



**FACT SHEET**

**CONTACT:** Amber Hamilton  
212-266-0062

**METABOLIC AND BARIATRIC SURGERY**

**OVERVIEW**

- Bariatric surgery has been shown to be the most effective and durable treatment for morbid obesity<sup>1</sup>
- Surgery results in significant weight loss and helps prevent, improve or resolve more than 40 obesity-related diseases or conditions including type 2 diabetes, heart disease, obstructive sleep apnea and certain cancers<sup>2,3,4</sup>
- Individuals with morbid obesity or BMI $\geq$ 30 have a 50-100% increased risk of premature death compared to individuals of healthy weight<sup>5</sup>
- Studies show surgery reduces a person's risk of premature death by 30-40%<sup>6,7</sup>
- Clinical studies have demonstrated significant improvements in safety, showing that the risk of death is 0.1%,<sup>8</sup> and the overall likelihood of major complications is about 4%<sup>9</sup>

**SAFETY AND RISKS**

- Agency for Healthcare Research and Quality (AHRQ) and recent clinical studies report significant improvements in metabolic and bariatric surgery safety<sup>10</sup>
  - Primary reasons for improved safety include the increased use of laparoscopy, advancements in surgical techniques,<sup>11</sup> and ASMBS and American College of Surgeons (ACS) accreditation program
    - Laparoscopic bariatric operations increased from 20.1% in 2003 to 90.2% in 2008<sup>12</sup>
- Overall mortality rate is about 0.1%<sup>13</sup> -- less than gallbladder (0.7%)<sup>14</sup> and hip replacement (0.93%) surgery<sup>15</sup> -- and overall likelihood of major complications is about 4.3%<sup>16</sup>
- Clinical evidence shows risks of morbid obesity outweigh risks of metabolic and bariatric surgery<sup>17,18</sup>
  - Individuals with morbid obesity or BMI $\geq$ 30 have a 50-100% increased risk of premature death compared to individuals of healthy weight<sup>19</sup>
- Studies show metabolic and bariatric surgery increases lifespan<sup>20,21</sup>
  - Gastric bypass patients may improve life expectancy by 89%
  - Patients may reduce risk of premature death by 30-40%

**EFFECTIVENESS**

- Studies show patients typically lose the most weight one-to-two years after surgery, and maintain substantial weight loss with improvements in obesity-related conditions<sup>22</sup>
  - Patients may lose as much as 60% of excess weight six months after surgery, and 77% of excess weight as early as 12 months after surgery<sup>23</sup>
  - On average, five years after surgery, patients maintain 50% of their excess weight loss<sup>24</sup>

## **METABOLIC AND BARIATRIC SURGERY IMPACT ON MORTALITY**

- Helps to improve or resolve more than 40 obesity-related diseases and conditions, including type 2 diabetes, heart disease, certain cancers, sleep apnea, GERD, high blood pressure, high cholesterol, sleep apnea and joint problems<sup>25,26,27</sup>
  - 60% reduction in mortality from cancer, with the largest reductions seen in breast and colon cancers<sup>28</sup>
  - 56% reduction in mortality from coronary artery disease
  - 92% reduction in mortality from type 2 diabetes
  - 40% overall reduction in mortality in gastric bypass patients<sup>29</sup>

## **MEDICAL OUTCOMES OF BARIATRIC SURGERY**

<b>Condition/Disease</b>	<b>% Resolved or Improved</b>	<b>% Resolved<sup>30</sup></b>
Type 2 Diabetes	86	76.8
Hypertension	78.5	61.7
Obstructive Sleep Apnea	85.7	83.6
Hyperlipidemia	78.5	61.7

## **PRIMARY METABOLIC AND METABOLIC PROCEDURES**

Significant new scientific evidence published over the last four years prompted the ASMBS, American Association of Clinical Endocrinologists (AACE) and The Obesity Society (TOS) to change its guidance in April 2013 to reclassify sleeve gastrectomy as a proven surgical option, rather than an investigational one

### ***Laparoscopic Gastric Bypass***

- Stomach reduced to size of walnut and then attached to middle of small intestine, bypassing a section of the small intestine (duodenum and jejunum) and limiting absorption of calories
- Risks include allergic reactions to medicines, blood clots in the legs, blood loss, breathing problems, heart attack or stroke during or after surgery and infection<sup>31</sup>

### ***Laparoscopic Adjustable Gastric Band***

- Adjustable silicone band filled with saline wrapped around upper part of stomach, creating small pouch that restricts food intake
- Risks include the gastric band eroding through the stomach, the gastric band slipping partly out of place, gastritis, heartburn, stomach ulcers, infection in the port, injury to the stomach, intestines, or other organs during surgery, poor nutrition, and scarring inside the belly<sup>32</sup>

### ***Sleeve Gastrectomy***

- Stomach divided and stapled vertically, removing more than 85%, creating tube or banana-shaped pouch restricting amount of food that can be consumed and absorbed by the body
- Risks include gastritis, heartburn, stomach ulcers; injury to the stomach; intestines, or other organs during surgery; leakage from the line where parts of the stomach have been stapled together; poor nutrition, scarring inside the belly that could lead to a future blockage in the bowel; and vomiting<sup>33</sup>

## ECONOMICS OF BARIATRIC SURGERY

- Metabolic and bariatric surgery usually costs between \$11,500 and \$26,000<sup>34</sup>
- On average, health care costs for patients suffering from morbid obesity were reduced by 29% within five years following bariatric surgery, due to the reduction or elimination of obesity-related conditions<sup>35</sup>
- Estimates suggest third-party payers will recover metabolic and bariatric surgery costs within two-to-four years following a patient's procedure, as a result of the reduction in costs associated with treating obesity-related conditions<sup>36</sup>
- According to expert analysis, surgical treatment of morbid obesity results in individual worker productivity gain of \$2,765 per year for U.S. employers<sup>37</sup>

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