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EMPOWERING **P**ATIENTS
FOR
INDIVIDUALIZED **C**CARE



ADULT TRACK

WEIGHT MANAGEMENT: KEEPING UP WITH A MOVING TARGET



Dan Bessesen, MD
Professor of Medicine

Division of Endocrinology, Metabolism and Diabetes

University of Colorado, School of Medicine

Director, Anschutz Health and Wellness Center



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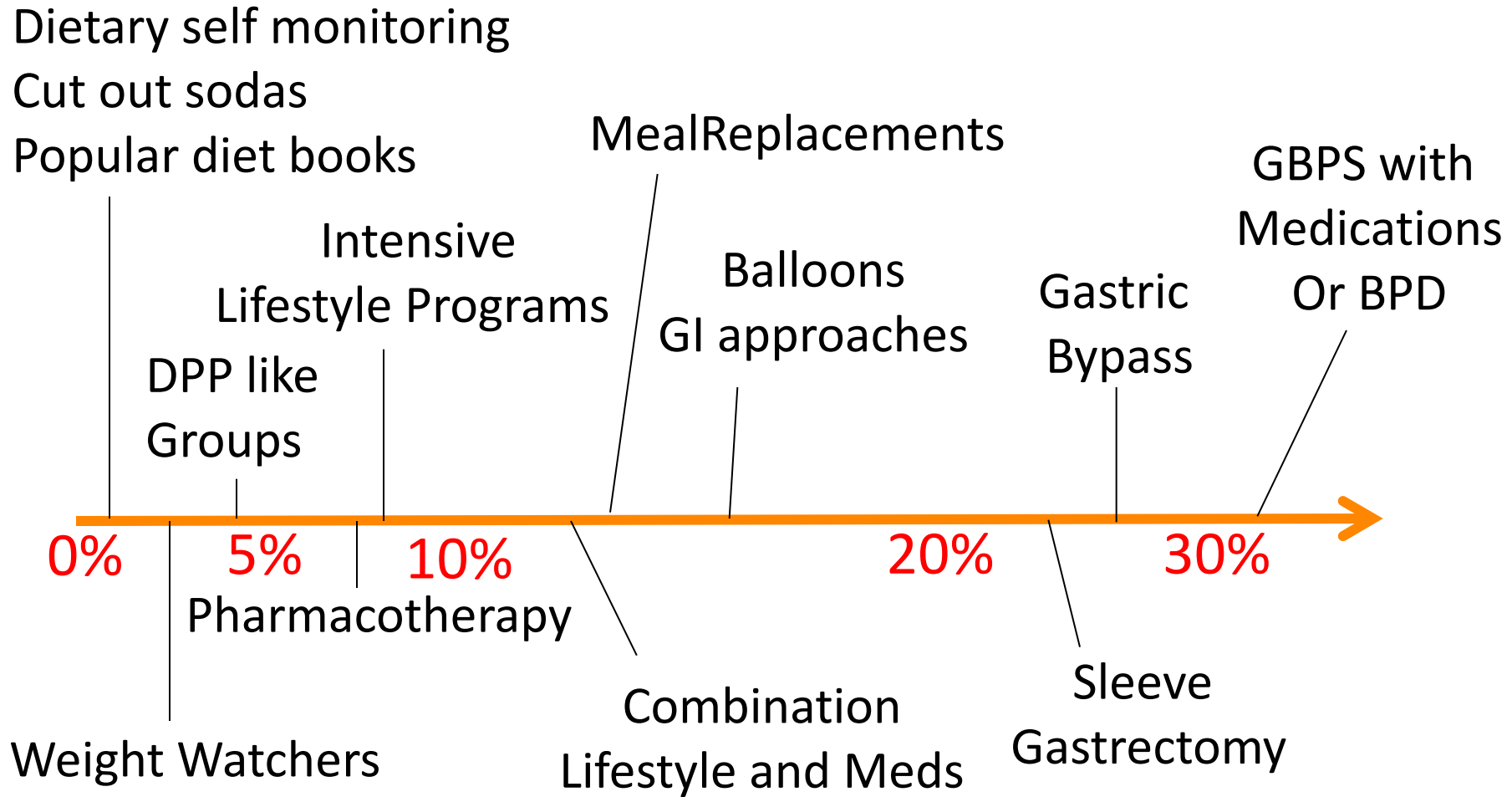
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A GUIDE TO SELECTING TREATMENT

Treatment	BMI category				
	25-26.9	27-29.9	30-34.9	35-39.9	≥40
Diet, physical activity, and behavior therapy	With co-morbidity	+	+	+	+
Pharmacotherapy		With co-morbidity	+	+	+
Surgery				With co-morbidity	+



Treatment Options: Effectiveness

LIFESTYLE

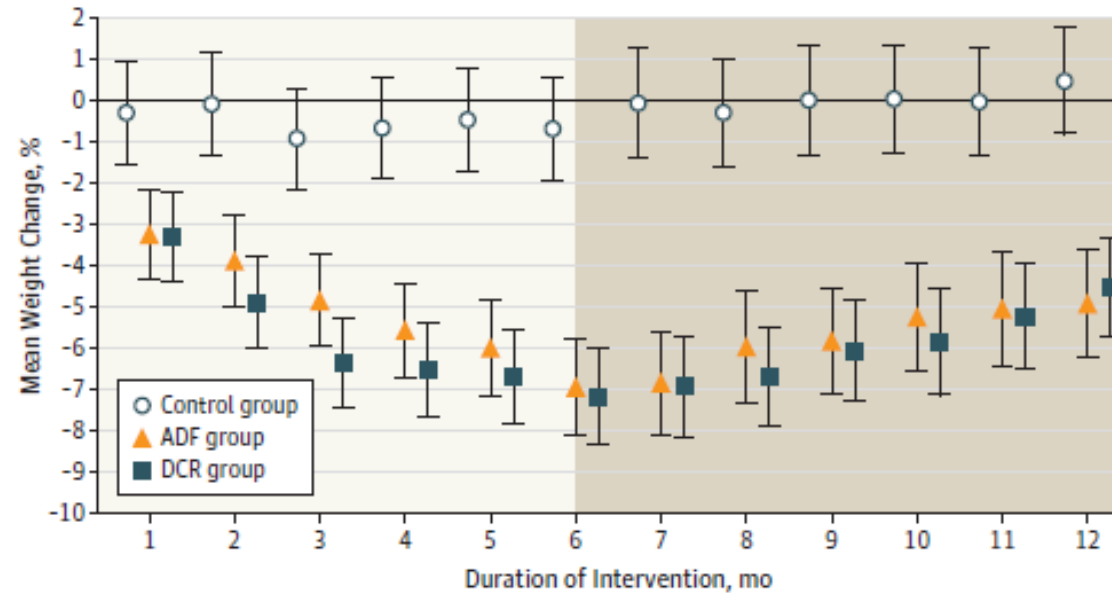
Low fat calorie restricted diet delivered in a group setting is the gold standard (DPP)

Look Ahead trial showed this diet improves many metabolic markers but did not lower mortality.

Individuals who lost >10% of their bodyweight in the 1st yr of the study had a 21% lower risk of the 1^o outcome (p=0.034) and a 24% reduced risk of the 2^o outcome (p=0.003)

ALTERNATE DAY FASTING

Figure 3. Weight Loss by Diet Group Relative to Baseline



Data were included for 100 participants; mean (SD) values were estimated using an intention-to-treat analysis with a linear mixed model. Error bars indicate 95% CIs for weight change from baseline by diet group at each time point (1-12 months). ADF indicates alternate-day fasting; DCR, daily calorie restriction.

WEIGHT LOSS MEDICATIONS

6 medications are FDA approved to help people lose more weight than they would on diet/exercise alone.

The average weight loss is 5-12%, but weight lost is variable. Typically occurs over 3-6 months.

Insurance often does not pay for them so cost may be an issue.

These medicines only work as long as patients take them. Could take for 3-4 months see what the pros and cons are then decide on long term use.

WEIGHT LOSS MEDICATIONS

Medication	Mechanism	Wt Loss	Concerns	Key Feature
Phentermine	Increases central NE	3-5%	BP, pulse, CVD	Least expensive
Orlistat	Blocks dietary fat absorption	3-5%	Diarrhea, vitamins	Safest (OTC)
Phentermine/ Topiramate	NE/GABA	8-10%	Pregnancy, CVD	Most effective pill
Naltrexone/ Bupropion	Opiate antagonist /DNSI	5-7%	Suicidal ideation Narcotics	? Depression intermediate
Liraglutide 3 mg	GLP-1 agonist	5-8%	Nausea, injection site reaction	Diabetes intermediate
Semaglutide 2.4 mg	GLP-1 agonist	10-12%	Nausea, injection site reaction	Diabetes Most effective

Lancet Diabetes Endocrinol. 2018 Mar;6(3):237-248.

NEW MEDICATIONS

Combination of semaglutide with cagrilintide (amylin analogue):
at the high dose weight loss of up to 17%

Tirzepatide (dual GLP-1 and GIP agonist): 21% weight loss

Awaiting cardiovascular safety studies

Future is combination therapy

Cost will be a major factor

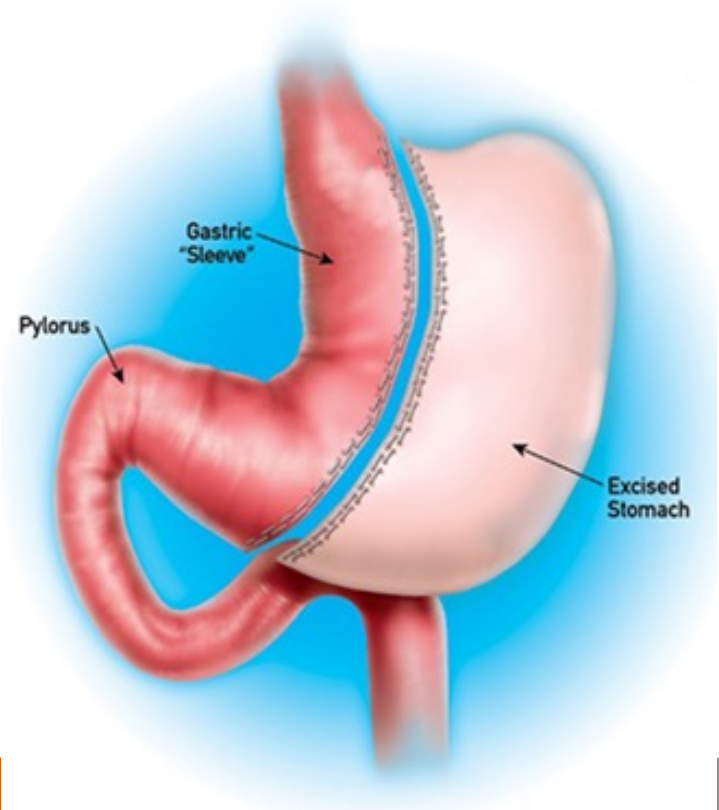


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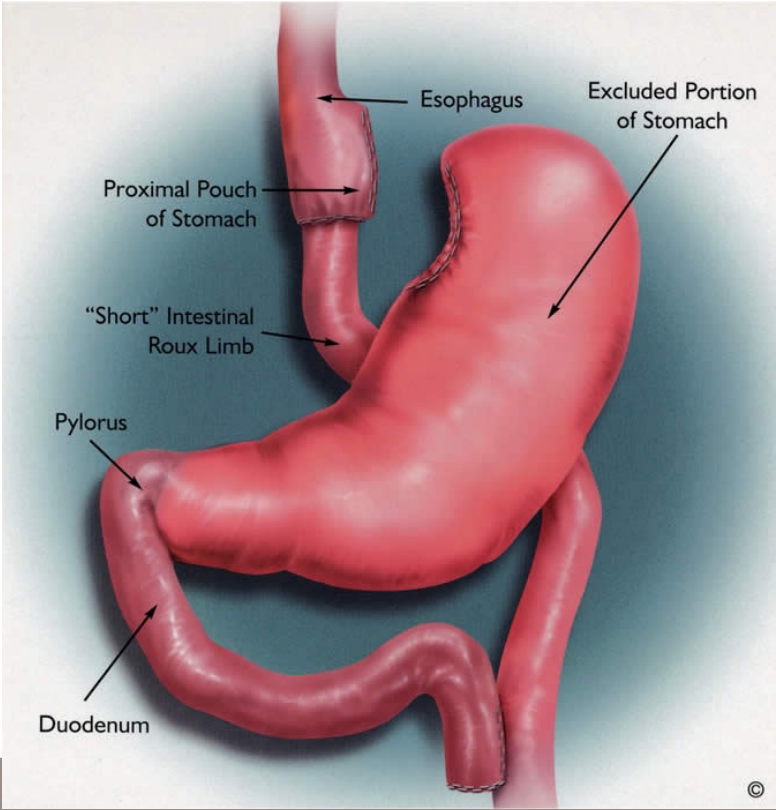
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Sleeve Gastrectomy

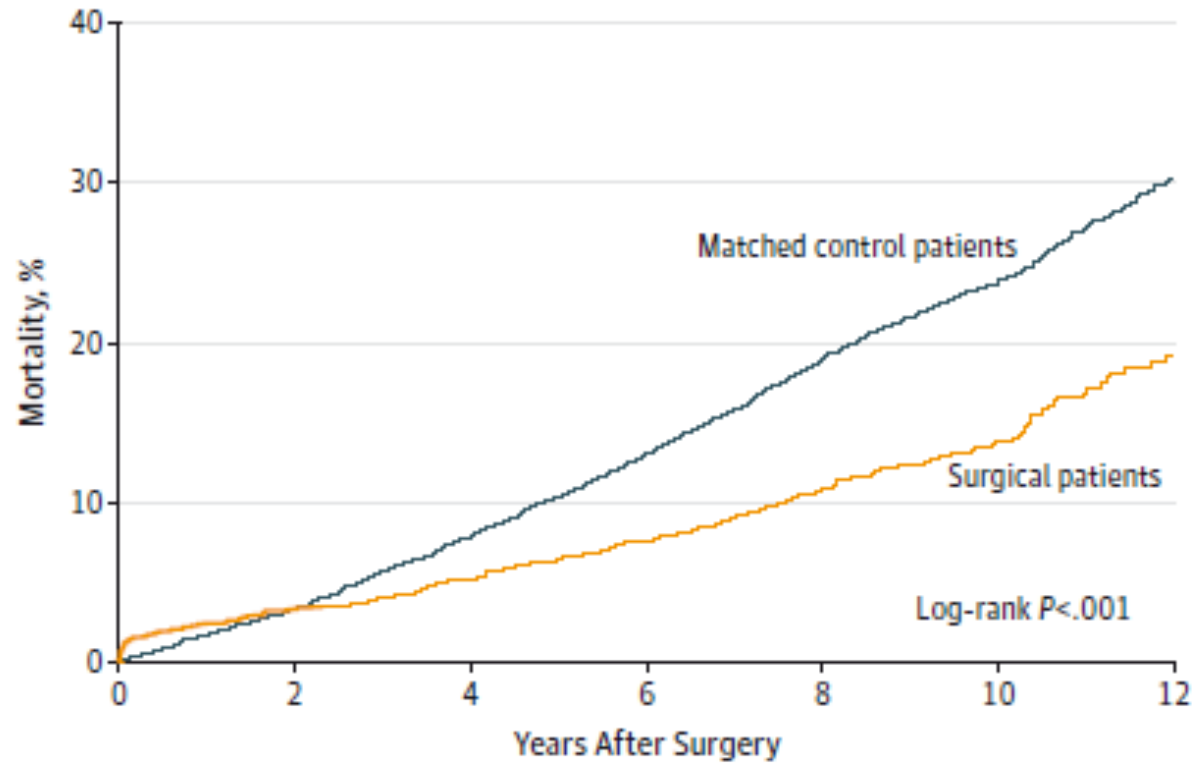


Gastric Bypass



Bariatric Surgery and Mortality (VA)

Figure. Kaplan-Meier Estimated Mortality Curves for Surgical Patients and Matched Control Patients



No. at risk							
Matched control patients	7462	7114	5306	3878	2641	1407	472
Surgical patients	2500	2416	1868	1412	1004	552	185

Primary and Secondary Endpoints at 5 Years

N Engl J Med 2017;376:641-51.

Parameter	Medical Therapy (n=38)	Bypass (n=49)	Sleeve (n=47)	P Value ¹	P Value ²
HbA1c ≤ 6%	5%	29%	23%	0.005	0.02
HbA1c ≤ 6% (without DM meds)	0%	22%	15%	0.002	0.02
HbA1c ≤ 7%	21%	51%	49%	0.004	0.008
Median change in FPG (mg/dL)	-14	-72	-49	<0.001	0.01
Relapse of glycemic control	80%	40%	50%	0.16	0.34
% change in HDL	+7	+32	+30	0.003	0.008
Median % change in TG	-8	-40	-29	0.01	0.02

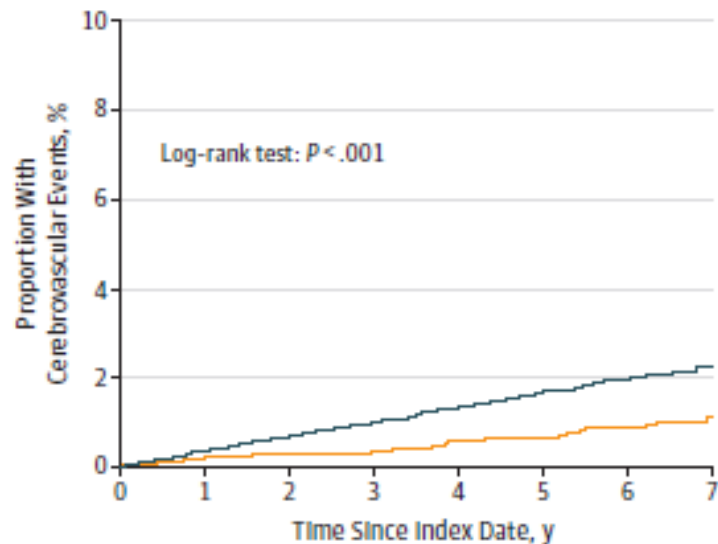
¹ Gastric Bypass vs Medical Therapy; ² Sleeve vs Medical Therapy

BARIATRIC SURGERY AND MACROVASCULAR DISEASE

Pts with DM undergoing weight loss surgery (n = 5301) were matched to 14 934 control patients on site, age, sex, body mass index, hemoglobin A1c, insulin use, observed diabetes duration, and prior health care utilization

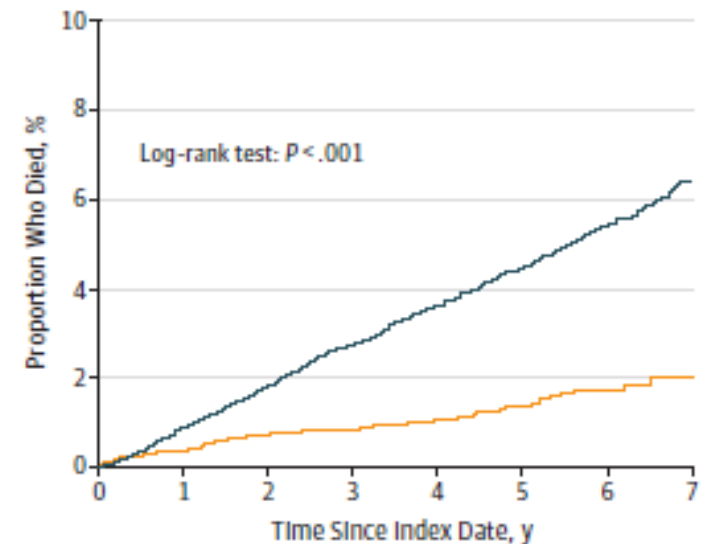
Figure 2. Cumulative Incidence Rates at All Study Sites

C Cerebrovascular events



Patients at risk		0	1	2	3	4	5	6	7
Matched nonsurgical patients		14934	13436	12190	11225	9614	6019	3797	2301
Bariatric surgery patients		5301	4796	4395	4072	3517	2267	1420	839

D All-cause mortality



Patients at risk		0	1	2	3	4	5	6	7
Matched nonsurgical patients		14934	13476	12257	11310	9712	6099	3860	2342
Bariatric surgery patients		5301	4804	4404	4082	3535	2278	1434	848

RISKS OF BARIATRIC SURGERY

Bypass: Death 0.1% (0-2%) Comparable to lap chole, better than hip replacement

B12 Deficiency, Fe deficiency, Calcium, Vitamin D deficiency, need for chronic vitamin replacements and monitoring

Trade off between sleeve and GBP

Suicide (malabsorption of anti-depressants?)

Pregnancy effects (benefits and question of risk)

SUMMARY

Intensity of treatment is related to weight and health conditions like diabetes

Options are lifestyle changes, anti-obesity medications and surgery

Weight loss appears to be very helpful for people with T2DM

A number of new medications coming along that may provide substantially more effectiveness



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