

Laparoscopic Vertical Sleeve Gastrectomy

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By Dr Laurent Layani

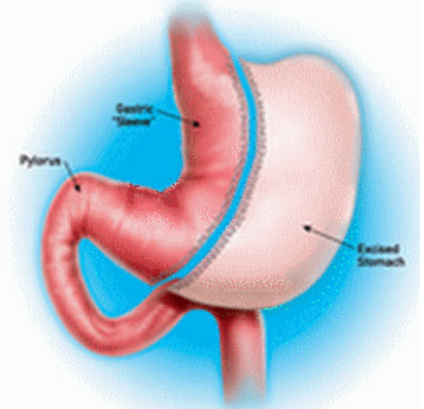
Laparoscopic Vertical Sleeve Gastrectomy (VSG) is a very effective and internationally accepted form of treatment for morbid obesity and the resolution of metabolic disease.

Background

I started performing Vertical Sleeve Gastrectomy (VSG) as a primary operation at WeightLoss Solutions Australia, John Flynn Hospital for failed gastric bands about 7 years ago after attending a presentation by Professor Michel Gagner, head of the laparoscopic department at Mount Sinai Hospital in New York.

VSG evolved from the 'duodenal switch' procedure for morbidly obese patients, which created a wider gastric tube along with a bilio-pancreatic diversion at the base of the duodenum. Realising the high complication rate when performing both together, efforts went in to performing the gastric tube laparoscopically, as the first stage, followed by the duodenal switch once a certain percentage of weight was lost. It was noted at this time that even with a tube size of 60-65 FR bougie, many patients did not require the second stage; and, by reducing the size of the bougie, we could provide a good primary operation with far less complications than the duodenal switch or gastric bypass.

With time, after introducing VSG to patients who required revision surgery, I recognized the possible benefits for 'super obese' male patients with a BMI 50+. I started seeing dramatic results and many patients were particularly happy with the resolution of hunger pains, cravings, and tolerance for a wide range of foods.



The Benefits of Sleeve Gastrectomy

Volume of stomach reduced without malabsorption issues

No implantation of foreign object

No need for follow up maintenance visits

Minimal food intolerances

Rapid and sustainable weight loss results

More recently, VSG has become a popular choice amongst patients with a BMI of 35+. I am reluctant to offer VSG to patients with a BMI of 30-35, except perhaps for those who live and work in remote locations or work abroad, like on oil rigs for example, because access to medically managed lap band adjustments is generally not immediately available. My exception may also apply to those with little or no medical cover.

One of the major benefits of VSG is the removal of the Ghrelin hormone, which increases in the blood stream before meals, enhancing appetite. The resection of the fundus removes the major site of Ghrelin release; and, I have no doubt that it plays a major role in altering eating habits.

Impact on Chronic Disease

Many patients have life-threatening diseases which are often resolved following weight loss surgery. These include:

- Type II Diabetes
- Sleep Apnoea
- Hypertension
- High Cholesterol
- Asthma

Many patients also note significant improvements in symptoms associated with:

- Depression and Fatigue
- Joint Pain and Degradation
- Infertility and Sexual Dysfunction

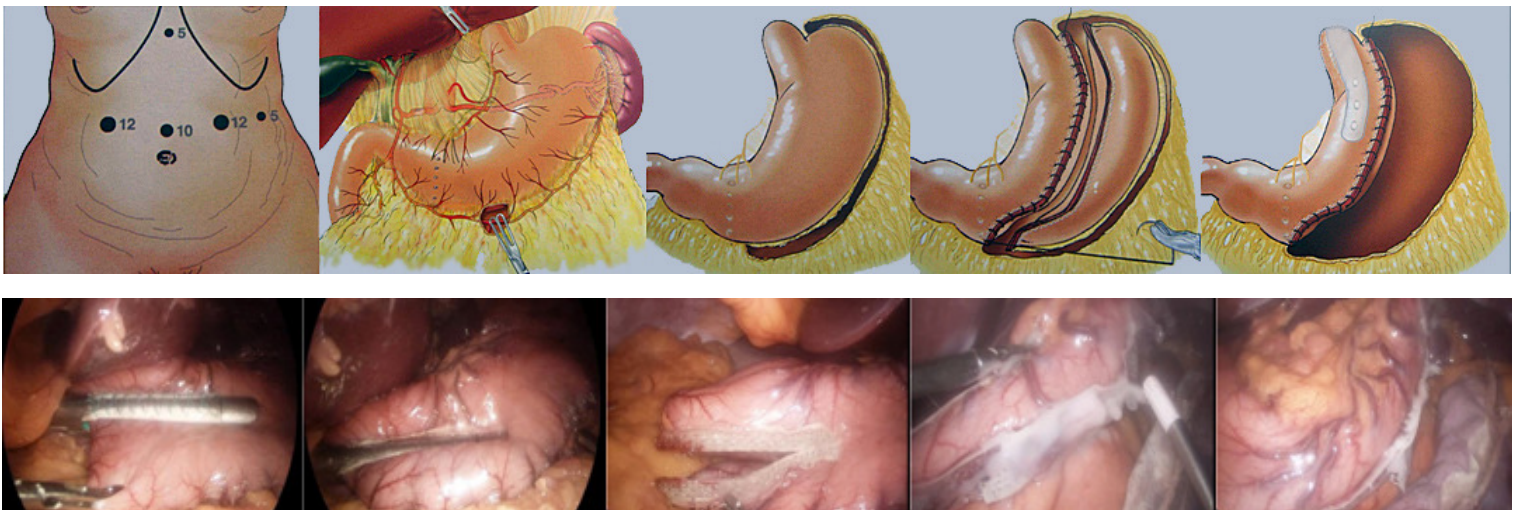
Dietary Requirements Pre and Post Surgery

The patient is placed on a very low calorie diet (VLCD) for 2 weeks prior to surgery, allowing for the reduction of fat around the liver. If the patient is in the 'super obese' range (over 250 kg), they are placed on the VLCD for 4 weeks prior to surgery. For patients with a BMI 35-40, the VLCD may only be required for 7-10 days pre-surgery.

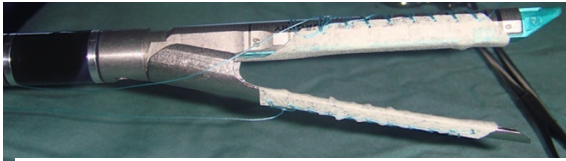
The post-operative diet is the same as that required for gastric banding. Patients are placed on a fluid diet for two weeks, followed by another 2 weeks of soft/puree foods, with **NO solid or chunky type food for one month**. In the interest of patient safety, this is something I expect all patients to be compliant with.

Patients are required to take a multivitamin and Vitamin B12 for life to help maintain their nutritional needs following surgery.

Stages in the Sleeve Gastrectomy

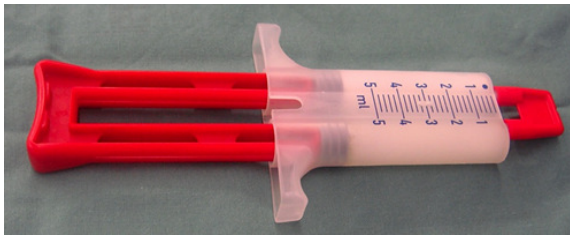


Sleeve Gastrectomy is similar to Gastric Banding in that it is performed laparoscopically. Patients also receive 12 months of support post-op.



Seamguard reinforcement echelon 60mm green by Gore Medical

During the initial consultation with the surgeon we discuss the advantages, disadvantages, and complications related to surgery in general, specifically VSG. Prior to surgery, the patient also consults with our psychologist and dietitian to discuss the impact surgery may have on their emotional well-being and dietary intake over time.



Tisseel - Fibrin sealant by Baxter Healthcare

After following the strict VLCD diet for the predetermined number of days, surgery is performed. The procedure is the same as for laparoscopic banding; except, we use 4 trocars of 12mm diameter and one of 5mm: a very small incision to enable use of the liver retractor

The patient is given Somac/40mg and Keflin/1g Intravenous/intra-operatively. The operation is standard in that, where the fundus is resected, we use a 32 FR bougie on every patient. I used reinforcement on the staple line called 'Seamguard' (Gore Medical), which is dissolvable in about 20-30 days and helps keep the complication rate extremely low. Seamguard keeps the suture line dry and reduces the risk of gastric haematoma. I believe it also reduces the risk of a leak from the staple line; although, there is no specific evidence to support this.



Post Sleeve Gastrectomy

Before the specimen is extracted we use fibrin glue, with a spray from Baxter, which makes the suture line more secure. The specimen is routinely sent to the pathologist. Recently we have been using a Pregabalin called Lyrica/300mg orally 2 hours prior to surgery to reduce the use of narcotics post-surgically in managing nausea. We usually give 4 Paracetamol for pain relief. Patients remain in hospital for 2-3 days compared with 1 day for gastric band patients. Incisions, pain, discomfort and recovery are generally the same for both VSG and lap band patients.

Questions and Answers: Vertical Sleeve Gastrectomy (VSG)

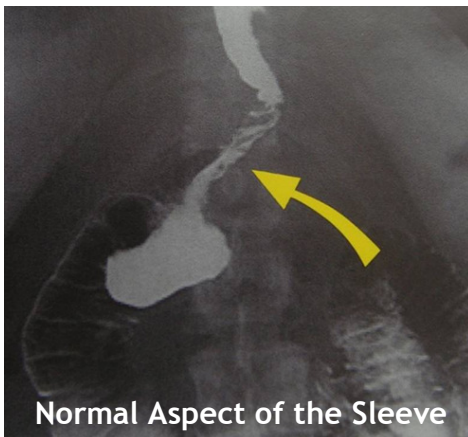
Which patients are suitable for VSG?

The gender of the patient can sometimes influence the final decision on which procedure to choose. I find men, particularly those with a high BMI, have a lot more difficulty in adapting and adjusting to implications surrounding the band. Ethnic origin is also important. For example, in India vegetarians eat a lot of bread, and bread can be difficult for a band patient to tolerate. Those who eat a lot of red meat may also experience similar challenges and may need to consider VSG as an alternative. We consider a patient's eating-related behaviours and attitudes when assessing suitability for weight loss surgery and also take into consideration where a patient lives and what they do for a living. Those opposed to VSG are generally so because they are uncomfortable with the permanency of having 2/3 of their stomach removed, despite the fact there is much less follow up required for VSG versus lap band. Those opposed to lap band are generally so because of the extra maintenance required (band adjustments) or are against having a foreign body implanted.



What are the risks?

There are the usual complication risks applicable to all forms of surgery; however, there is the added risk of a leakage along the staple line. This is a possible but very rare complication of which we have had only one within our practice so far. This puts our complication rate at less than 0.3%. Stenosis is another possible complication. This is when the sleeve is too narrow and conversion to a Gastric Bypass is required. Again, this is extremely rare!



Normal Aspect of the Sleeve

Can the gastric tube stretch with time?

Early papers with 5 year follow up were based on a 50 or 60 FR bougie and showed that some patients had regained weight. Since using a 32 FR bougie, I have not seen any patients who have required revision due to weight regain. This is something we will have to monitor over the next 5-10 years.

Can Sleeve Gastrectomy be performed for failed Gastric Banding?

Yes! This is something we have performed quite extensively; although, it is not done as a single operation. The band is removed as a single stage operation and VSG can be performed around 6-8 weeks later. In circumstances where there is erosion of the band (very rare) we may need to wait for 12-14 weeks before performing VSG. Revision surgery can be very difficult, since this is technically a lot more challenging, but we have had good results from this with no leaks to date for this conversion.

Are there any contra-indications for Sleeve Gastrectomy.

There is a reluctance to perform VSG on those who have been diagnosed with Crohn's disease. Patients taking immunosuppressant medications or steroids may need to have their medication reduced or adjusted; however, this is not necessarily a contraindication to undergoing VSG. Those who currently take Plavix are required to cease the medication 10 days prior to surgery; we may request a clearance from the patient's cardiologist if necessary. I don't find reflux to be a concern and I commonly repair hiatus hernias prior to the stomach resection during the sleeve gastrectomy.

Case Study: From Slim Magazine July 2011 Jozsef Zsolti underwent Sleeve Gastrectomy in July 2010, here is his story.

At 56 years of age, Jozsef Zsolti was suffering from a number of weight-related health complications, including diabetes, high blood pressure and high cholesterol. To make matters worse, his kidneys were failing and he was facing a very premature death.

Jozsef weighed 115kg and his BMI was 39; he had uncontrollable eating habits, and his quality of life was diminishing beyond expectation. After trying for many years to maintain a healthier lifestyle and avoid diabetes, Jozsef felt he had run out of options to get control over his poor eating habits and began searching for weight loss alternatives that would allow him to live a longer, more fruitful life.

These were difficult times for Jozsef; he felt he had no alternative but to consider weight loss surgery, but he had so many questions and so many reservations about surgery. He needed advice and he needed it fast. He had become dependent on insulin to control his diabetes and was really concerned about his health and future. That is when WeightLoss Solutions Australia came into Jozsef's life. "The team at WeightLoss Solutions Australia were able to guide me and provide me with the support I needed to accept surgery as my only option and appreciate the benefits of having surgery. They understood my concerns and were there to help me all the way," he said.

Sleeve gastrectomy is an alternative weight loss procedure to gastric banding, involving the laparoscopic keyhole surgery) removal of about 75% of the stomach organ, without any re-routing of the intestinal tract.

With all intestinal connections maintained there are no malabsorption problems after surgery and expected weight loss results are very good, if not excellent, with most patients losing up to 50% of their excess body weight in the first 12 months.

The procedure is an extremely effective weight loss alternative for those who prefer an irreversible option that needs little, if any, ongoing maintenance following surgery. Sleeve gastrectomy reduces the food holding capacity of the stomach, leading to early satiety and fullness from a small meal.

The results for Jozsef and many others like him have been life-changing.

*Jozsef believes that his decision to undergo sleeve gastrectomy has given him back the quality of life he once so enjoyed. **Within two months of having surgery his blood sugars were in the non-diabetic range; he was off his insulin and no longer facing a lifetime of medication to control his diabetes.** He took that all important step to change his life and feels so much younger and healthier for it.*

Dr Layani, head surgeon from WeightLoss Solutions Australia said: "The results for Jozsef have been nothing short of amazing; he no longer lives with diabetes and his cholesterol levels are normal, as is his blood pressure. I see many patients come into the clinic suffering from chronic illnesses and to see them walk away healthy is fantastic!"

Just ten months after surgery, Jozsef is thrilled with the changes to his life. "This surgery has meant a not so sad farewell to all of the medications I was taking. I am now 100% healthy and living a fulfilled lifestyle that, at one point, I thought would be never possible. I have lost 30.5kg and my BMI is below 30 for the first time in many years!"



Overall outcomes to date have been remarkable: Average excess weight loss results are around 60-70%

The outcome for those with co-morbidities has also been very positive, particularly for diabetic patients, who often experience a major improvement in symptoms in the early stages of their weight loss journey. Patients with hypertension also notice marked improvements if not complete resolution following this rapid weight loss. Improvements in other conditions, such as sleep apnoea, joint pain, and depression are also increasingly evident. Pregnancy is not a problem post-surgery; although, falling pregnant in the first 12 months following VSG is discouraged.

Over the last two years we have seen an escalation in the number of patients requesting VSG. This is due to the positive results and quality of life improvements experienced by most patients. The tolerance for a wider variety of foods is a factor when comparing VSG to lap band and patients generally notice a distinct change in their hunger sensations. This experience likely relates to hormonal changes facilitated by the removal of part of the stomach that is responsible for producing Ghrelin. Some notable changes include a marked reduction in food-related cravings, particularly for sweeter foods. Some patients find this aspect to be a positive outcome.



Dr Laurent Layani and Dr Candice Silverman are in private practice at John Flynn Private Hospital, Tugun. Their clinic offers comprehensive weight loss related services and prides itself on helping patients achieve sustainable results. Dr Layani is widely recognised and published in the area of upper gastrointestinal and hepatobiliary disorders and is internationally respected for his expertise in bariatric surgery.



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**"If you lose weight, you'll have more energy.
Why do you think they call it FATigue?"**

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