

data analysis on adverse outcomes was the basis of the development of a revisional procedure to develop a clinical pathway to reduce complications.

**Results:** The review showed gastric leak (8.2%) to be the most common revisional complications at our hospital, followed by respiratory problems (2.7%). There was also an interesting finding noted regarding the relationships among primary procedure, revisional procedure, LOS, and complication rate. These data guided the development and implementation of a new clinical pathway addressing appropriate nursing assessments and interventions for these patients. Staff nurses received classroom and bedside clinical training on using this clinical pathway to guide their practice. The efficacy of this pathway needs to be regularly evaluated in regards to rate of complication, sequelae and LOS.

**Conclusion:** Revisional patients carry an increased risk of complications related to various pre-existing conditions. Development and implementation of a specific clinical pathway aims to improve the quality of care of revisional patients.

#### IH-108.

##### OBJECTIVE QUANTIFICATION OF AMOUNT AND INTENSITY OF PHYSICAL ACTIVITY (PA) IN BARIATRIC SURGERY CANDIDATES AND AGE- AND SEX-MATCHED NORMAL WEIGHT (NW) CONTROLS

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**Background:** Physical Activity (PA) is an important component of weight loss programs and may be encouraged for patients undergoing bariatric surgery. However, it is unclear how PA patterns may differ between bariatric surgery candidates and Normal Weight (NW) individuals when PA is assessed objectively. This study used objective PA measures to: 1) assess levels of PA at different intensities in bariatric surgery candidates and 2) compare these PA levels with those of NW individuals within the context of public health PA recommendations.

**Methods:** PA was objectively assessed in 27 surgery candidates [83% female; M age=47.8y; (BMI)=45.6±6.2 kg/m<sup>2</sup>] and 18 NW (82% female; M age=47.9y; BMI=22.5±1.3 kg/m<sup>2</sup>) participants via triaxial accelerometry. Time (min/day) spent in light (2.00-2.99 METs), moderate (3.00-4.99 METs) and vigorous (≥5 METs) PA by surgery candidates and NW participants were compared.

**Results:** Time (min/day) spent in PA at ≥ 2 METs was comparable between surgery candidates (143.4±39.3) and NW participants (143.8±69.7) (p=0.984). Similarly, min/day spent in light and moderate PA was not different between groups. However, surgery candidates spent fewer min/day in vigorous PA (11.8±13.8 vs. 21.7±12.0, p=0.017). Additionally, 5% of surgery candidates accumulated ≥ 150 weekly minutes of moderate-or-

vigorous PA in ≥10-minute bouts versus 39% of NW participants (p=0.004).

**Conclusion:** When compared to NW individuals, bariatric surgery candidates appear to spend comparable time performing PA at ≥2 METs. However, they spend less time in vigorous PA, which may affect energy expenditure. Moreover, they are less likely to perform PA in bouts of sufficient duration and intensity to meet PA recommendations for improving health outcomes. Additional investigation is warranted to examine the effects of PA patterns and intensity on weight and health outcomes in bariatric surgery candidates.

#### IH-109.

##### CAN HEALTHCARE PROVIDERS INCREASE PERIOPERATIVE EXERCISE BEHAVIOR IN BARIATRIC PATIENTS?

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**Background:** Exercise is thought to augment weight loss in bariatric surgical patients. This study is designed to determine whether verbal encouragement by healthcare professionals can increase perioperative physical activity in bariatric surgical patients.

**Methods:** 41 surgical candidates were prospectively randomized and all were instructed to exercise 30 minutes a day. Patients in the intervention group were contacted weekly via telephone and strongly encouraged to exercise. Providers specifically discussed ways to overcome barriers to exercise. The control group was simply asked if they were exercising. Patient activity was recorded using an accelerometer (Actical, Respironics, Inc) worn continuously for 7 days. Data was recorded preoperatively at baseline, 30 days later and at 8 weeks postoperatively.

**Results:** There were 25 subjects in the intervention group and 16 in the control group. 8 patients in the intervention group and 5 patients in the control group did not complete the study. At baseline the intervention group had a weekly average total energy expenditure (AEE) of 37,143 (± 5,759) Kcal while the control group's average was 31,666 (± 9,522) Kcal. At 30 days, the intervention group's AEE was 34,385 (± 1,386) Kcal while the control group's average was 33,625 (± 9,895) Kcal (p = 0.50). Weight loss was noted in both groups prior to the operation: study group (3.1 ± 4.7 lbs) and control group (6.4 ± 8 lbs).

**Conclusion:** Extensive verbal encouragement alone did not increase baseline activity or energy expenditure and 32% of patients did not exercise at all or refused to wear the accelerometer. Those who did exercise were able to maintain high AEE and this may lead to significant clinical weight loss in the perioperative period.

#### IH-110.

##### PREDICTORS OF WEIGHT LOSS FOLLOWING BARIATRIC SURGERY: A SYSTEMATIC REVIEW

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**Background:** Obesity is a major health concern that affects 32% of adults in the United States. Surgical treatment generates substantial results, but 20-30% of patients fail to achieve successful weight loss (>50% excess weight loss).

**Methods:** We performed a literature search of PubMed® between 1988 and February 2008. We searched for bariatric surgery and exercise, preoperative weight loss, eating disorders, nutrition, depression, social support, patient expectations, energy, follow-up, and weight loss failure.

**Results:** Of 464 screened articles, 140 were included. Because of heterogeneity in study design and measurement of weight loss outcomes, data pooling was not possible. The main predictors of weight loss include preoperative weight loss, postoperative eating habits, exercise, and surgeon follow-up.

**Conclusion:** The identification of predictive factors will allow for better patient selection and interventions targeting specific needs of patients. Structured postoperative programs (for exercise and

diet maintenance) should be a mandatory part of follow-up for these operations.

#### Predictive factors of postoperative weight loss

Domain	# Total Articles	# Positive Effect	# No Effect	# Negative Effect	Overall Effect*
[Depression]	[10]	[0]	[7]	[3]	[Inconclusive]
[Psychiatric]	[39]	[8]	[2]	[5]	[Inconclusive]
Sexual abuse		[7]	[1]	[2]	[Inconclusive]
Therapy Personality d/o					[Positive]
[Preop Weight Loss]	[9]	[5]	[4]	[0]	[Positive]
[Preop Eating Disorder]	[30]	[16]	[4]	[3]	[Inconclusive]
Binge eating		[5]	[3]	[1]	[Inconclusive]
Sweet eating					[Inconclusive]
[Postop Eating Disorder]	[32]	[9]	[3]	[3]	[Negative]
Binge eating					[Negative]
Sweet eating					[Negative]
[Exercise]	[11]	[9]	[2]	[0]	[Positive]
[Follow-up]	[3]	[3]	[0]	[0]	[Positive]
[Social Support]	[6]	[2]	[3]	[1]	[Inconclusive]
[Energy Intake]	[6]	[1]	[3]	[2]	[Inconclusive]

\*Inconclusive: studies had conflicting results.