University of Sydney

RYGB post OAGB for weight regain

IFSO Melbourne; Sept 2024

David Martin
Upper GI Surgeon Concord, Royal Prince Alfred & Strathfield Private Hospitals. University of Sydney

Chair of the Sydney Upper GI Surgical Society
Head of Upper GI and Bariatric Surgery Strathfield Private Hospital
Executive Board. Australian and New Zealand Oesophago-Gastric Surgical Association (2015-2024)

Convention (surgical revision) for weight regain post OAGB

1. Trim the pouch +- fixed ring

2. Lengthen the BP limb (shorten the common channel)

The only benefit of adding a roux limb (& jej-jej)

bile reflux (or long segment Barrett's)

shortening the pouch - recurrent ulceration

to make a rare high-risk revision safer

**or if you don't have insurance cover for OAGB

*At the cost of

increased operating time
+- acute complications (broader surgical community - BSR)
post-op pain & internal hernia & hypoglycaemia

*Ataya K, et al. RYGB vs OAGB; Rev Surg After Failed Sleeve; Syst RV & Meta-analysis. J Metab Bariatr Surg. 2023 Dec;12(2):57-66

Combined pouch & loop resizing as a revisional procedure for weight regain after primary OAGB

N = 8 Males. Avg 35 yrs old.
BMI 48.7 (150kg)

BP limb previous; 168cm (+- 27cm).
(Is this the appropriate length for young men w/ high BMI?)

BP limb post modification; 267cm (+- 27cm)

2 years post revision

BMI 28.44. **EWL 74.5%**

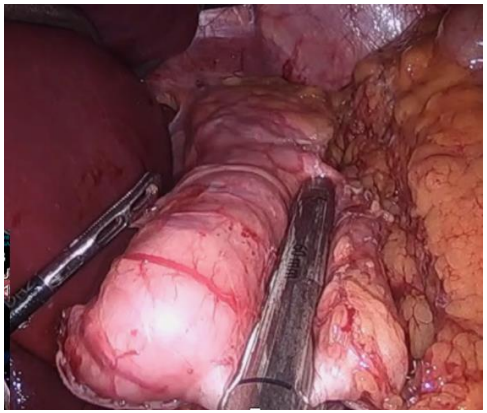
J Minim Access Surg 2023 Jul-Sep;19(3):414-418.

DM Results **Revision OAGB** (Mini Gastric Bypass)

N = 136 (Post Sleeve & Band)

n = 1300 OAGB
10% revision

Majority Re-trimmed (>95% last 4-5 years)



2.9% (4) conversion (revision OAGB) to RYGB

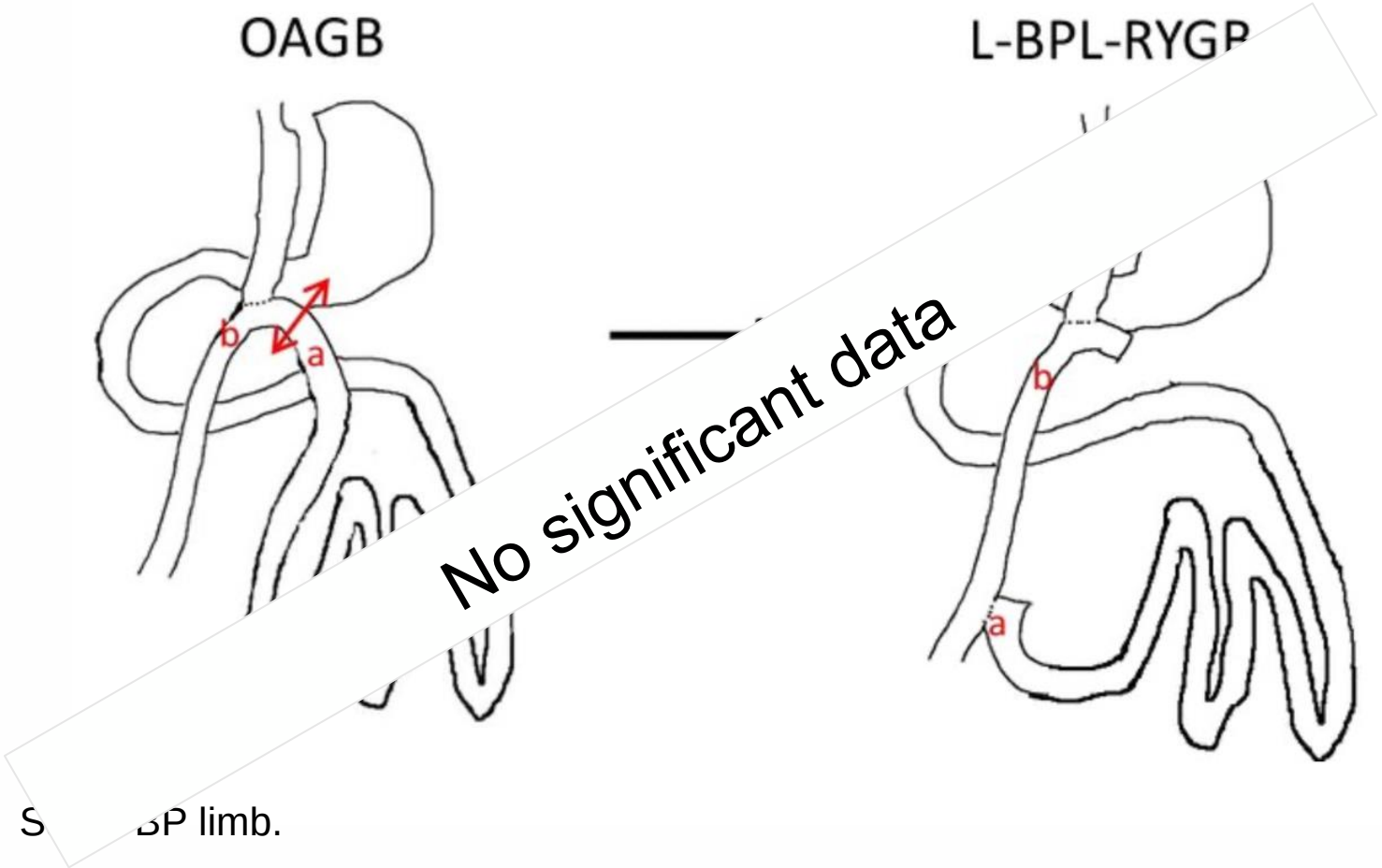
3 revision OAGB post sleeve

(2015 no HH & no trim, 2018 trim, no hh, 2018 sml HH & trim)

1 revision OAGB post band (OAGB 2020)

Aug 2024

Simple Roux Conversion for weight loss



S BP limb.

Simple lengthening of the alimentary limb – no redo of Gastro-jej

Shortening of the common channel

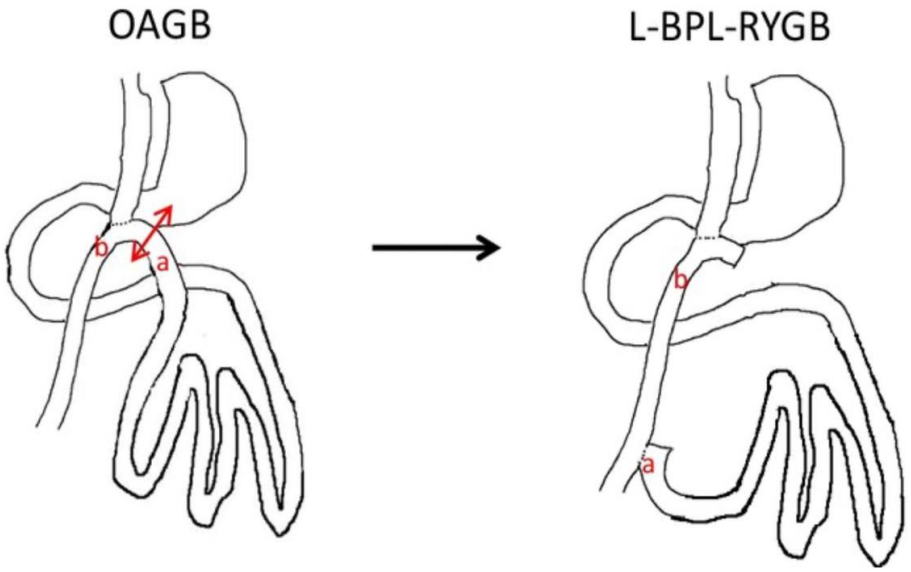
Same total alimentary channel

OAGB to RYGB (adding an alimentary limb (for bile reflux)

Added 70cm Roux Limb for GERD (n = 21)

Weight increased by 3kg at 1 year

(78kg to 81kg) then stable 5 years



Reduced

GERD & diarrhoea

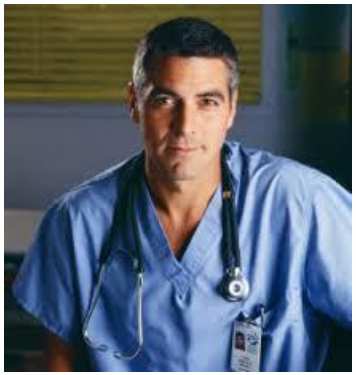
No change in

steatorrhea

anastomotic ulceration

JM Cheavlier. Obes Surg 2022 Apr;32(4):970-978.

Distalisation of Alimentary Limb for failed RYGB (BP) lengthening BP limbs



Dr Michael Talbot

> Obes Surg. 2023 Jan;33(1):293-302. doi: 10.1007/s11695-022-06388-z. Epub 2022 Dec 2.

Failed Roux-en-Y Gastric Bypass-Long-Term Results of Distalization with Total Alimentary Limb Length of 250 or 300 cm

Kamran Shah [1 2], Bent Johnny Nergård [3], Morten Wang Fagerland [4], Hjörtur Gislason [3 5]

Affiliations + expand

PMID: 36459358 PMCID: PMC9834116 DOI: 10.1007/s11695-022-06388-z

> Obes Surg. 2020 Mar;30(3):804-811. doi: 10.1007/s11695-019-04348-8.

Revisional Surgery for Insufficient Loss or Regain of Weight After Roux-en-Y Gastric Bypass: Biliopancreatic Limb Length Matters

Marko Kraljević [1], Thomas Köstler [1], Julian Süsstrunk [1], Ioannis I Lazaridis [2], Amy Taheri [3], Urs Zingg [1], Tarik Delko [4]

Affiliations + expand

PMID: 31863410 DOI: 10.1007/s11695-019-04348-8

> Surg Obes Relat Dis. 2018 May;14(5):554-561. doi: 10.1016/j.soard.2018.01.004. Epub 2018 Jan 31.

Conversion of standard Roux-en-Y gastric bypass to distal bypass for weight loss failure and metabolic syndrome: 3-year follow-up and evolution of technique to reduce nutritional complications

Saber Ghiassi [1], Kelvin Higa [2], Steven Chang [3], Pearl Ma [3], Aaron Lloyd [3], Keith Boone [3], Eric J DeMaria [4]

> Surg Obes Relat Dis. 2020 Mar;16(3):381-388. doi: 10.1016/j.soard.2019.12.009. Epub 2019 Dec 17.

Weight loss and malnutrition after conversion of the primary Roux-en-Y gastric bypass to distal gastric bypass in patients with morbid obesity

Yonta van der Burgh [1], Abel Boerboom [2], Hans de Boer [3], Bart Witteman [2], Frits Berends [2], Eric Hazebroek [2]

Finishing with a v long BP limb (circa 2.5 – 3.5m) (**& starting from a short BP Limb)
- results in moderate weight los

to avoid a much higher risk of nutritional problems;

Total alimentary limb (TALL) > 4m

****Common channel > 2m**

Effect of Roux Limb (in primary RYGB)

Cohort comparisons

Mt Sinai (2003) **n = 45** (**alim 45-100cm**) vs 13 pts (**alim 150cm**)

no diff wt loss 2 years **- trend towards less failure (p=0.07)**

Feng JJ, Gagner M, Pomp A, et al. Surg Endosc. 2003. 17:p. 1055–60

UCSan Fran (2008) **n = 137** (BMI > 50) (alim **100cm vs 150cm**)

1 yr EWL loss better 64% vs. 53%, p < 0.01

Ciovica R, Takata M, Vittinghoff E, et al.. Obes Surg. 2008. 18:p. 5–10

Alabama (2009) **n = 344 (BP limb 18-30cm)**

Alimentary Limbs; 3 Groups (**41-61cm, 130-160cm, 115-250cm)**

5 Years ; BMI Change 14.7 vs 20.8 vs 21.7 (p<.01-.05)

Gleysteen JJ. Surg Obes Relat Dis. 2009. 5:p. 242–7

2012

Very Very Long Roux (primary RYGB)

n = 355 **BMI 48.5**

BP limb 79cm

Com Channel 76cm

Roux (Alimentary) Limb **604cm (+-99cm)

5 years EWL > 74%.

(low failure < 6% lost < 50% EWL)

**low incidence severe malnutrition

mild anaemia and hypoproteinaemia freq observed

Revision w/ proximalisation in 4 (1.1%)

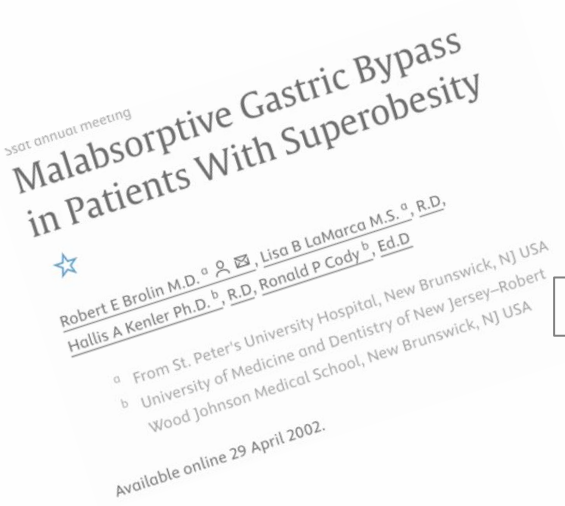
OBES SURG (2012) 22:1427–1436
DOI 10.1007/s11695-012-0708-y

CLINICAL REPORT

A Novel Distal Very Long Roux-en Y Gastric Bypass (DVLRYGB) as a Primary Bariatric Procedure—Complication Rates, Weight Loss, and Nutritional/Metabolic Changes in the First 355 Patients

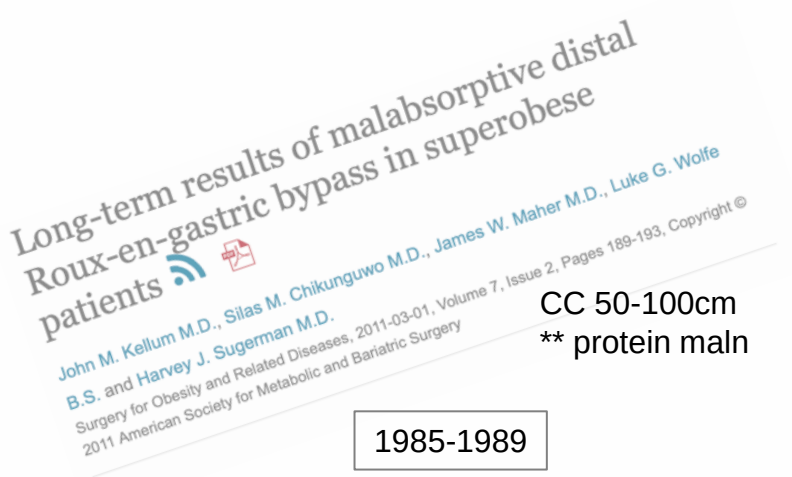
Martin Thurnheer · Philipp Bisang · Barbara Ernst · Bernd Schultes

St Gallen



CC 75cm

2002



CC 50-100cm
** protein maln

1985-1989

V V Long Roux Limb (1o RYGB)
Cohort comparison

2021

> Obes Surg. 2021 Mar;31(3):994-1003. doi: 10.1007/s11695-020-05109-8. Epub 2020 Nov 16.

Long-Term Outcome of Proximal Versus Very-Very Long Limb Roux-en-Y Gastric Bypass: the Roux-Limb to Common Channel Ratio Determines the Long-Term Weight Loss

Julian Süsstrunk # [1], Ioannis I Lazaridis # [2], Thomas Köstler [3], Marko Kraljević [2], Tarik Delko [2], Urs Zingg [3]

Basel

Short BP limb 50-60cm

n = 454 (mean f/up 9.4yrs)

Very Very Long Limb Roux Group (n = 232) BMI 45.8

Common channel 1m (****Alimentary limb circa 5-6m**)

versus

Standard Roux Group (n = 223**)** BMI 42.9

Alimentary limb 1.5m

Weight loss; 5 yr 78.3% (VL) vs 70.2% (Std) EWL (p.002) (**18 months to 5 years**)

****Revisions** (limbs, pouch); 25 v 29 (p.46.3) (Increased adaptation less revision to 5 years VL)

Very Long Roux limb length significantly influences **long-term outcome**

better wt loss

less wt regain

V V Long Roux Limb (1o RYGB)
RCT – DUCATI STUDY

2022

Randomized Controlled Trial > Obes Surg. 2020 Dec;30(12):4732-4740.
doi: 10.1007/s11695-020-04982-7. Epub 2020 Sep 21.

Does the Length of the Common Channel as Part of the Total Alimentary Tract Matter? One Year Results from the Multicenter Dutch Common Channel Trial (DUCATI) Comparing Standard Versus Distal Roux-en-Y Gastric Bypass with Similar Biliopancreatic Bowel Limb Lengths

Ralph P M Gadiot [1], M Leeman [2], L Ulas Biter [2], Martin Dunkelgrun [2], Jan A Apers [2], Gerhard Van't Hof [3], Pierre B Feskens [3], Guido H Mannaerts [4]

RCT n = 444

Short BP limb 60cm

VV Limb Roux Group – Com Channel 1m

(**Alimentary limb circa 5-6m)

vs

Standard RYGB Group Alimentary limb 1.5m

1 year Results

TBWL; 34.2% (VL) vs 33.6% (Std) (p.0.359)

Revisions (malabsorption); 1.4% vs 0.9% (p=46.3)

3 year Results

TBWL; 34.0% (VL) vs 31.4% (Std) (p=0.017)

Revisions (malabsorption); 3.6% vs 0.9% (p= 0.055)

Obesity Surg. 2021 Dec;31(12):5132-5140.

Summary – Roux Conversion OAGB
What does the literature tell us about lengthening the alimentary limb

From Primary RYGB Cohort Data (**v short BP limb**).** (Alabama Study n = 344)

Long (150cm) vs Short (50cm) Alimentary Limb lengths may influence 5yr wt loss

From Revision RYGB Data (V Long BP, TALL 4m**, Com Channel 2m)**

Our OAGB pts will have a longer total alimentary limb (TALL) >> 4m
and a shorter BP limb
Can we go shorter than a 2m common channel - 1.5m ??

From Primary VV Long Roux Limb RYGB (BP 50-79cm
(Alim 6m+, Com Channel 1m)

Ducati RCT n = 444 **Swiss C** **t loss 18 months – 5 years**
(**likely increas
change

pts longer BP limb (150 – 210cm)
OAGB pts already selected out as /wt loss resistant
and been through some bowel adaption

we do a common channel 1.5m??

Is a moderate weight loss advantage for from these 1o studies strong enough to influence OAGB revision

Available evidence

Revision Surgery for weight regain post OAGB

Convention Remains the Same

1. Trim the pouch +- fixed ring

2. Lengthening the BP limb; Next speaker; Maurizio De Luca

** baseline 40:60 ref from Migual Carbajo Valladolid →

** Take into account patient bowel function

Other patient factors; Gender, age ,ht, wt, bmi,
wt loss aims, wt loss literacy

But if we did the long RYGB conversion for Weight regain after OAGB

Previous OAGB (BP limb 150cm-200cm)

1. **Trim** any moderate or large pouch (** Revision RYGB data – not commonly done))

2. **Roux Conversion** (long alimentary limb) ; relatively simple wrt BP lengthening

*not require redo Gastro-jejunostomy

1.5m Common channel from the data (is maybe ok?)

I would probably use 2m – especially if trimming pouch

Modify for bowel ftn +- other pt factors

Risks; Malnutrition / Bowel Issues

RYGB Issues – hypoglycaemia, internal hernia, abdominal pain

** no change in anastomotic ulceration (& acid GERD) without pouch shortening

But if you do

Very Long RYGB Conversion of OAGB

for weight regain

**Keep prospective data

Collaborate & pool data across centers

facilitate faster information broader surgical community