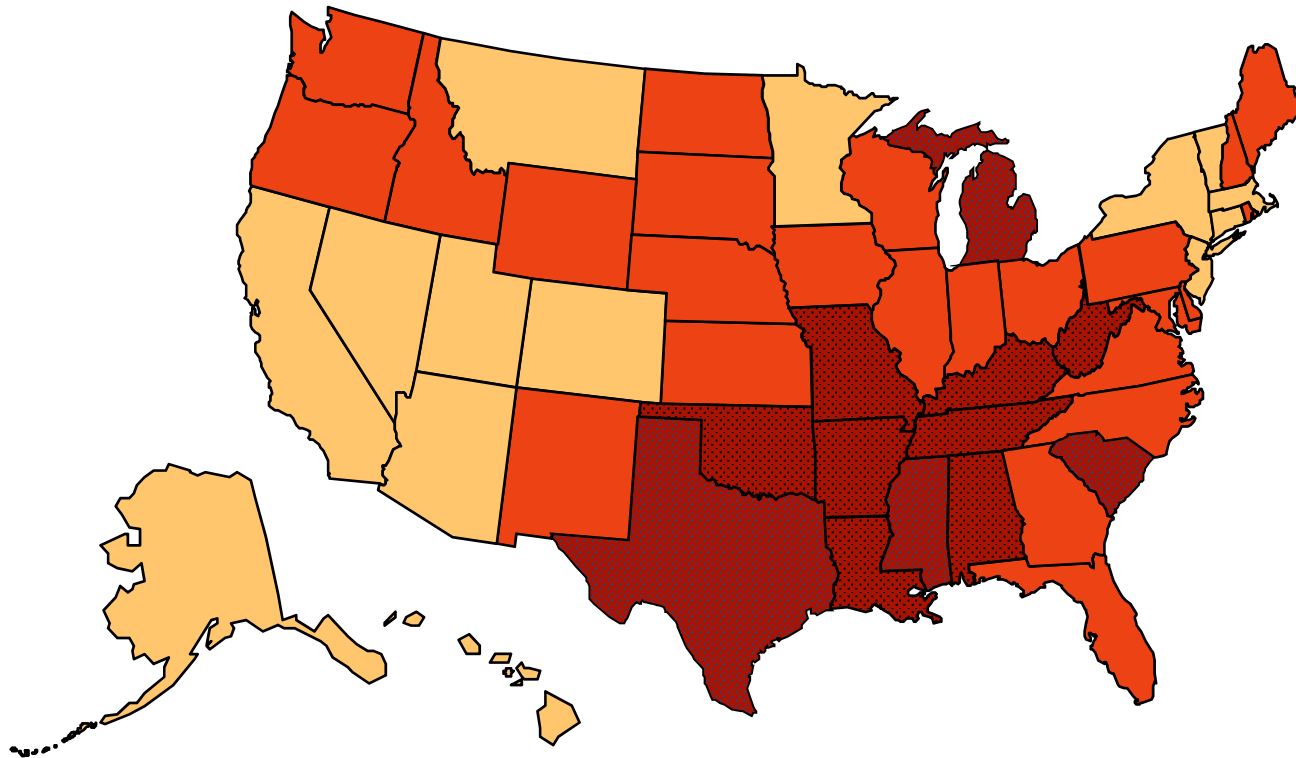
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Obesity Trends* Among U.S. Adults

BRFSS, 2010

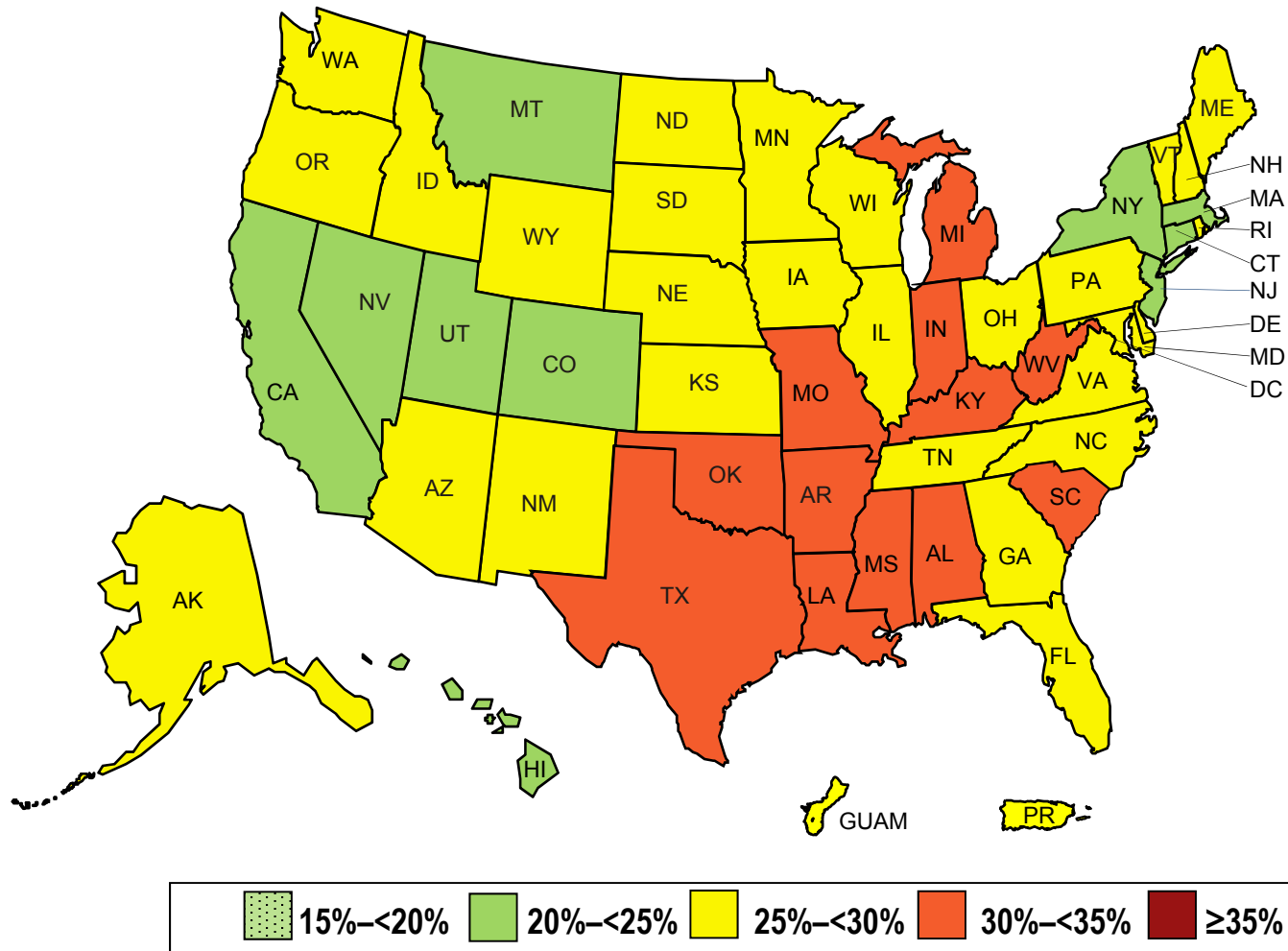
(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



Legend: No Data, <10%, 10%–14%, 15%–19%, 20%–24%, 25%–29%, $\geq 30\%$

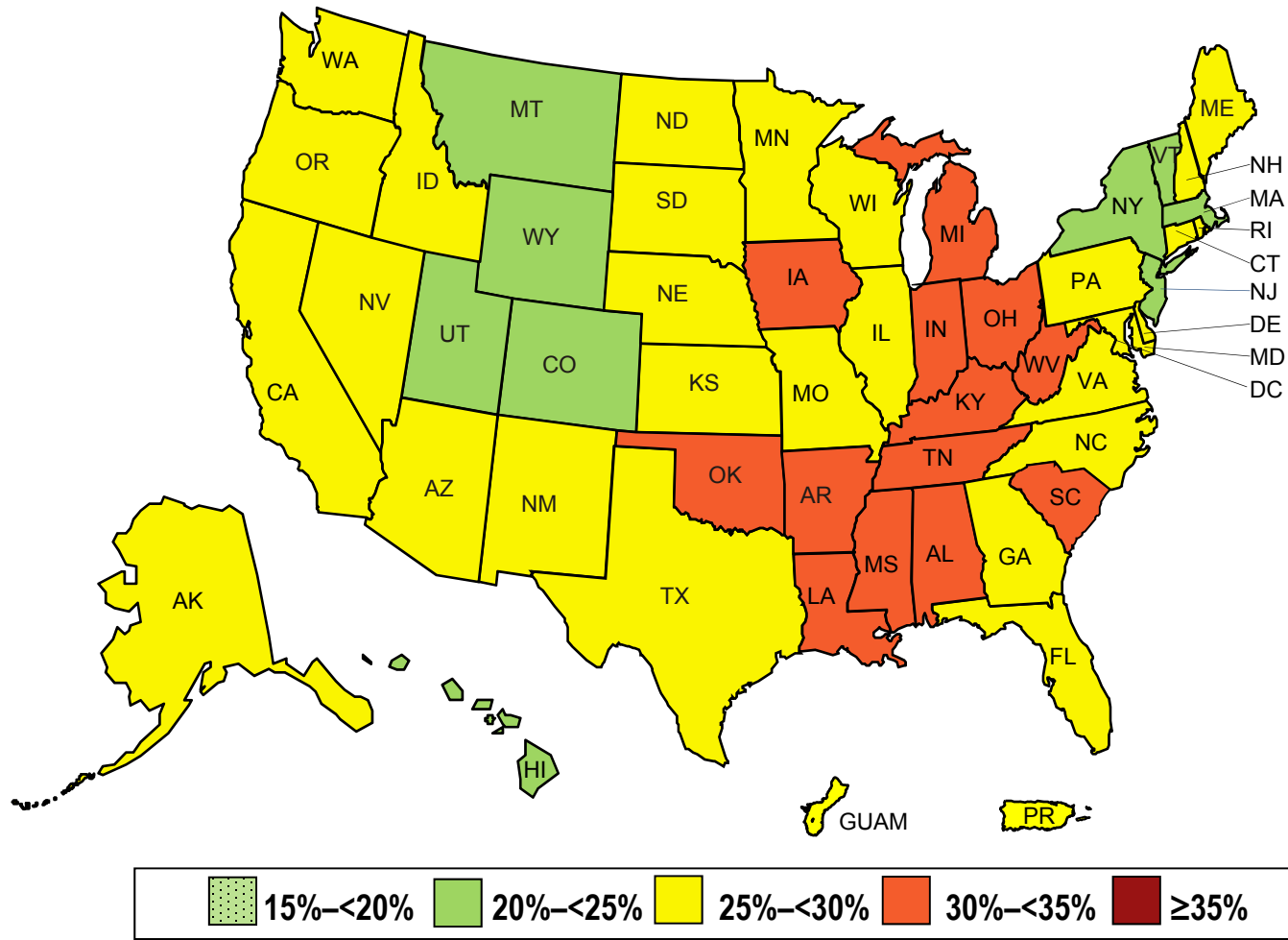
Prevalence* of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2011

*Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.



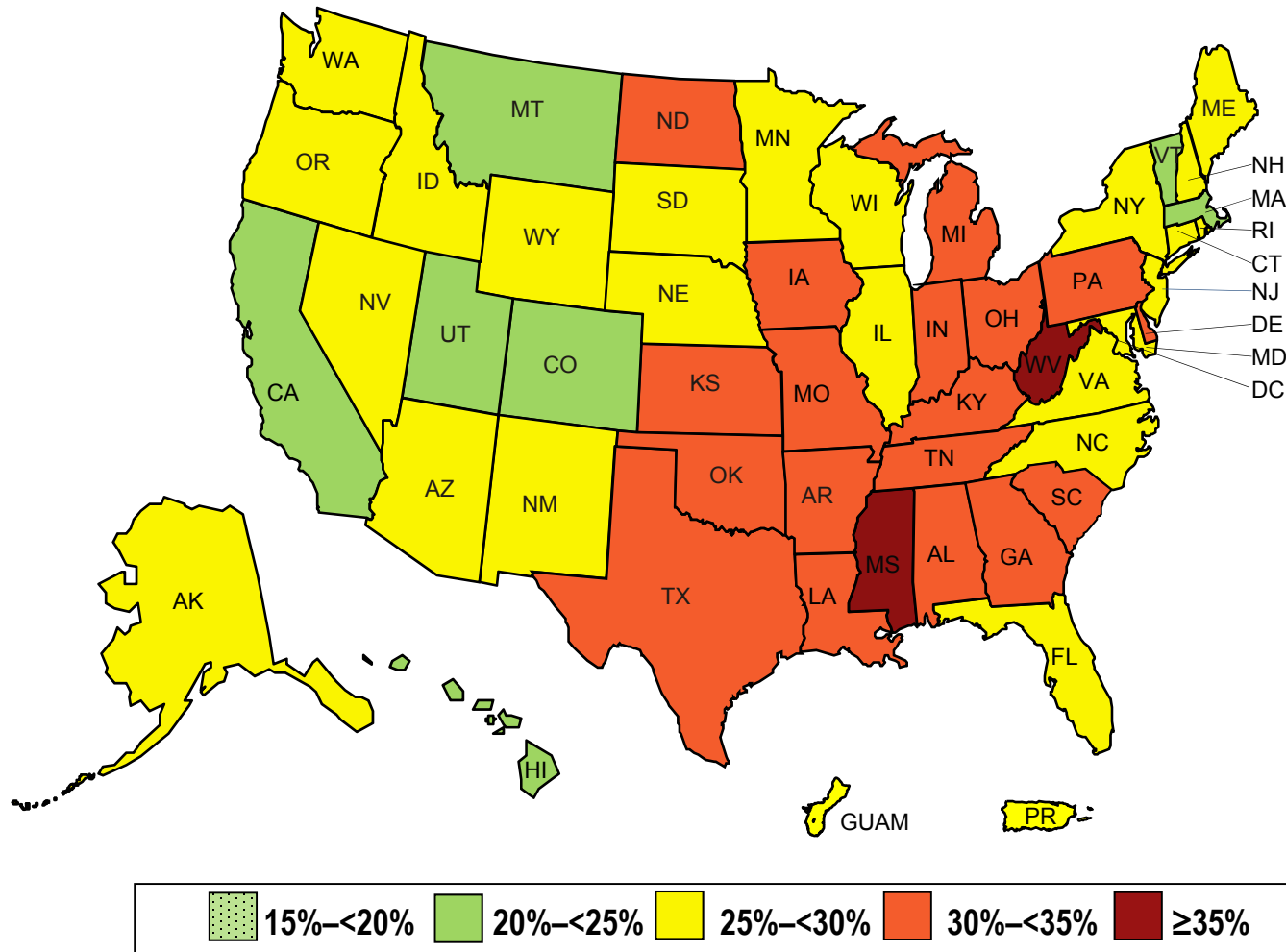
Prevalence* of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2012

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Prevalence* of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2013

*Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.



Measuring





Body Mass Index (BMI)

A measure of weight in relation to height, calculated by using weight in kilograms divided by the square of height in meters.

$$\text{weight (kg)} / [\text{height (m)}]^2$$

Example: Weight = 68 kg, Height = 165 cm (1.65 m)

$$\text{Calculation: } 68 \div (1.65)^2 = \mathbf{24.98}$$


BMI (kgm ⁻²)	Definition
<18.5	<i>Underweight</i>
18.5-24.9	<i>Ideal Weight</i>
25-29.9	<i>Overweight</i>
30-39.9	<i>Obese</i>
40-49.9	<i>Morbidly Obese</i>
50-59.9	<i>Super Obese</i>
60-69.9	<i>Super Super Obese</i>
>70	<i>Hyper Obese</i>

Classification of Overweight and Obesity by Body Mass Index (BMI), Waist Circumference, and Associated Disease Risks

	BMI (kg/m ²)	Obesity class	Disease risk* relative to normal weight and waist circumference	
			Men ≤102 cm (≤40 in) Women ≤88 cm (≤35 in)	Men >102 cm (>40 in) Women >88 cm (>35 in)
Underweight	<18.5		-	-
Normal**	18.5-24.9		-	-
Overweight	25.0-29.9		Increased	High
Obesity	30.0-34.9	I	High	Very High
	35.0-39.9	II	Very High	Very High
Extreme Obesity	≥40.0	III	Extremely High	Extremely High

*Disease risk for type 2 diabetes, hypertension, and coronary heart disease.

**Increased waist circumference can also be a marker for increased risk even in persons of normal weight

Reprinted from National Institutes of Health and National Heart, Lung, and Blood Institute, 1998.

Percent Body Fat

Increased Body Fat (Adiposity)

American Council on Exercise classification:
Percent body fat*

Essential Fat

Women: 10-13%
Men: 2-5%

Athletes

Women: 14-20%
Men: 6-13%

Fitness

Women: 21-24%
Men: 14-17%

Acceptable

Women: 25-31%
Men: 18-24%

Obesity

Women: $\geq 32\%$
Men: $\geq 25\%$

*Based on "expert opinion;" cut-off points not scientifically validated

Reference/s: [503]



		RANGE	POINTS	SCORE
BMI		18.5 - 24.9	0	
		25.0 - 29.9	1	
		30.0 - 39.9	2	
		> 40	3	
Waist Circumference	Male	</=40 in	0	
		>/=40 in	1	
	Female	</=35 in	0	
		>/=35 in	1	
Body Fat %	Male	</=25	0	
		>/=25	1	
	Female	</=35	0	
		>/=35	1	
Health Report Card			Total Points	

Total Points	Health Report Card
0	Green
1	Green
2	Yellow
3	Orange
4	Red
5	Red +

Table 2.1: Adult Weight Related Report Card based on Weight Related Health Indicators



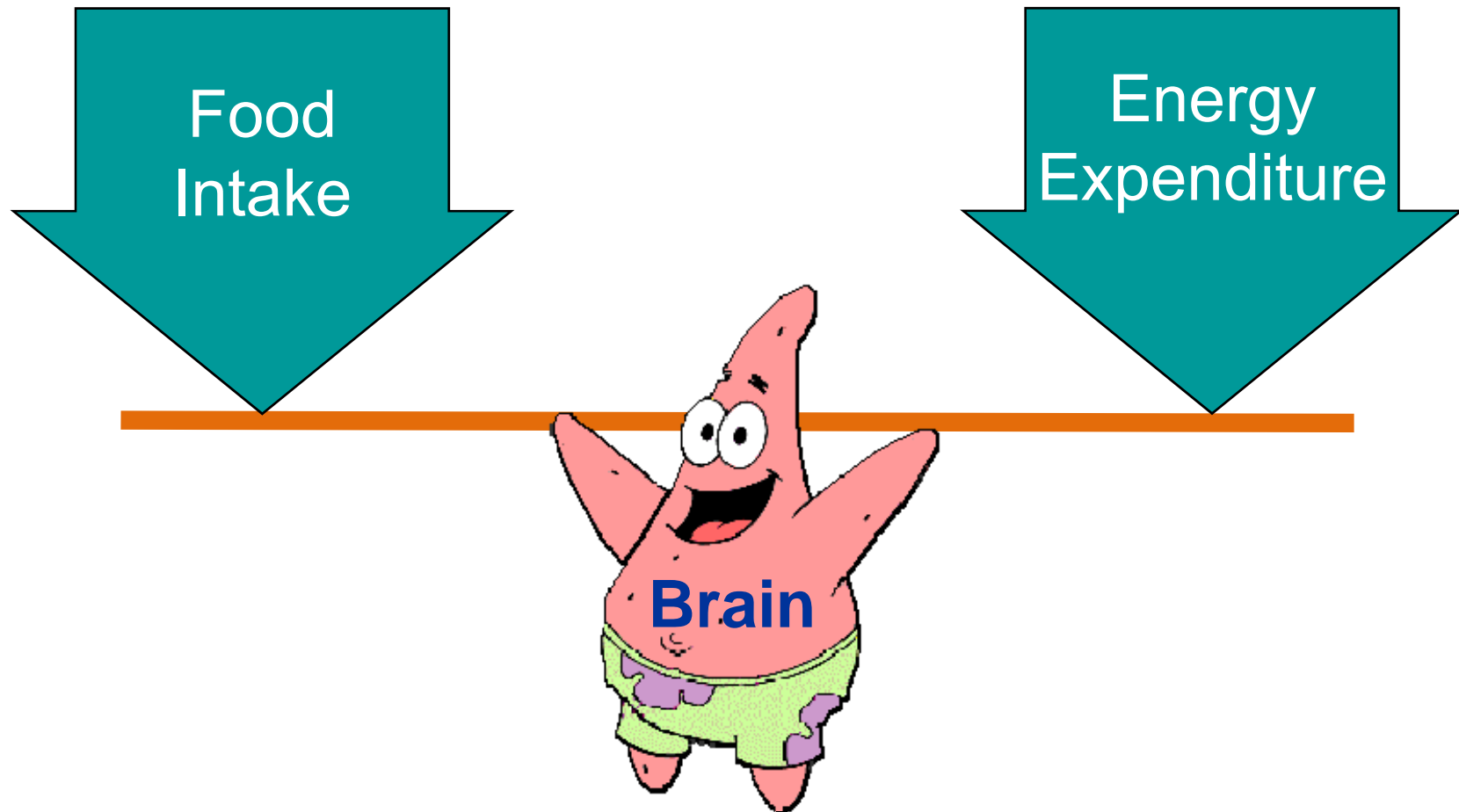


**HOW DOES SOMEONE BECOME
BIG?**



Weight and Energy Balance

Adding physiology to physics...



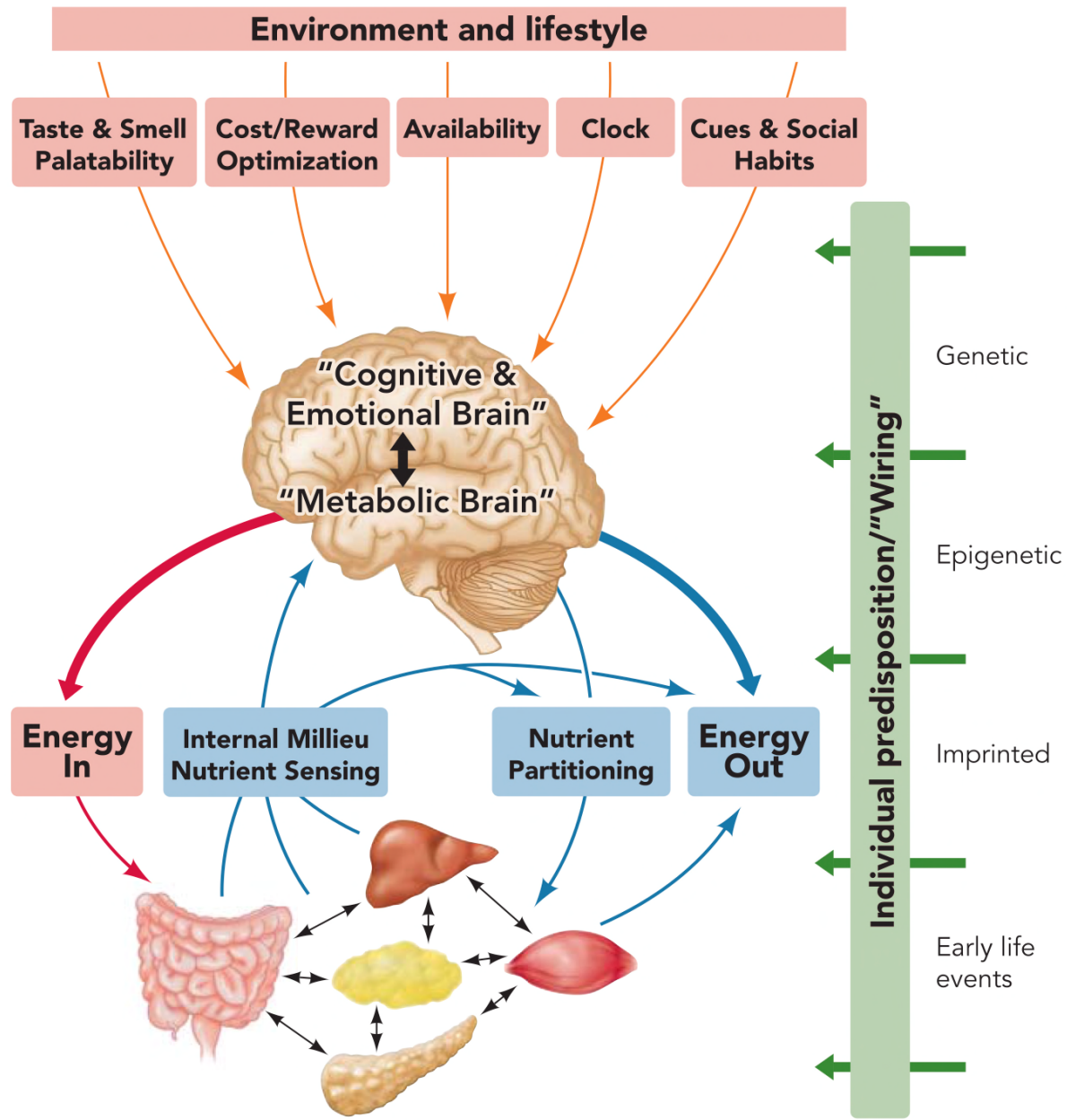


Figure 3.3 Schematic diagram showing the major factors determining neural control of appetite and regulation of energy balance



Genes, Imprinting, Epigenetic Changes

INHERITANCE



Drosophila aka “Fruit Fly”



SuVar

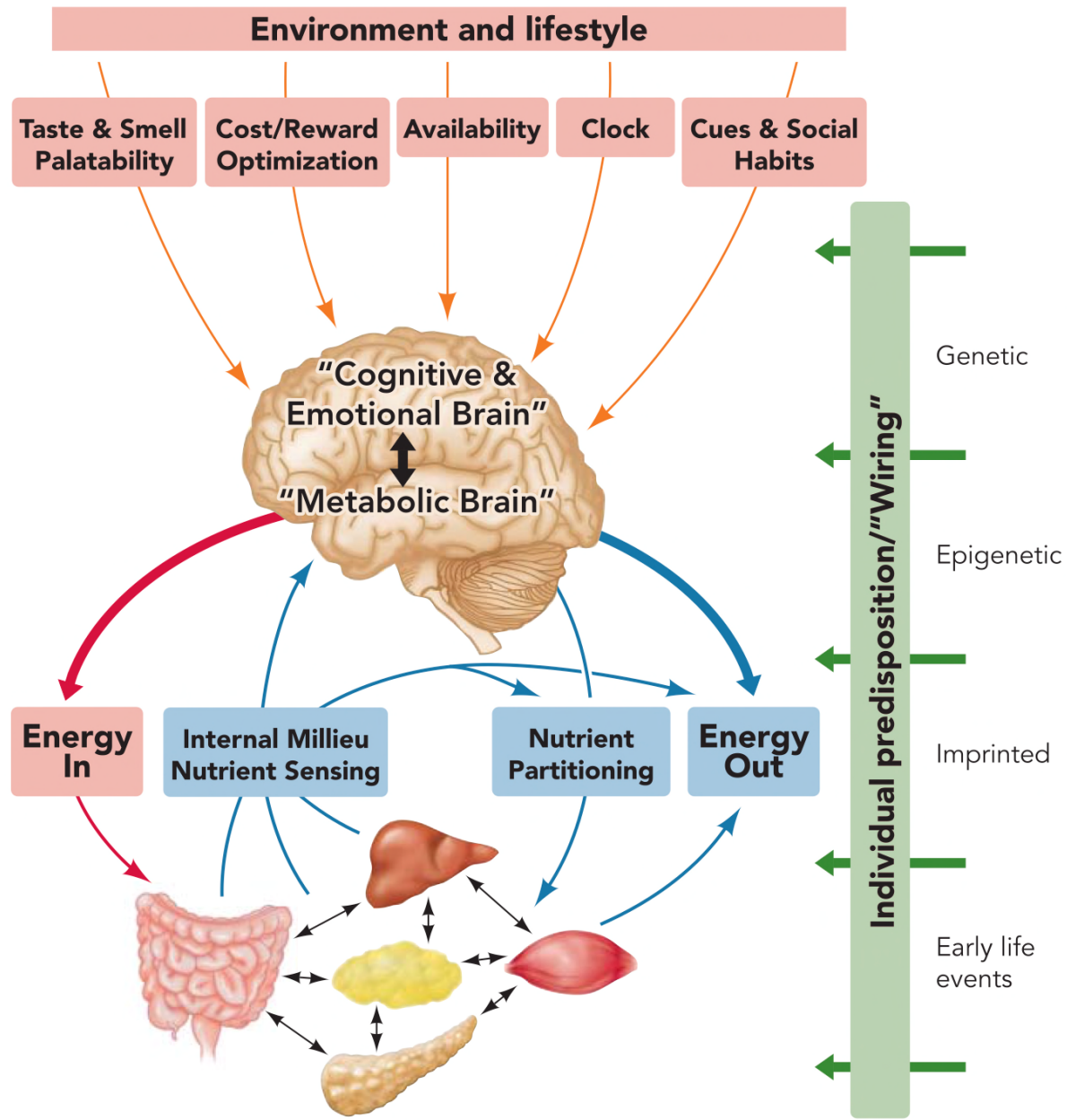


Figure 3.3 Schematic diagram showing the major factors determining neural control of appetite and regulation of energy balance



GUT-BRAIN AXIS





THE FAT CELL







WHAT ARE THE CONSEQUENCES





What is Horology?

The study of clocks and watches





A “Complication”

Any feature of a timepiece beyond
the simple display of hours and
minutes





Ultra-complicated watches

Breguet, Patek Philippe and
Vacheron Constantin





The “Super Complication”

Patek Philippe for Henry Graves, Jr. 1933

24 Complications

8 Years to design and build

Nighttime sky at Graves Home in NYC

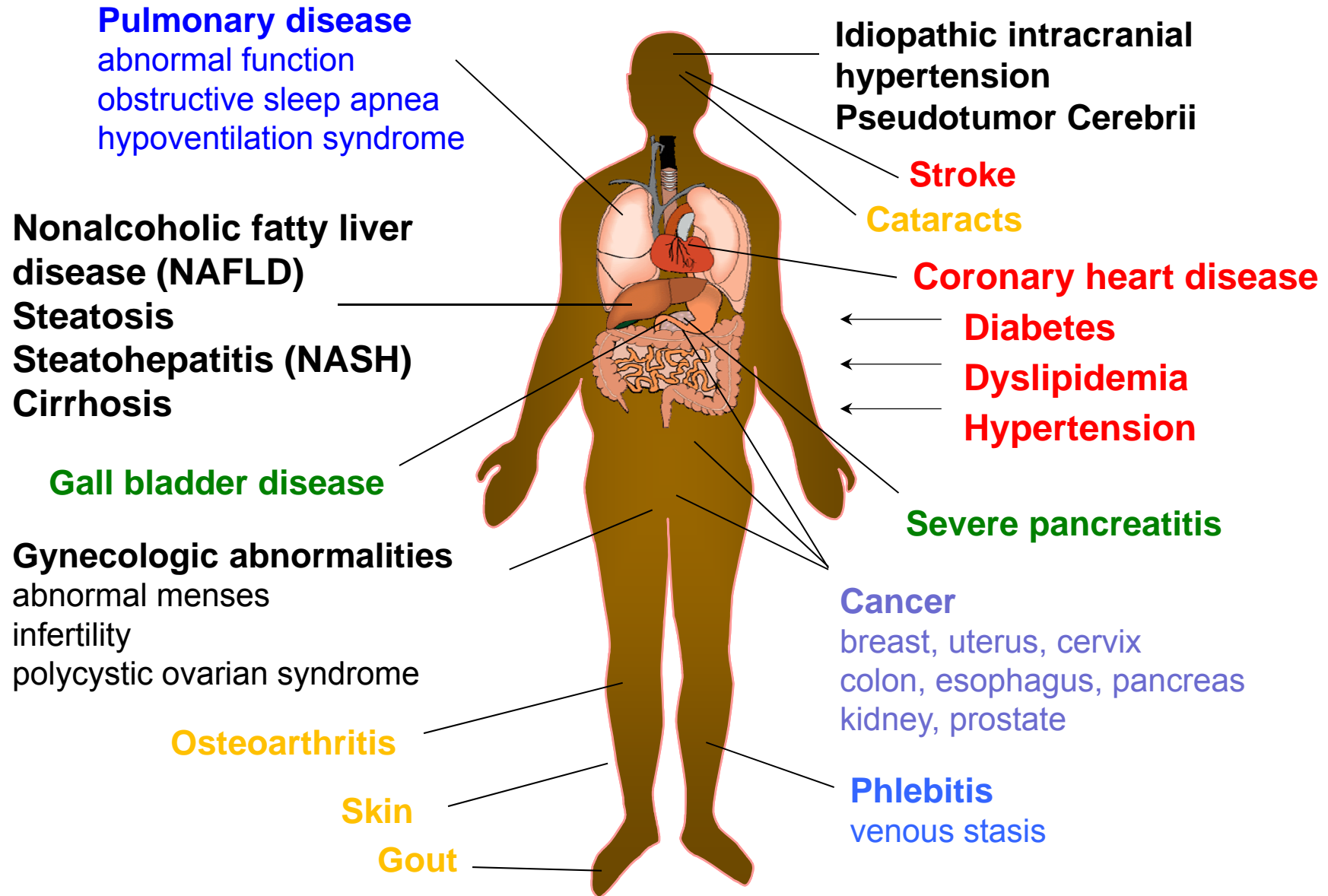
Sold in November of 2014 for \$24M dollars



**“COMPLICATIONS” ARE
EXPENSIVE**



Medical Complications of Obesity





Level 3

Devices/Surgery

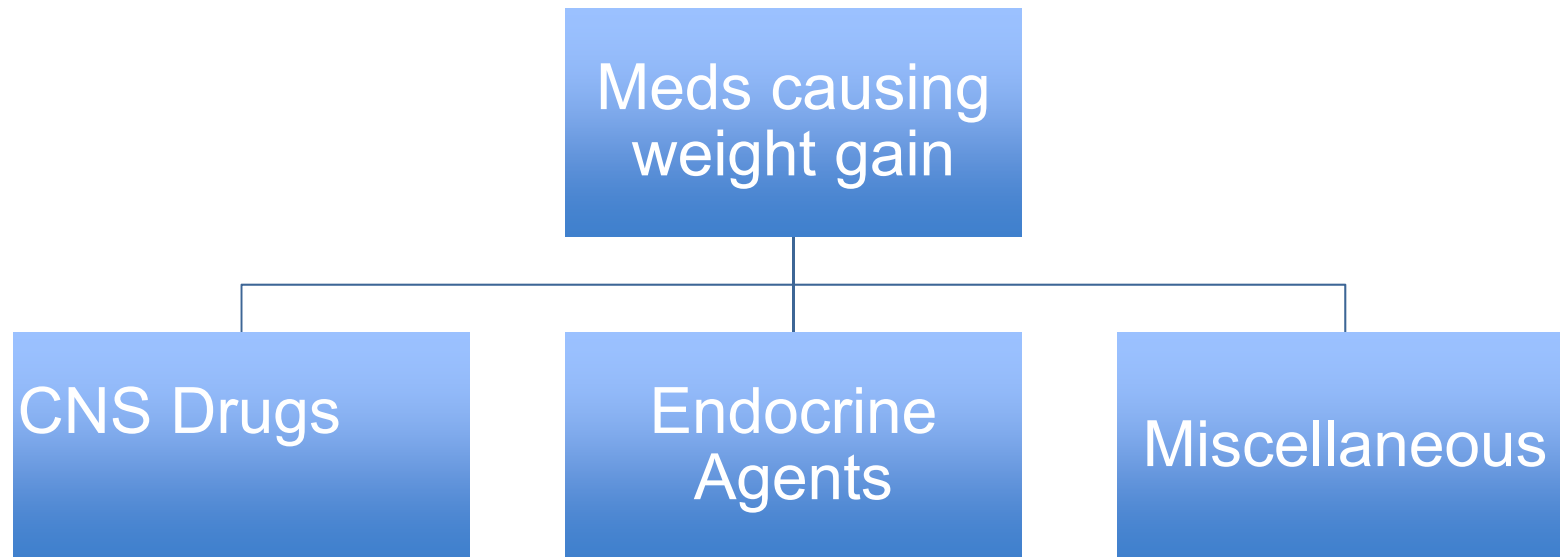
Level 2

Medications

Level 1

Lifestyle Management





Leslie WS et al. (2007). Weight gain as an adverse effect of some commonly prescribed drugs: a systematic review.QJM. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/17566010>

Expectations of Weight Loss

Medication	Dose	Duration	Study	%Wt loss over placebo
Orlistat	120mg TID	1 yr, 4 yr	XENDOS	3.8/2.5
Phentermine	30mg	9-12 months		8.1
Qsymia	7.5/46; 15/92	2 yr	SEQUEL	7.5/8.8
Lorcaserin	10mg BID	1 yr	BLOOM	3.6
Bupropriion SR+Naltrexone SR	360/32	1 yr	COR-II	5.2
Metformin	850mg BID	2.8 yr	DPP	2.5
Intensive lifestyle +meal replacements		1 year/4 yr	LOOK AHEAD	7.9/3.6
Intensive lifestyle alone		1 yr	DPP	6.9

Goldie Hawn's daughter Kate Hudson weds a rock star

JANUARY 16, 2007

People

weekly



HALF HER SIZE!

Seventeen months after stomach-reducing surgery, singer **CARNIE WILSON** has dropped 150 lbs. and 20 dress sizes. 'I can't believe it's me in that tiny body!'



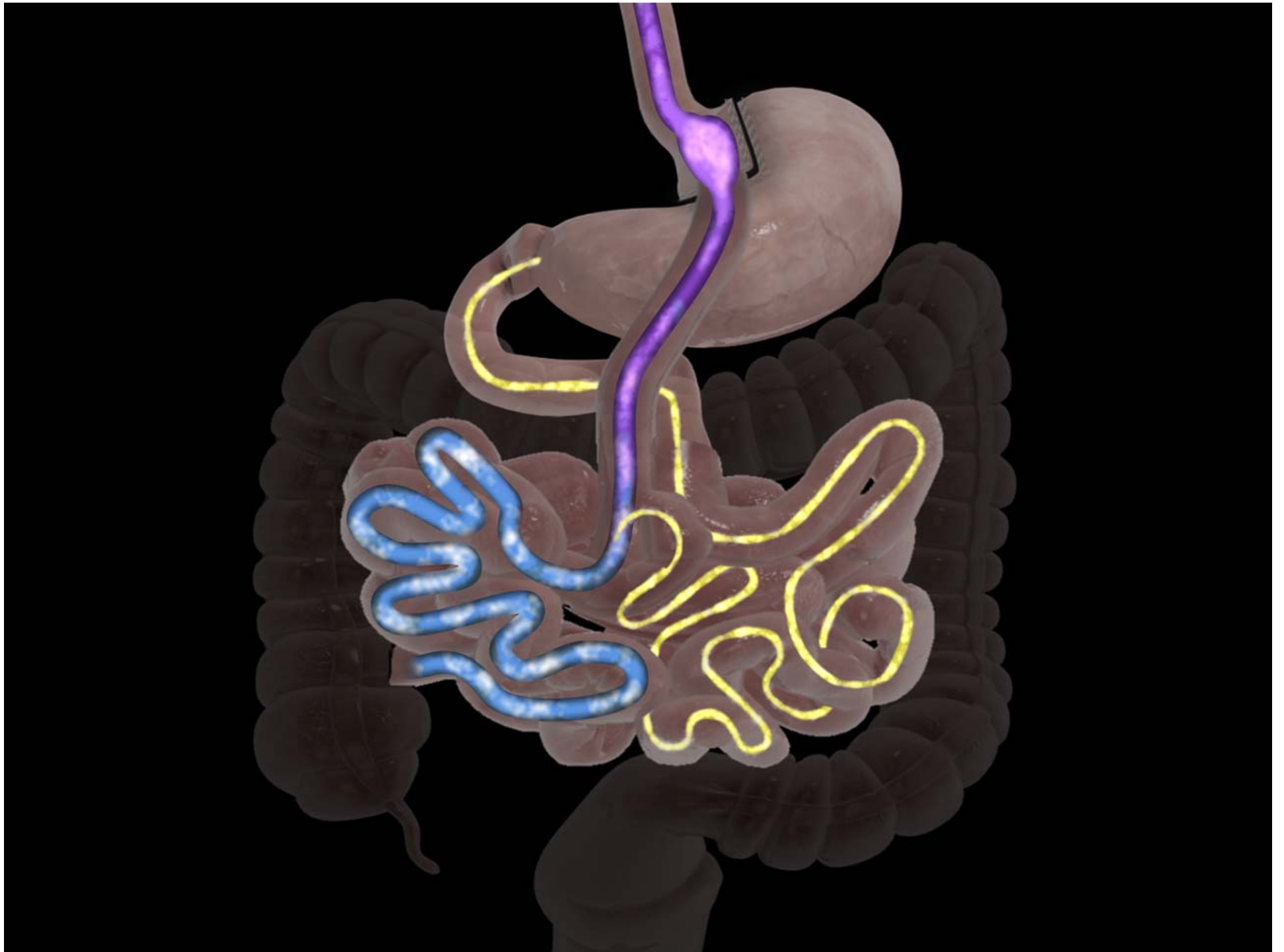








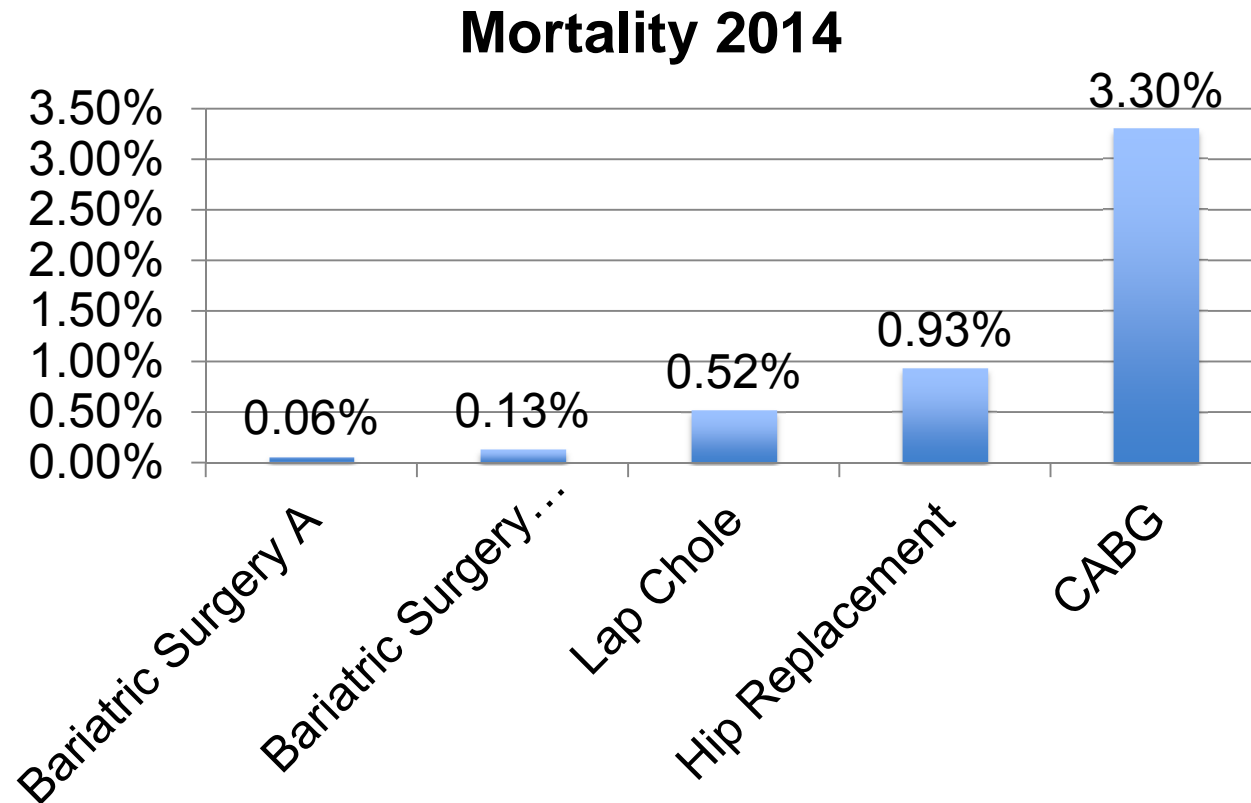








Morton J. Does hospital accreditation Impact Bariatric Surgery Safety?
Ann Surg 2014 Sep 260(3)504-9



A = national accredited surgeons NA = Non-accredited

Nationally >96% performed with laparoscopic approach


Postoperative complications in bariatric surgery using age and BMI stratification:
a study using ACS-NSQIP Data

Variable	LRYGB (N=11,617)	LSG (N=3,069)	LAGB (N=5,622)
Morbidity, n (%)	589(5.1%)	98 (1.4%)	114 (3.7%)
Mortality, n (%)	19 (0.2%)	3 (0.1%)	3 (0.1%)
Reoperation, n (%)	255 (2.2 %)	48 (1.6%)	55 (1.0%)
Op time, mean mins(SD)	126.5 (50.6)	93.3 (45.9)	64.2 (31.5)
LOS, median days(IQR)	2.0 (1.0)	2.0 (1.0)	1.0 (1.0)

Sanni A et al. Postoperative complications from NSQIP data registry Surg Endosc 2014 At



Risks of Surgery

- Immediate
 - Bleeding
 - Leaks
 - Blood Clots
 - Medium Term
 - Stricture
 - Ulcers
 - Gallstones
 - Long Term
 - Vitamin Deficiencies
 - Bowel Obstruction
- 

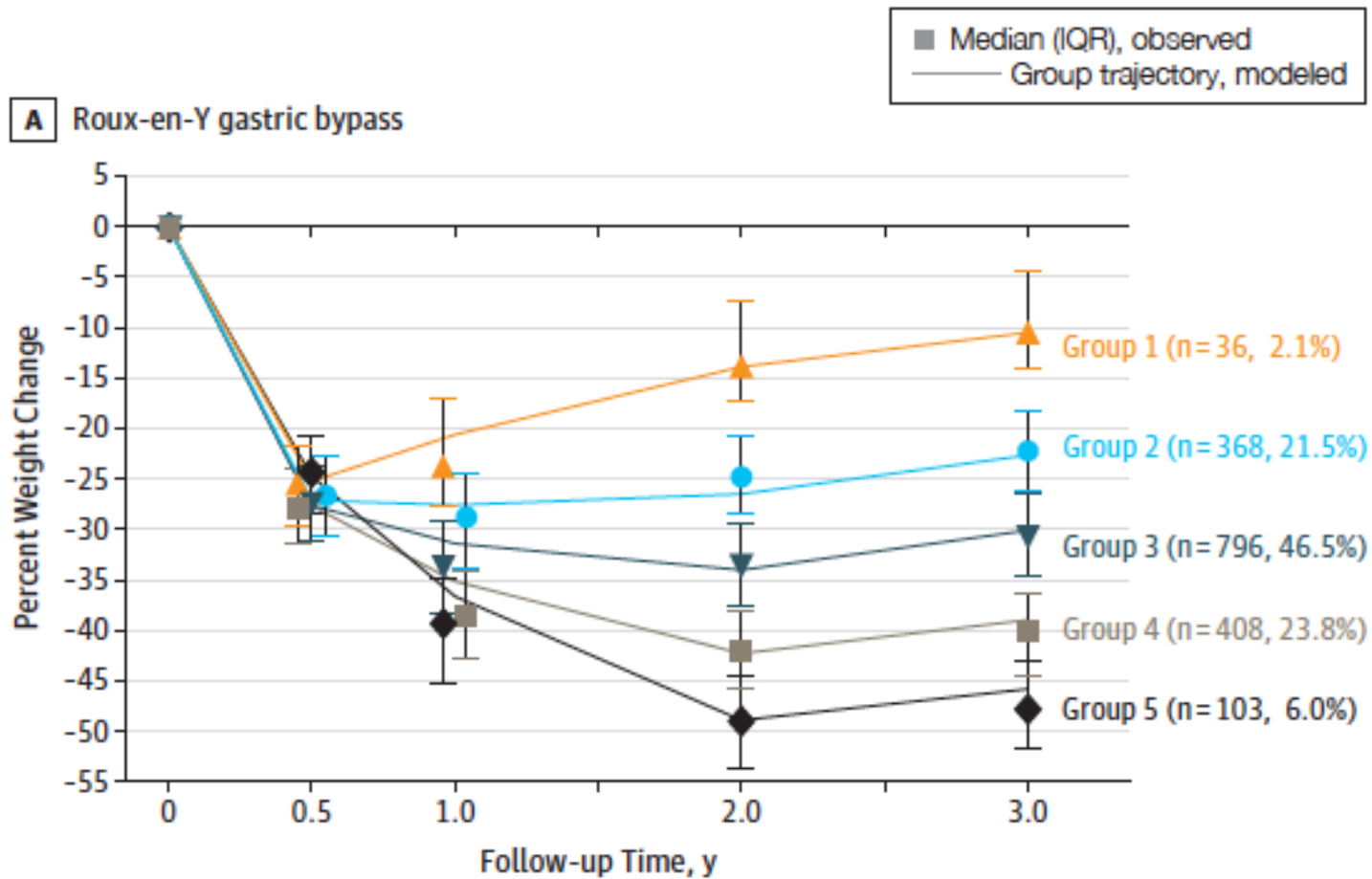


WEIGHT REGAIN



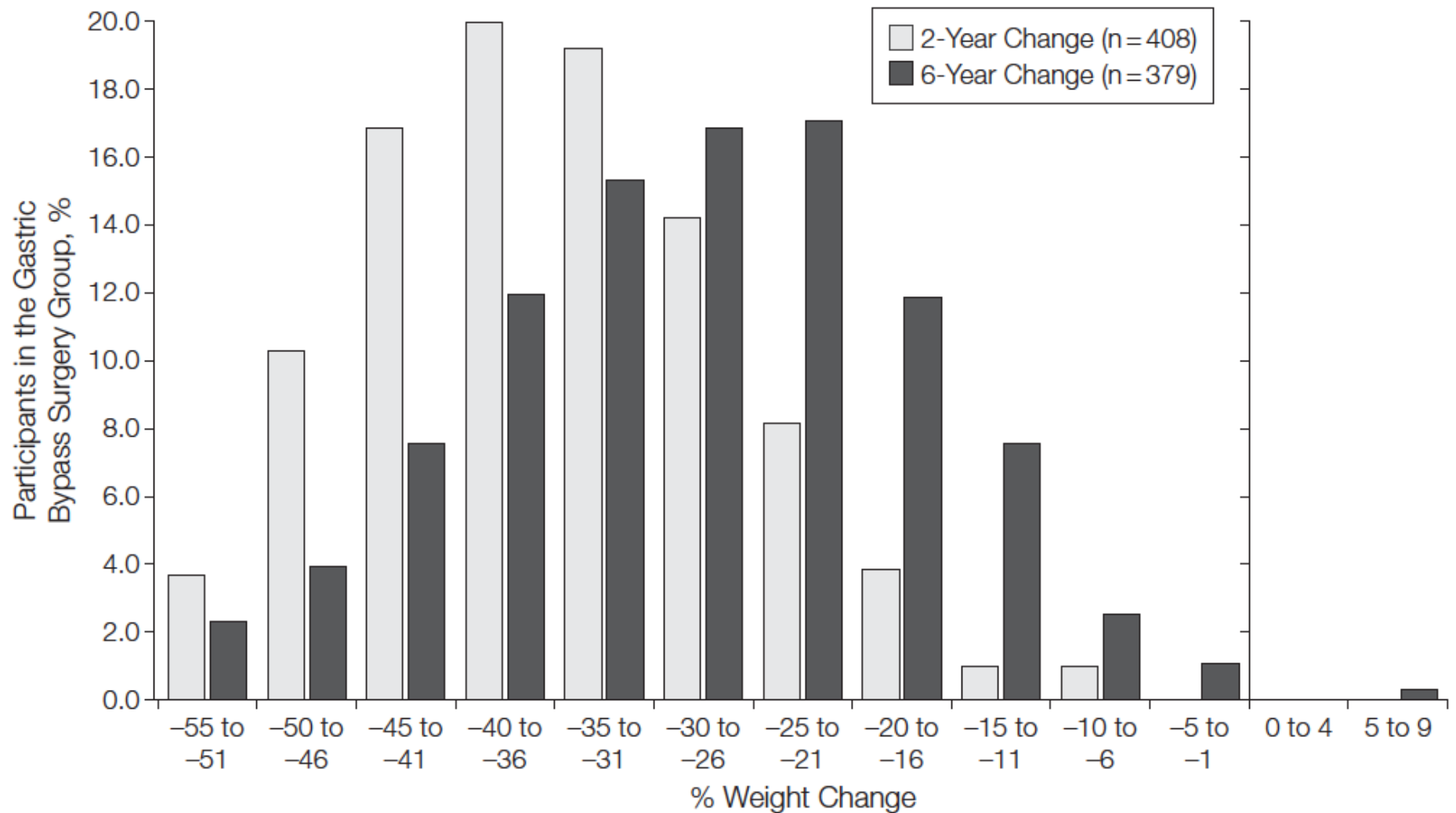
Variability in Response to RYGB

Figure 3. Percent Weight Change Trajectories



Courcoulas AP et al. Weight Change and Health Outcomes at 3 years after Bariatric Surgery JAMA 2013 Nov 4

Figure 2. Frequency Distribution of Percentage Weight Change From Baseline to 2-Year and 6-Year Follow-up Examinations



The percentages of participants in the gastric bypass surgery group are shown grouped by 5% of unadjusted baseline weight loss intervals at the 2-year and 6-year follow-up examinations.



Remission of Disease


- NAFLD
- Type 2 Diabetes
- Musculoskeletal Problems
- HTN





**THE VARIATION IN RESPONSE TO
SURGERY IS IN THE PATIENT**





Examples of Types of Secondary Bariatric Surgery Procedures


- Correction of complications from previous procedure
 - Erosion of Adjustable Gastric Band
 - Removal of Adjustable Gastric Band for esophageal dilatation
- Conversion of primary MBS procedure to another secondary MBS procedure
 - Band to Sleeve or Bypass
 - Sleeve to Duodenal Switch
- Revision of primary procedure
 - Lengthening of Roux Limb in RYGB
 - Re-Sleeve
 - Banding the bypass





Kiara and her sister, Linda
The beach at Rocky Point, Mexico, 2005





“...you shouldn’t spend one minute of your life doing something you’re not passionate about. I understand that someone has to take out the garbage, and do the dishes, and it’s probably you. But, in terms of the strategy of your life and the day to day movement of your life, every day you should do something you believe in.”

~Robin Blackstone, Medical Outliers





“Knowing is not enough; we must apply.
Willing is not enough; we must do.”
Goethe

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