



Fatty Liver
(non-alcoholic fatty liver disease)

肥胖 與 脂肪肝



衛生福利部雙和醫院
(委託臺北醫學大學興建經營)



鄭明哲醫師

專長

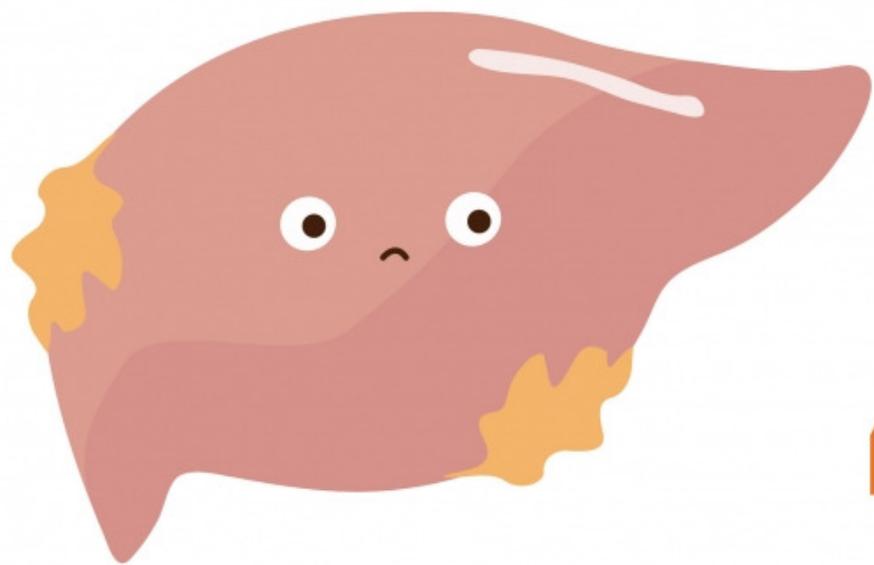
- 內視鏡抗逆流
- 脂肪肝 減重
- 胃鏡 大腸鏡 超音波
- 腸胃肝膽胰疾病、出血、結石、腫瘤

經歷

- 東京埼玉大學內視鏡中心
- 台大醫院內視鏡中心
- 雙和醫院腸胃科
- 台灣、馬來西亞 執業醫師

臉書粉絲團追蹤





4 大常見成因

脂肪肝

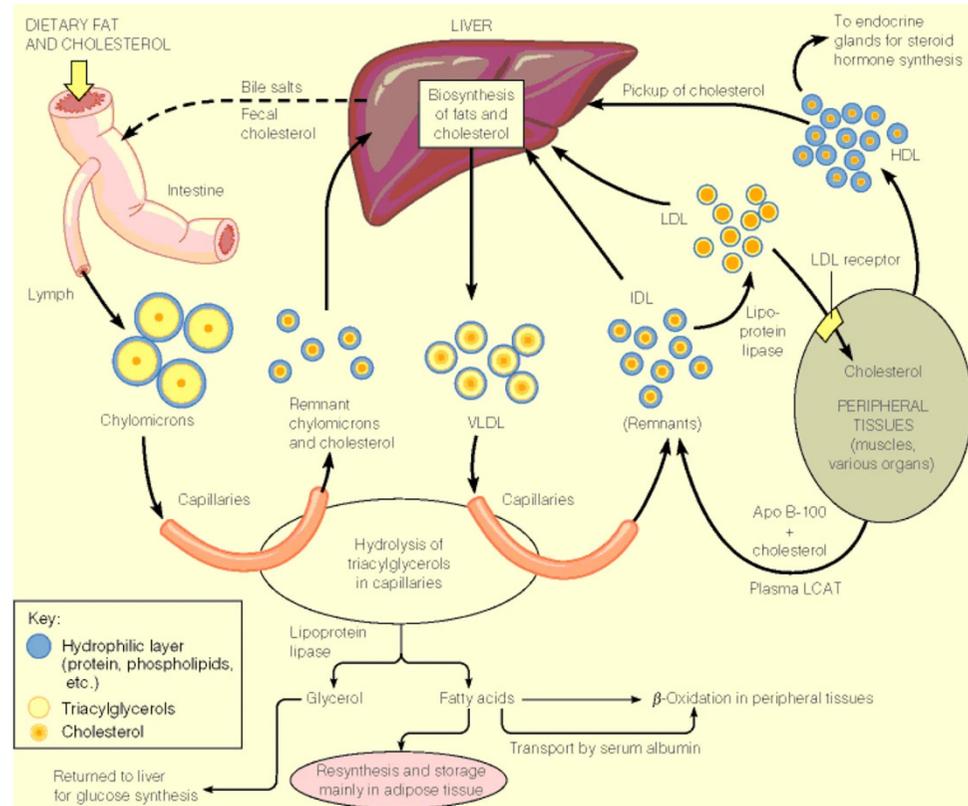
肥胖、營養過剩

長期酗酒

高血脂、糖尿病患
等代謝疾病

長期服用類固醇
或某些藥物

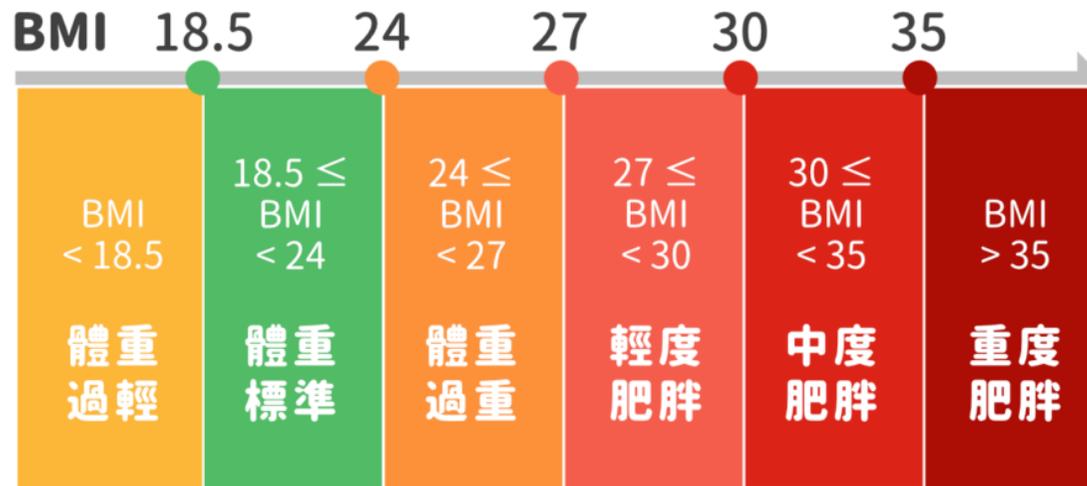




- 一般由血液中所攝取的過多遊離脂肪酸(**free fatty acid, FFA**)，會在肝臟中合成三酸甘油酯並儲存起來，而若是身體需要能量時，也以**VLDL**的形式將三酸甘油酯轉運出肝臟進入血液循環中。
- 以上若攝取過多，大多在肝臟中合成三酸甘油酯並儲存起來，就會形成脂肪肝。

如何判斷過重或肥胖？

身體質量指數 (BMI= kg/m^2) 是最主要的判斷方式，
依據數值分為 **過輕、標準、過重** 和 **輕、中、重度肥胖**



健康的體脂率標準

男生為15-25%、女生為20-30%。

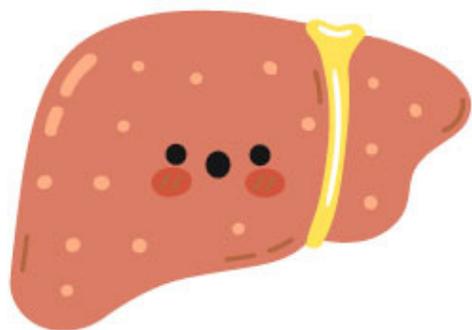
如果體脂率超出標準，

即使 BMI 正常也屬於肥胖喔！



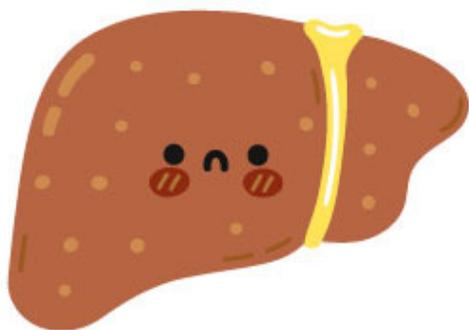
脂肪肝3階段

輕度脂肪肝



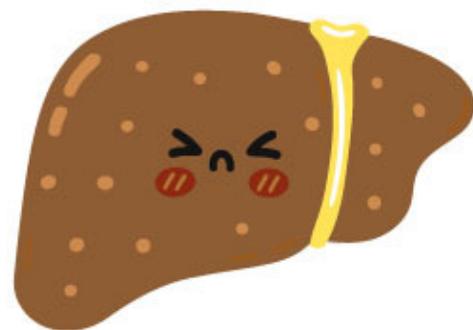
脂肪含量
占肝臟重量
5%~10%

中度脂肪肝



脂肪含量
占肝臟重量
10%~25%

重度脂肪肝



脂肪含量
超過肝臟重量
25%

脂肪肝造成底層變黑，無法成
像，血管模糊無法辨識

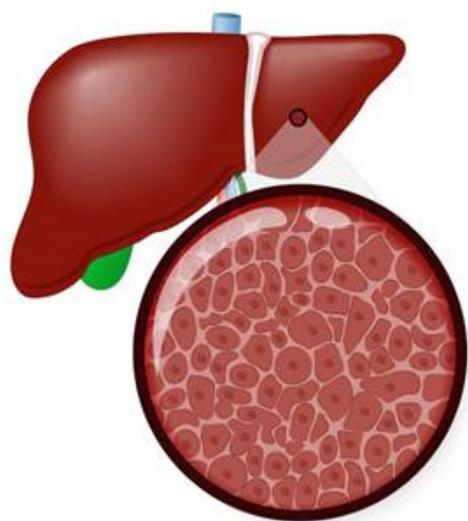


健康的肝臟

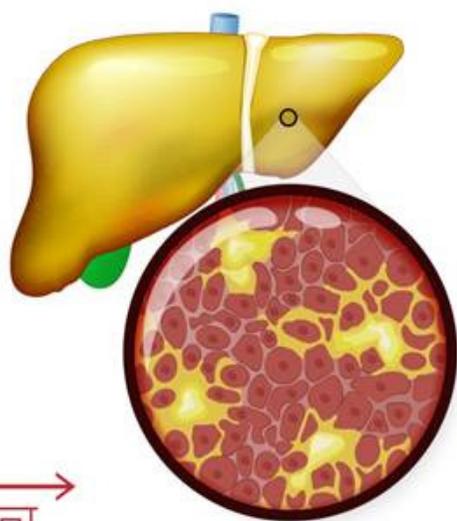
脂肪肝

肝纖維化

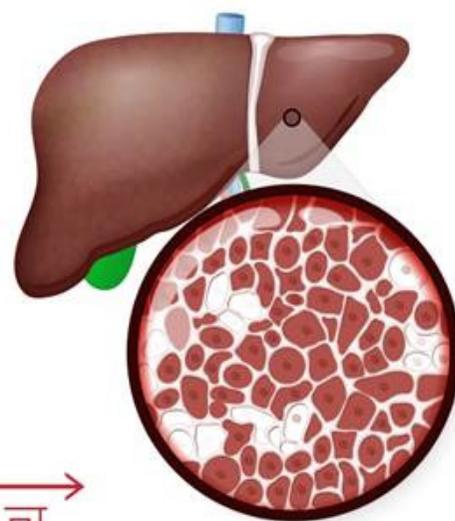
肝硬化



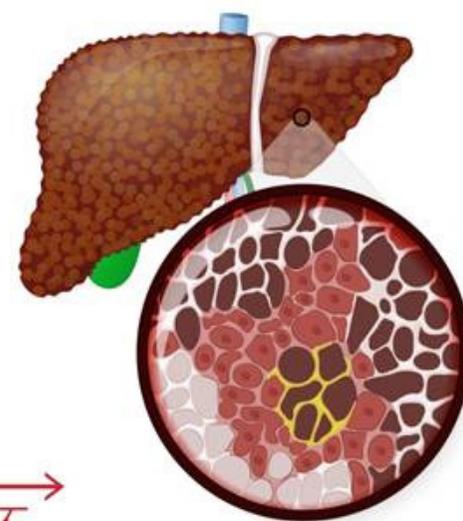
↔
可逆



↔
可逆



→
不可逆



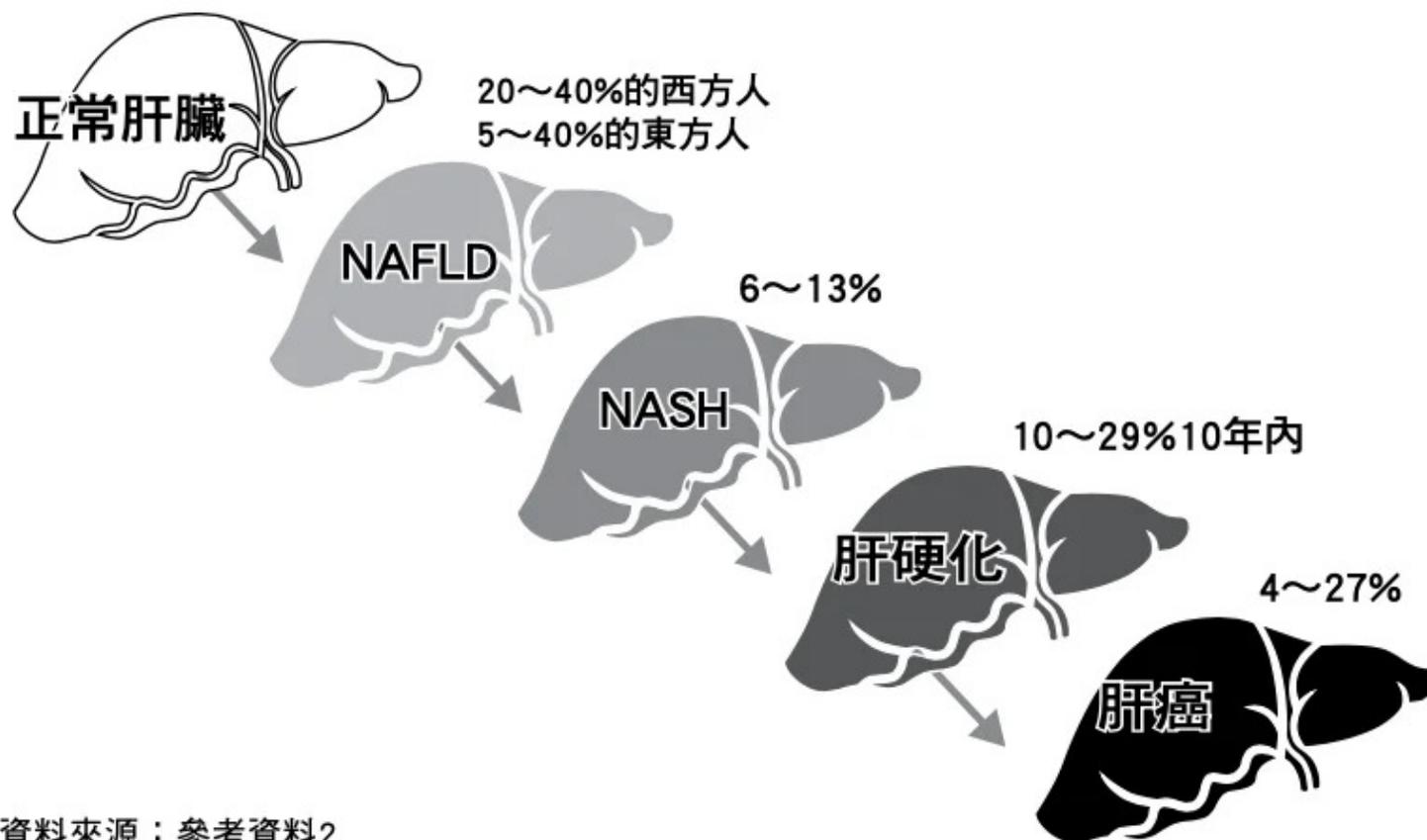
健康的肝細胞

過量脂肪堆積在肝臟

肝臟形成結疤組織

肝臟結節化

圖一 非酒精性脂肪肝疾病變化過程



資料來源：參考資料2

圖片來源：家庭醫學與基層醫療 第三十卷第九期

餐餐高糖高油



注意脂肪肝的 5 種警訊



1. 容易疲累



2. 下肢水腫



3. 食慾不振



4. 右上腹不適



5. 力氣變小



肝臟傳來的警訊!



HEHO

肝硬化的十大常見症狀

1



疲倦、
食慾不振

2



消瘦、
體力變差

3



黃疸

4



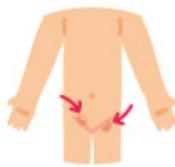
茶色尿

5



腹水、
下肢水腫

6



疝氣

7



牙齦出血

8



皮膚淤青

9



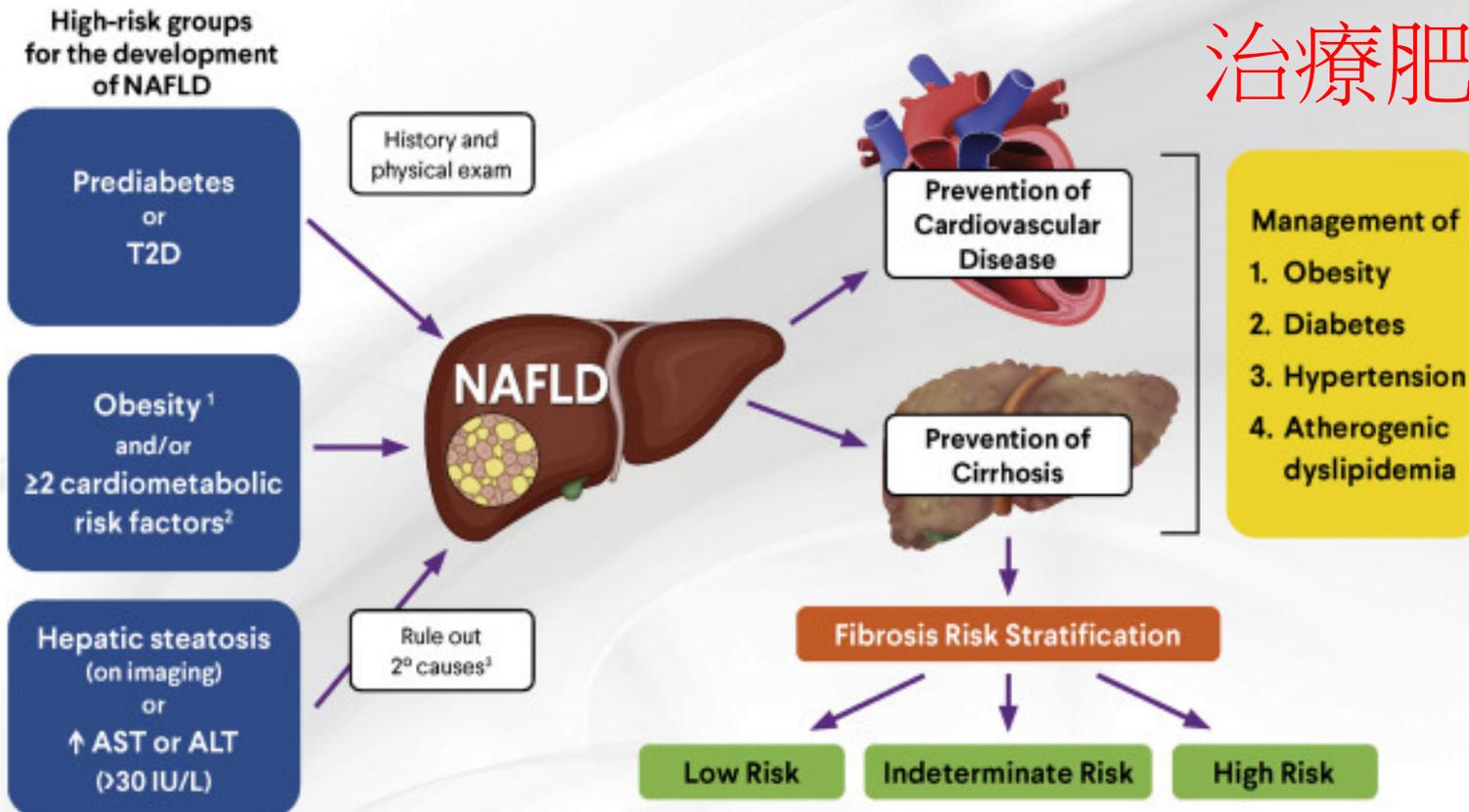
蜘蛛痣、
手掌紅斑

10



月經失調、
男性女乳症

Management Algorithm for NAFLD – Overview



治療肥胖三高

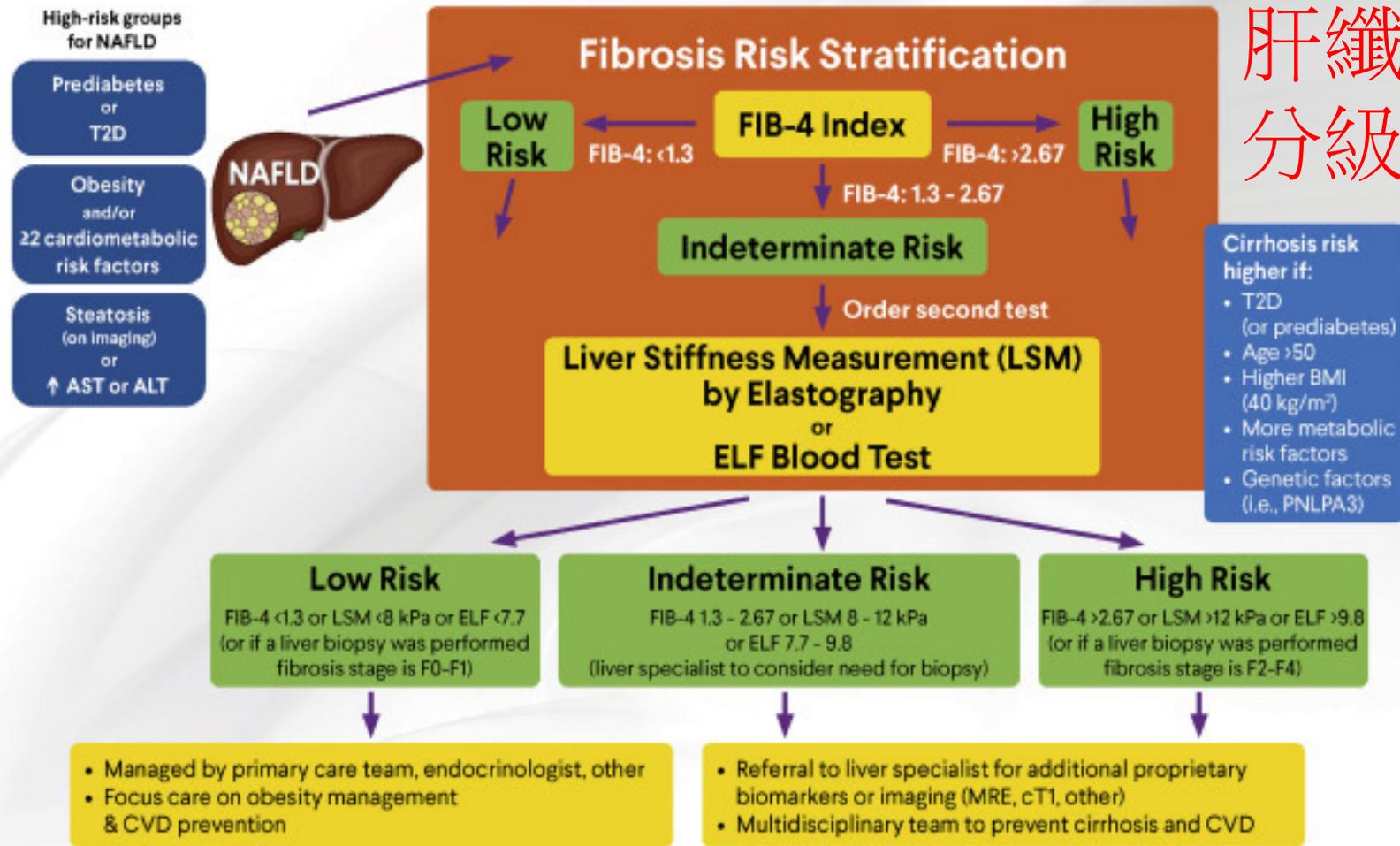
Abbreviations: ALT = Alanine aminotransferase, AST = Aspartate aminotransferase, T2D = Type 2 diabetes mellitus

1. Adiposity-based chronic disease (ABCD) is a diagnostic term proposed by AACE to better describe the disease of obesity in a complication-centric manner of abnormal adipose tissue mass, distribution, function and resulting morbidity that can be ameliorated with weight loss.
2. Cardiometabolic risk factors of the metabolic syndrome are waist circumference >40 inches men >35 inches women, triglycerides ≥150 mg/dL, HDL-C <40 mg/dL men, <50 mg/dL women, BP ≥130/85 mm Hg, fasting plasma glucose ≥100 mg/dL (NCEP ATP III)
3. Secondary causes of liver steatosis or elevated transaminases (AST or ALT) are excessive alcohol consumption (≥14 drinks/week for women or ≥21 drinks/week for men), hepatitis B, hepatitis C (genotype 3), Wilson's disease, alpha 1 antitrypsin deficiency, lipodystrophy, starvation, parenteral nutrition, abetalipoproteinemia, hemochromatosis, mass lesions, medications and other causes.

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Algorithm Figure 1

Cirrhosis Prevention in NAFLD

肝纖維化
分級



Abbreviations: ALT = Alanine aminotransferase, AST = Aspartate aminotransferase, cT1 = Liver multiscan, CVD = Cardiovascular disease, ELF = Enhanced liver fibrosis test[®], FIB-4 = Fibrosis-4 index, kPa = Kilopascals, LSM = Liver stiffness measurement, MRE = Magnetic resonance elastography, T2D = Type 2 diabetes mellitus
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 Algorithm Figure 2



◆第五章 肥胖與疾病之關係

- ◆第一節 第 2 型糖尿病
 - 一、第 2 型糖尿病的預防
 - 二、體重過重或肥胖的第 2 型糖尿病病人如何減重
 - 三、控制血糖藥物與體重變化
- ◆第二節 代謝症候群
 - 一、代謝症候群的定義
 - 二、代謝症候群的現況
 - 三、肥胖與代謝症候群的治療
- ◆第三節 心血管疾病
 - 一、肥胖與心血管疾病的關係
 - 二、體重控制對心血管疾病好處
 - 三、肥胖治療藥物對心血管危險因素的影響
- ◆第四節 退化性關節炎
- ◆第五節 睡眠呼吸中止症候群

- ◆第六節 憂鬱
- ◆第七節 非酒精性脂肪肝
- ◆第八節 不孕症
- ◆第九節 癌症
- ◆第十節 胃食道逆流



Medication	治療	Liver fat	Disease activity (steatohepatitis/NAS)	Studies
Metformin		Unchanged	Neutral	(298-302)
Pioglitazone	血糖藥	Decreased	Improved ^o	(97, 98, 280-282)
Insulin	胰島素	Decreased	Effect unknown	(177, 178, 306)
GLP-1 RAs (semaglutide and liraglutide)	瘦瘦針	Decreased	Improved ^o	(99, 286-288)
SGLT2 inhibitors (dapagliflozin, empagliflozin, and canagliflozin)	排糖藥	Decreased	Effect unknown	(28, 294-297)
DPP-IV inhibitors (sitagliptin and vildagliptin)		Unchanged (in RCTs)	Effect unknown	(286, 303-305)

Table 7

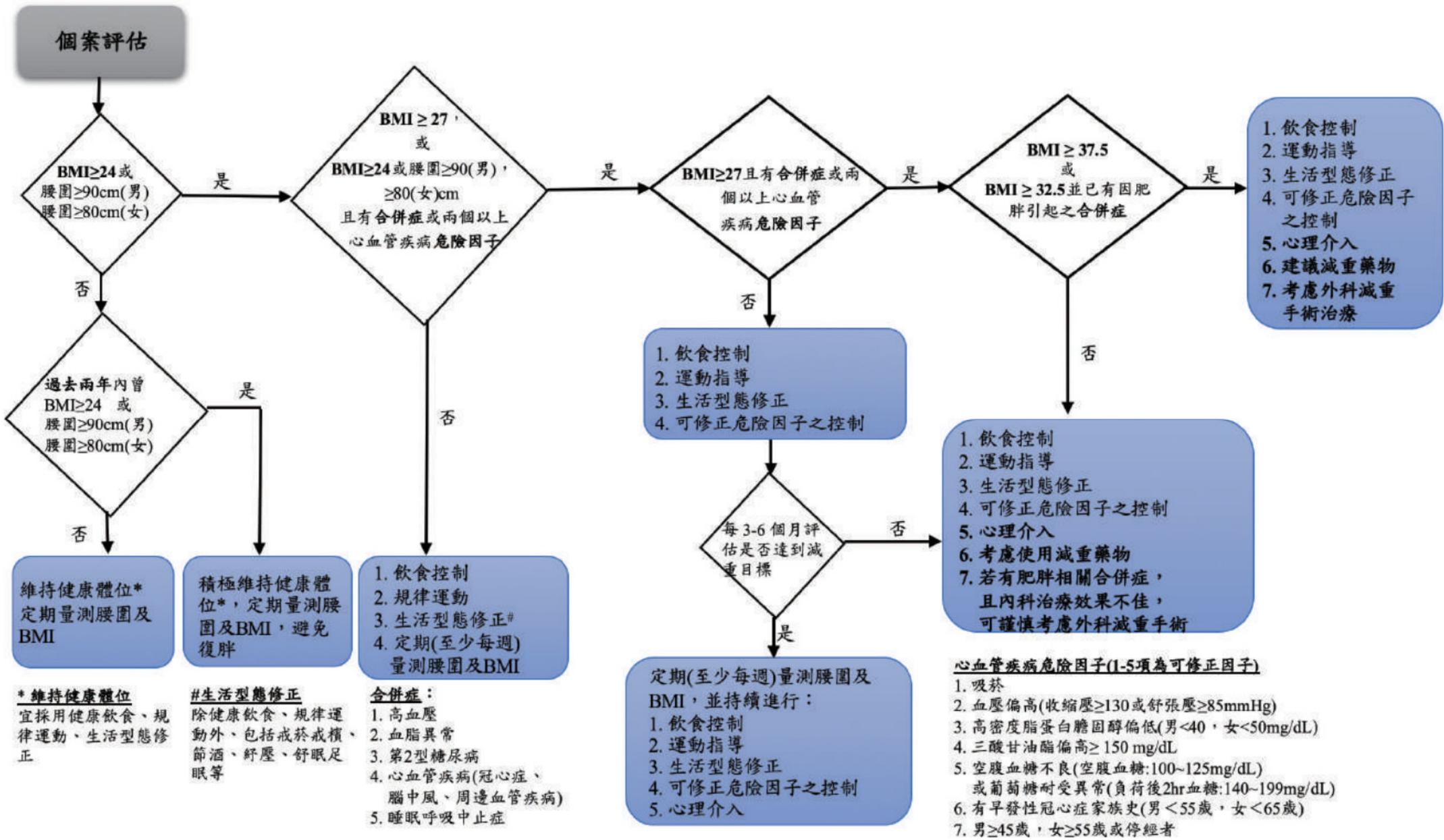
Medications to Treat Diabetes and Their Efficacy for the Treatment of Nonalcoholic Fatty Liver Disease

Medication	治療	Liver fat	Disease activity (steatohepatitis/NAS)	Studies
Metformin		Unchanged	Neutral	(298-302)
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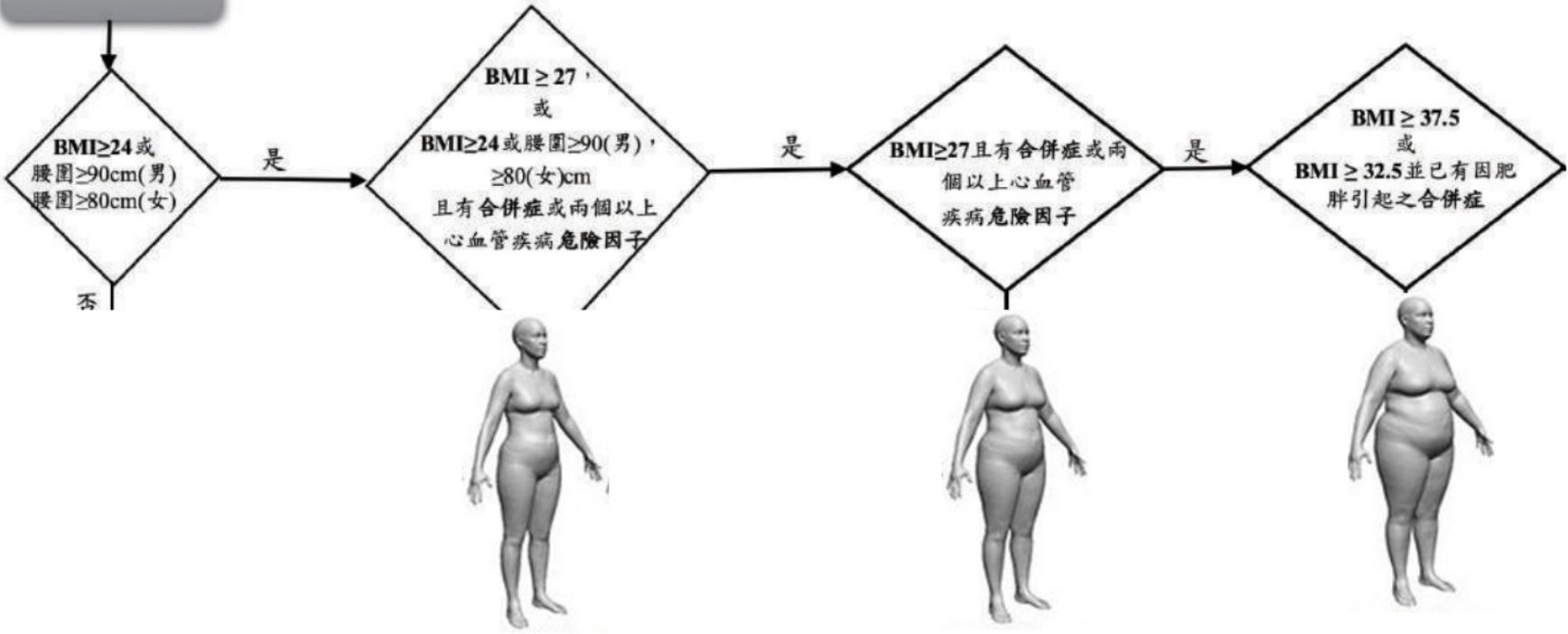
減重 (5-10% 體重)

Table 7

Medications to Treat Diabetes and Their Efficacy for the Treatment of Nonalcoholic Fatty Liver Disease

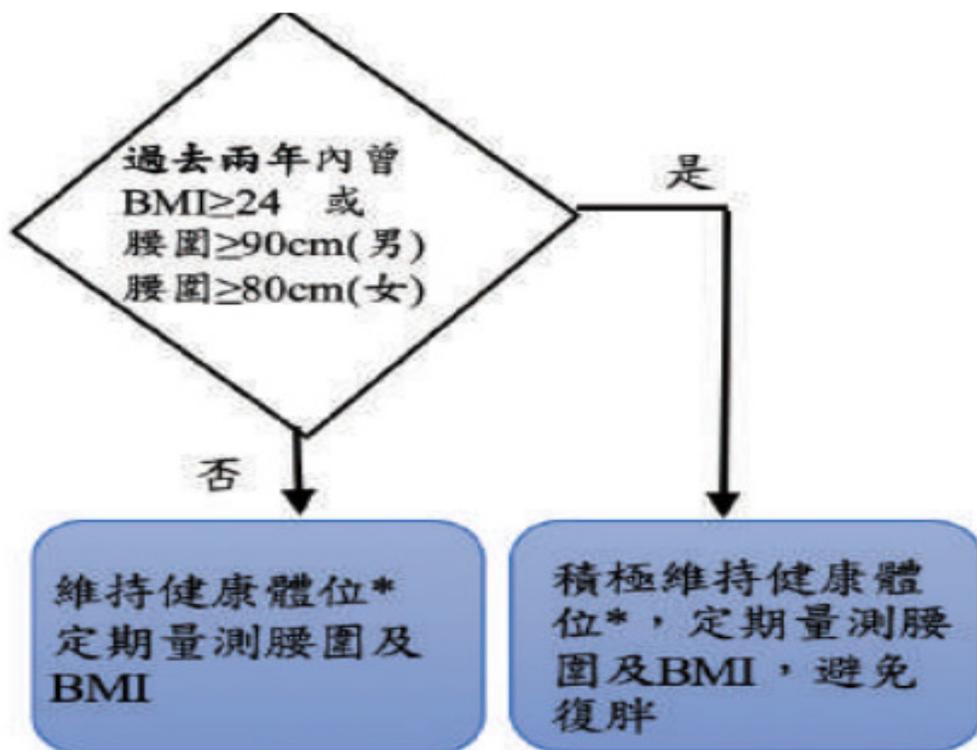
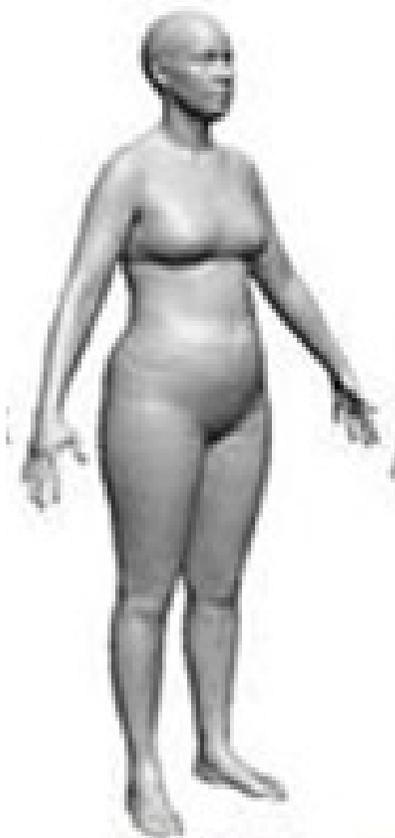


個案評估



心血管疾病危險因子(1-5項為可修正因子)

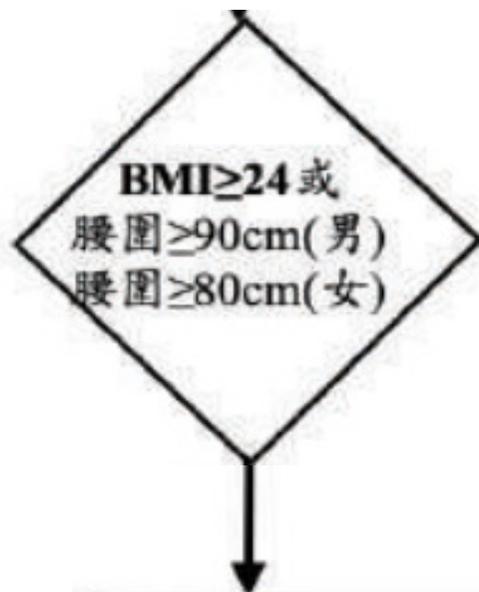
1. 吸菸
2. 血壓偏高(收縮壓 ≥ 130 或舒張壓 ≥ 85 mmHg)
3. 高密度脂蛋白膽固醇偏低(男 < 40 ，女 < 50 mg/dL)
4. 三酸甘油酯偏高 ≥ 150 mg/dL
5. 空腹血糖不良(空腹血糖:100~125mg/dL)
或葡萄糖耐受異常(負荷後2hr血糖:140~199mg/dL)
6. 有早發性冠心病家族史(男 < 55 歲，女 < 65 歲)
7. 男 ≥ 45 歲，女 ≥ 55 歲或停經者



***維持健康體位**
宜採用健康飲食、規律運動、生活型態修正

#生活型態修正
除健康飲食、規律運動外、包括戒菸戒檳、節酒、紓壓、舒眠足眠等





1. 飲食控制
2. 規律運動
3. 生活型態修正[#]
4. 定期(至少每週)量測腰圍及BMI



別讓脂肪在肝臟佔地為王！ 消滅脂肪肝必吃&避吃指南

必吃



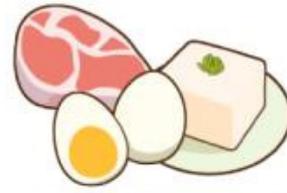
蔬果全穀

增加抗氧化力
助肝臟代謝



優質好油

清理血中
壞膽固醇



好蛋白質

協助
肝臟脂肪排出

避吃



酒類



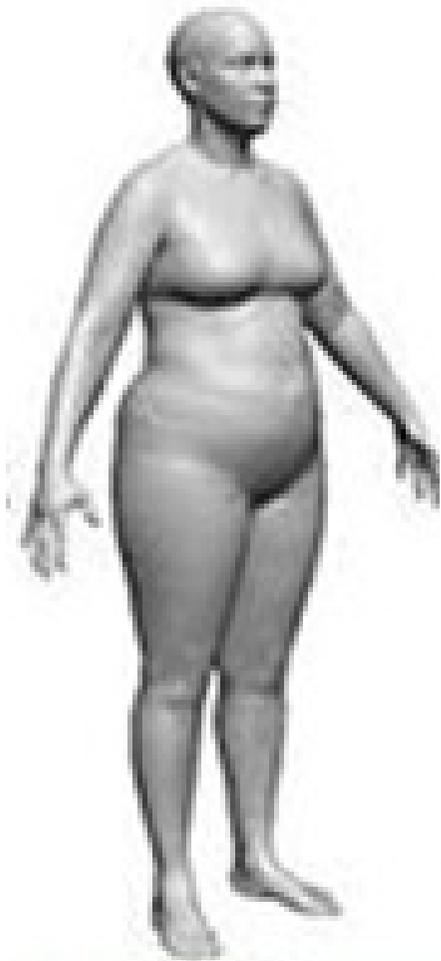
含糖飲料



過量水果



吃太多會加速肝臟脂肪堆積！



1. 飲食控制
2. 運動指導
3. 生活型態修正
4. 可修正危險因子之控制

每 3-6 個月評
估是否達到減
重目標

否

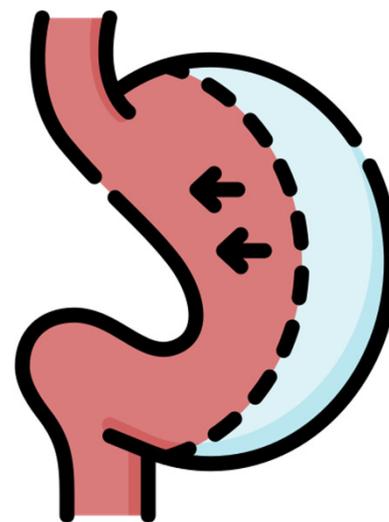
5. 心理介入
6. 考慮使用減重藥物
7. 若有肥胖相關合併症，
且內科治療效果不佳，
可謹慎考慮外科減重手術

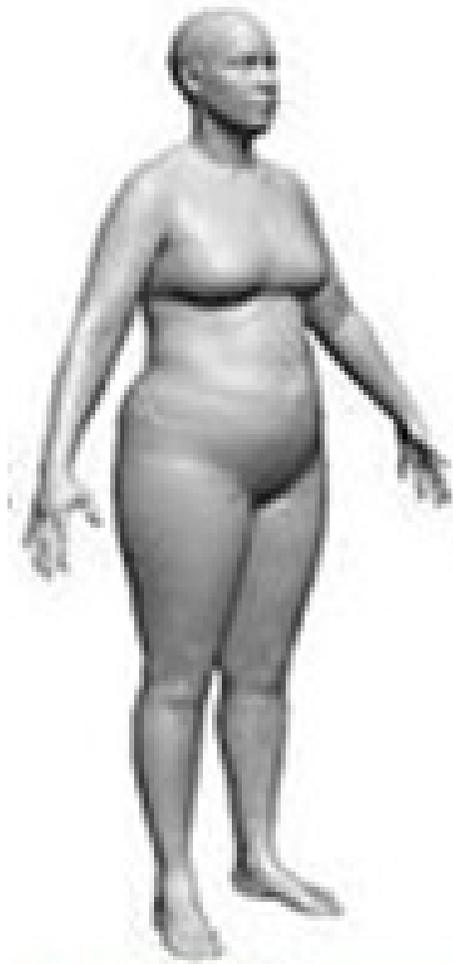
定期(至少每週)量測腰圍及
BMI，並持續進行：

1. 飲食控制
2. 運動指導
3. 生活型態修正
4. 可修正危險因子之控制
5. 心理介入

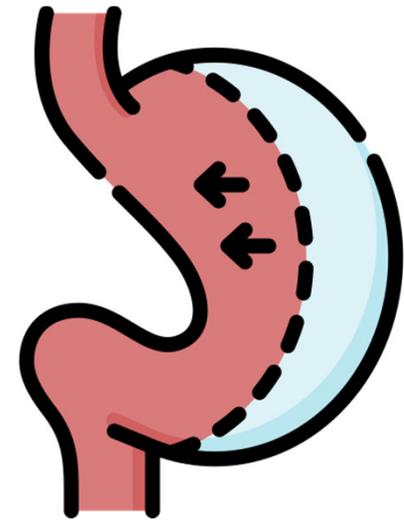
合併症：

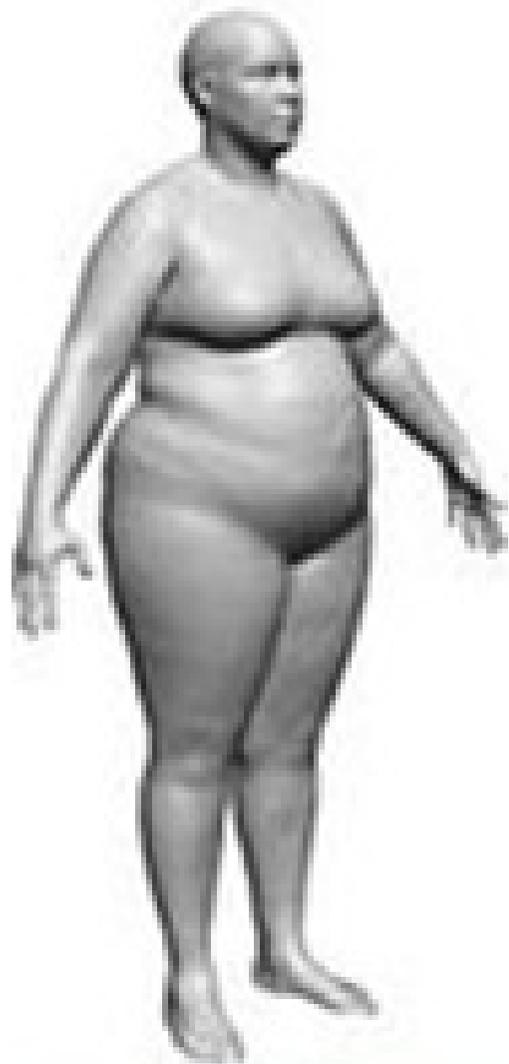
1. 高血壓
2. 血脂異常
3. 第2型糖尿病
4. 心血管疾病(冠心病、
腦中風、周邊血管疾病)
5. 睡眠呼吸中止症





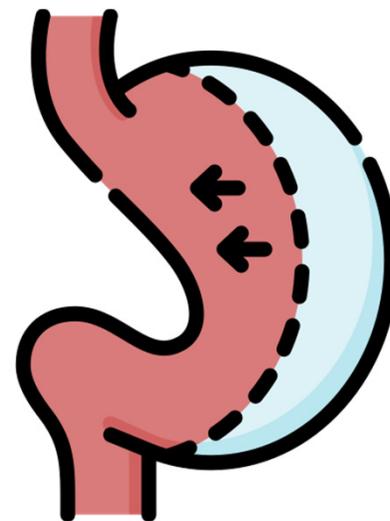
1. 飲食控制
2. 運動指導
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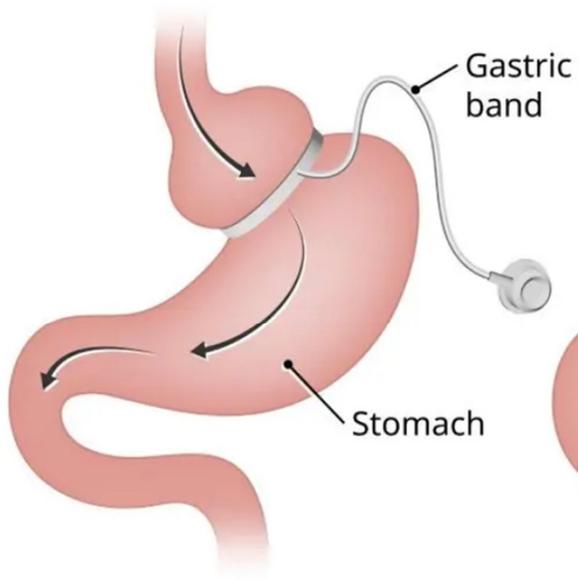
BMI \geq 37.5
或
BMI \geq 32.5 並已有因肥胖引起之合併症

1. 飲食控制
2. 運動指導
3. 生活型態修正
4. 可修正危險因子之控制
5. 心理介入
6. 建議減重藥物
7. 考慮外科減重手術治療

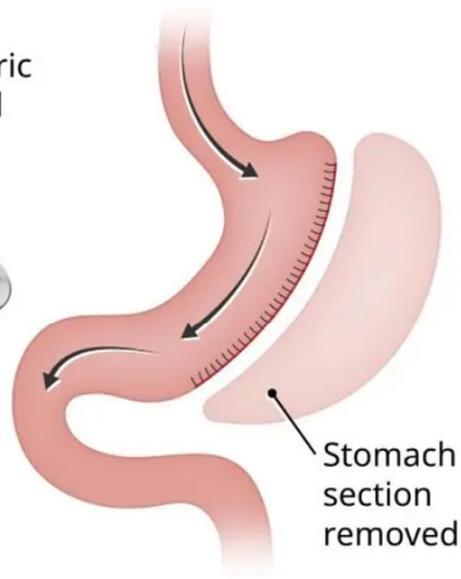


Bariatric Surgery

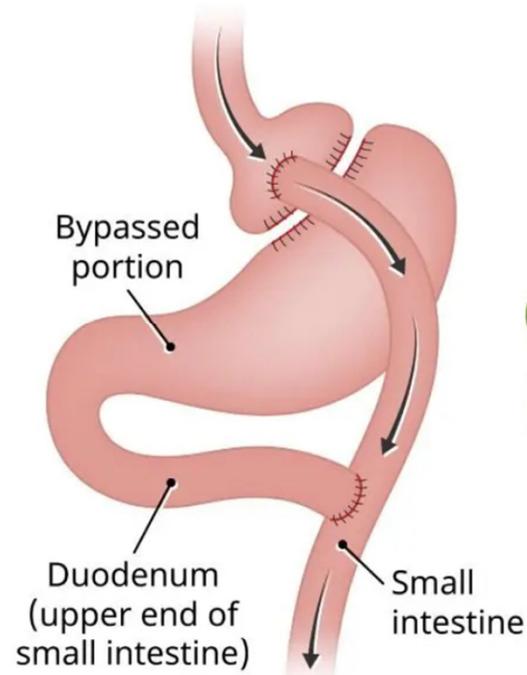
Laparoscopic adjustable gastric banding (LAGB)



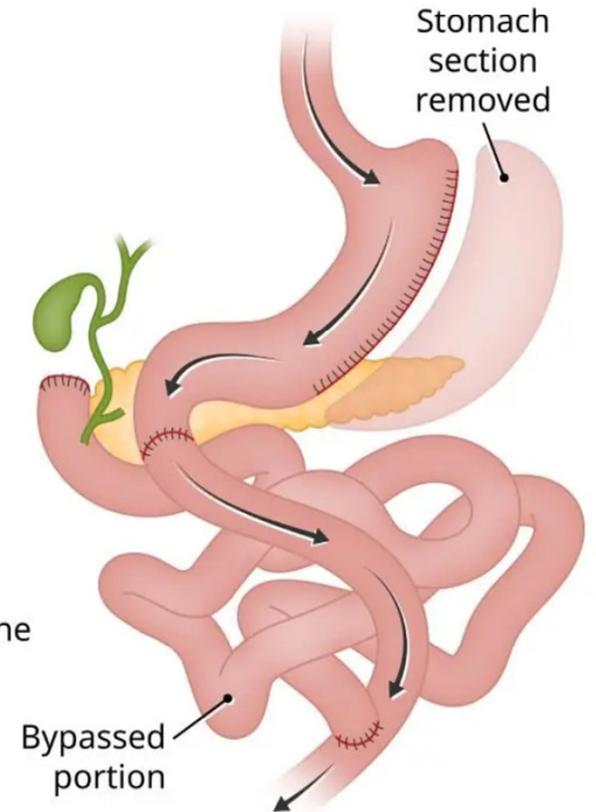
Laparoscopic sleeve gastrectomy (LSG)



Laparoscopic Roux-en-Y gastric bypass (LRYGB)

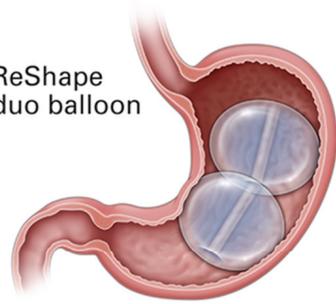


Laparoscopic biliopancreatic diversion with duodenal switch

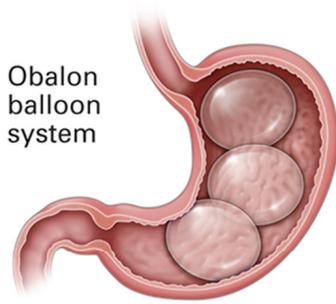




Orbera intragastric balloon



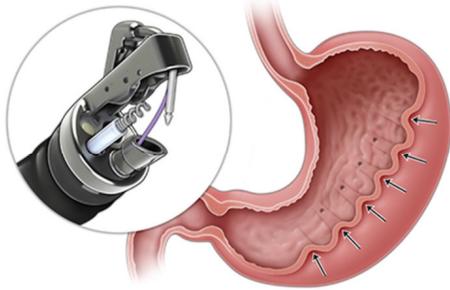
ReShape duo balloon



Obalon balloon system



Spatz adjustable balloon



Endoscopic gastric remodeling (ESG)



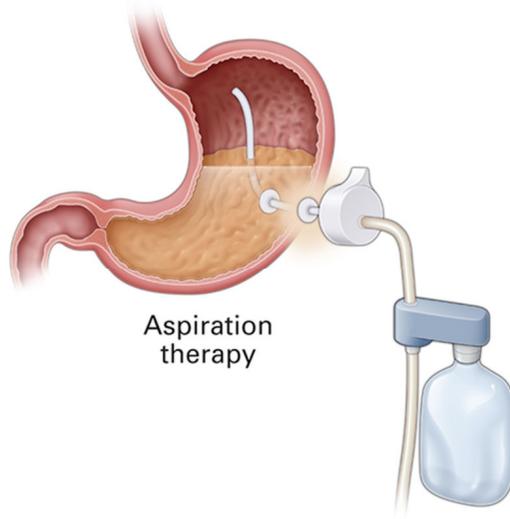
Endoscopic gastric remodeling (POSE)



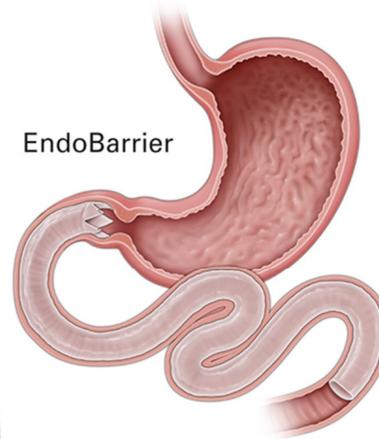
Endoscopic gastric remodeling (Endomina)



Transpyloric shuttle



Aspiration therapy

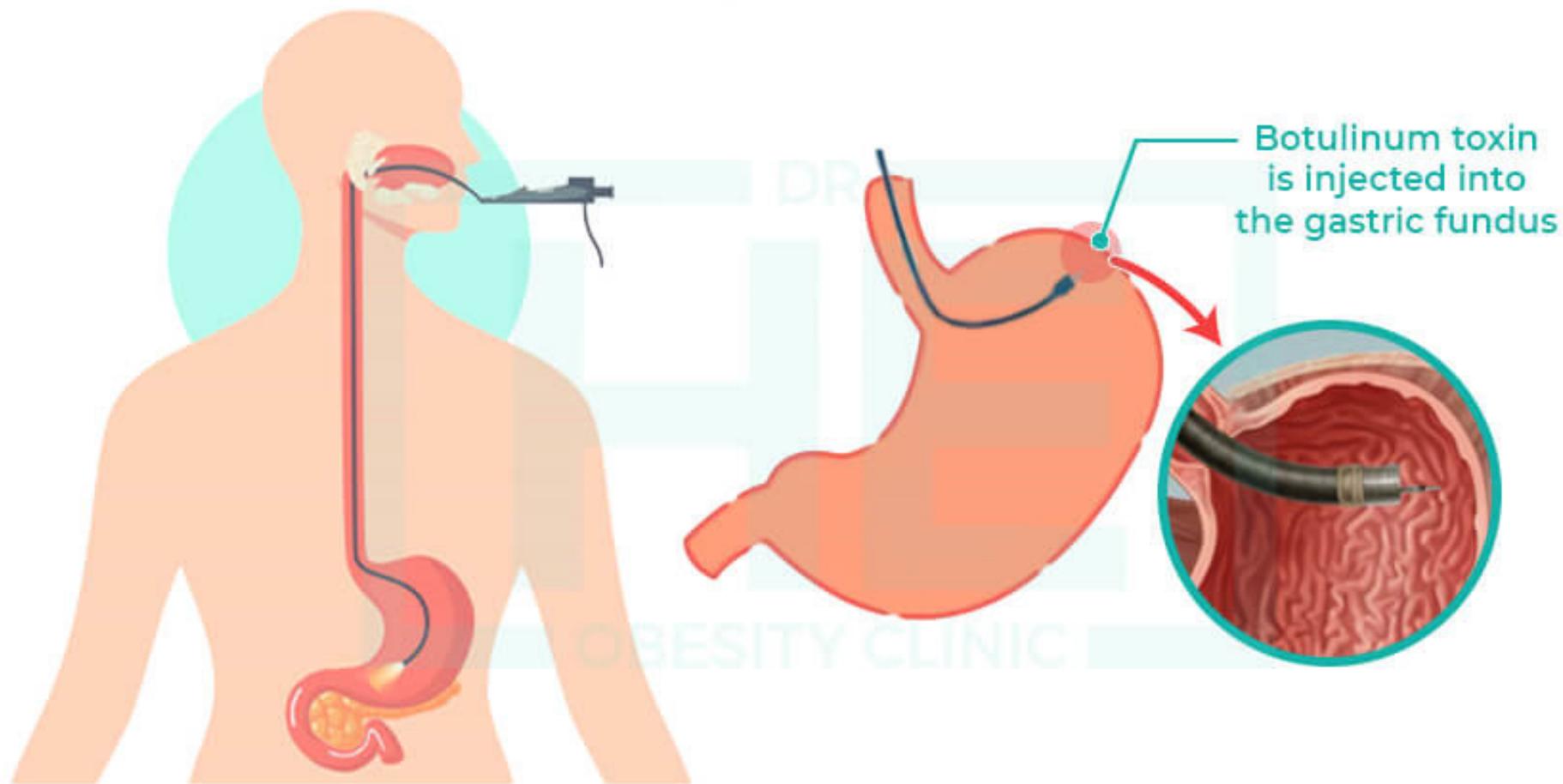


EndoBarrier



Revita DMR

胃 肉毒注射



臉書粉絲團追蹤

