

# IMPACT OF OBESITY & BMI IN RENAL TRANSPLANT

## TEAM EFFORT: WHAT IS THE DIETITIAN'S ROLE



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# OBJECTIVES

- Understand the impact of obesity on transplant recipients
- Explain the Renal Registered Dietitian's role in counseling obese patients to prepare them for active listing
- Illustrate how can you help obese patients prepare for post transplant life



# DEFINE OBESITY AND BMI

Overweight and obesity are usually defined using body mass index

$$\text{BMI} = \frac{\text{(weight in kg)}}{\text{(height in meters)}^2}$$



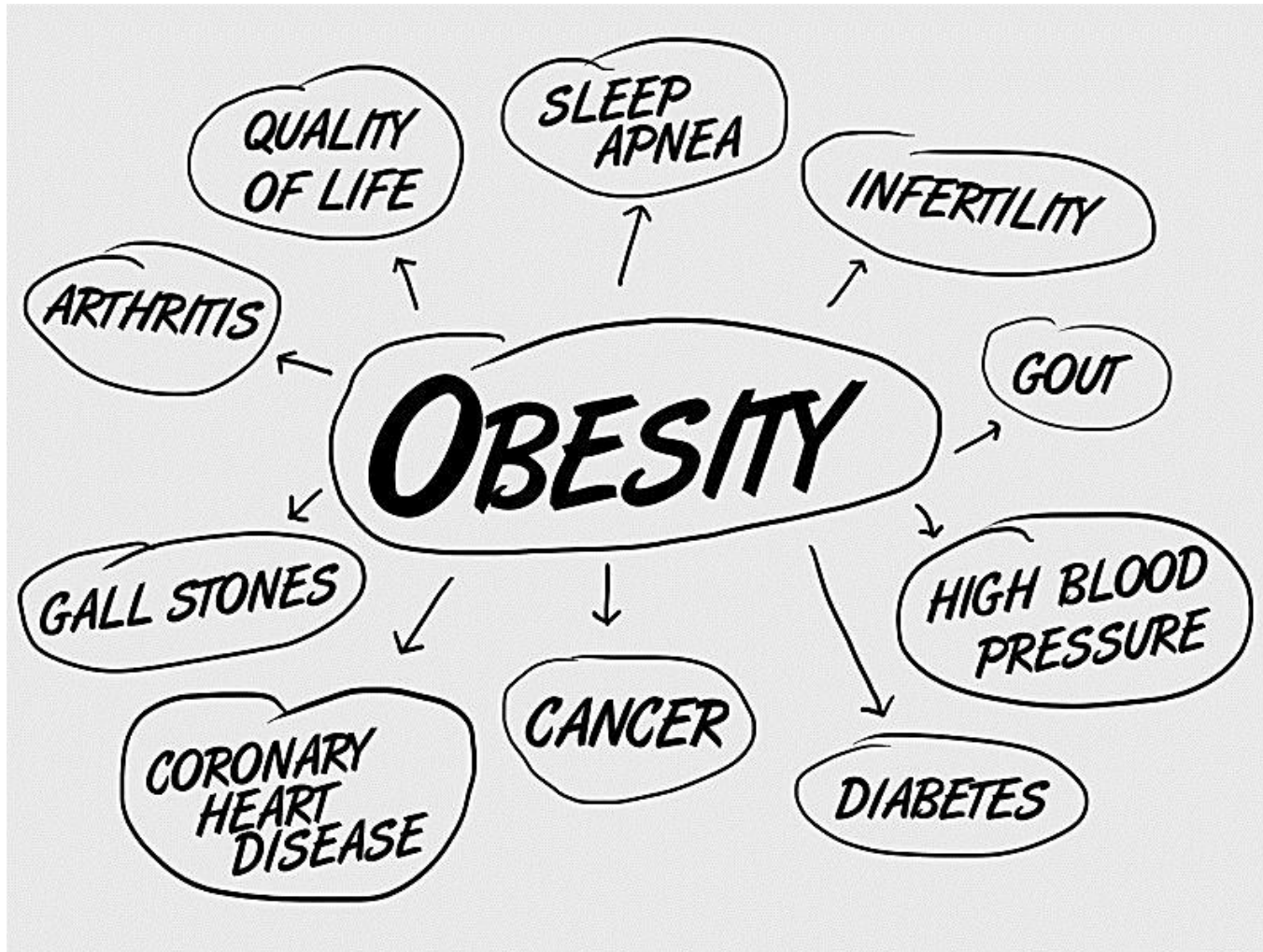
*BMI does not take into account muscle mass vs visceral and non-visceral adiposity*

# DEGREE OF OVERWEIGHT AND OBESITY DEPENDS UPON BMI

Classification	BMI
Underweight	$<18.5 \text{ kg/m}^2$
Normal weight	$\geq 18.5 \text{ to } 24.9 \text{ kg/m}^2$
Overweight	$\geq 25 \text{ to } 29.9 \text{ kg/m}^2$
Obesity	$\geq 30 \text{ kg/m}^2$
Class I	$30.0 \text{ to } 34.9 \text{ kg/m}^2$
Class II	$35.0 \text{ to } 39.9 \text{ kg/m}^2$
Class III (severe)	$\geq 40 \text{ kg/m}^2$



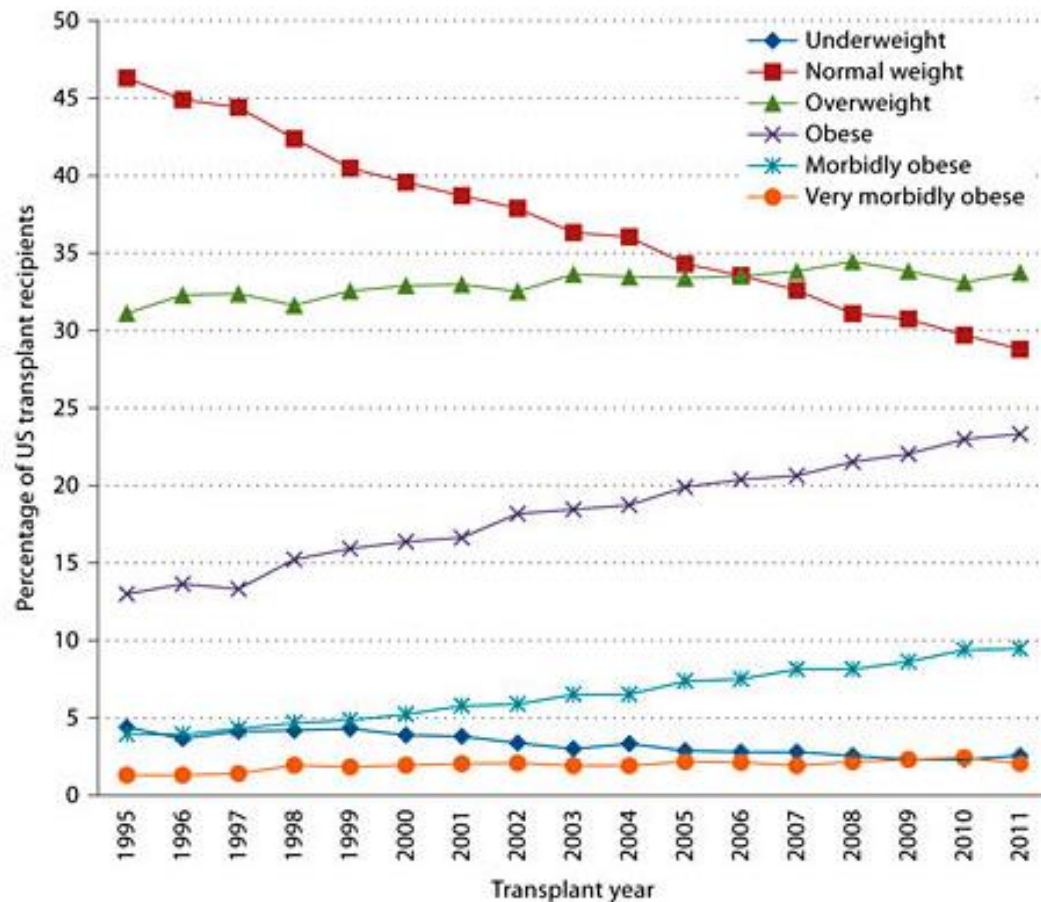
# CONSEQUENCES OF OBESITY



# THE OBESITY EPIDEMIC: CHANGING BMI DISTRIBUTION OF KIDNEY TRANSPLANT RECIPIENTS IN THE US OVER TIME

BMI was categorized by WHO criteria as:

**underweight** (<18.5), **normal weight** (18.5–24.9), **overweight** (25–29.9),  
**obese** (BMI 30–34.9), **morbidly obese** (BMI 35–39.9), **very morbidly obese** (BMI ≥40).

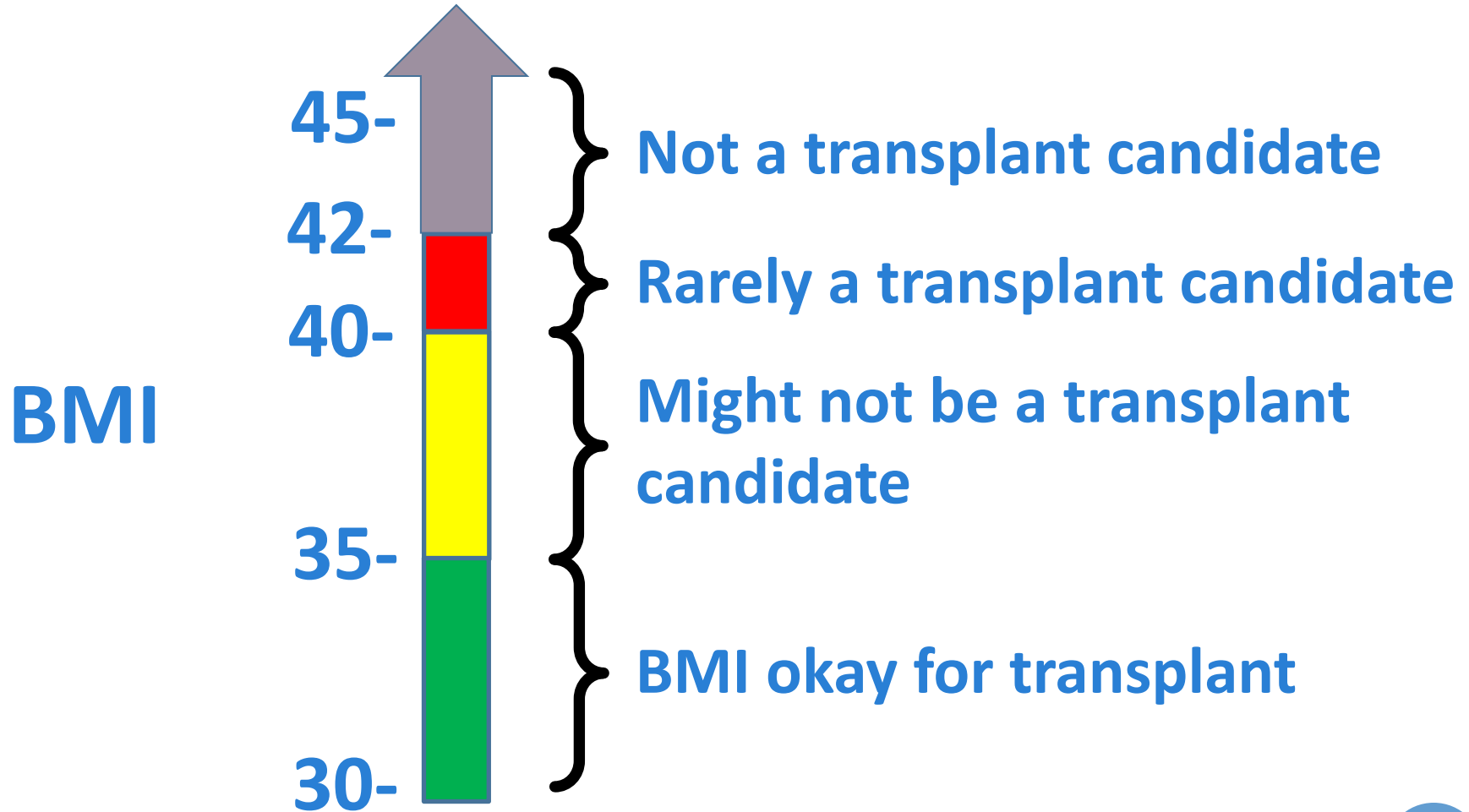


# WHAT IMPACT DOES OBESITY HAVE IN KIDNEY TRANSPLANT RECIPIENTS

- Longer OR time
- Delayed graft function → Chronic rejection
- Wound healing
- Hospital readmissions/ costs \$
- Development of diabetes mellitus
- Development of a ventral hernia
- More likely to have a failed transplant in the first 3 years
- Death?



# AT SBMC, WE EXCLUDE SOME SEVERELY OBESE PATIENTS FROM KIDNEY TRANSPLANT



*Patients can be excluded from kidney transplant due to severe obesity alone:  
every center sets their own criteria*

# REGISTERED DIETITIAN'S ROLES IN OBESE TRANSPLANT CANDIDATES

## Case Study:

- Jack is a 62 year old male with ESRD due to diabetes
  - On hemodialysis for 1 year using L AV fistula
  - Diabetic for 12 years with history of coronary artery disease
  - Hypertension, metabolic syndrome, neuropathy, retinopathy
- 5' 10", 262lbs
- BP 146/88
- Central abdominal obesity
- Adherent to his treatments
- BMI = 37.5 (morbid obesity)



# CASE STUDY:

## IS JACK AN ACCEPTABLE TRANSPLANT CANDIDATE?

Jack might be a transplant candidate

- Obesity with diabetes and CAD might exclude him from transplant

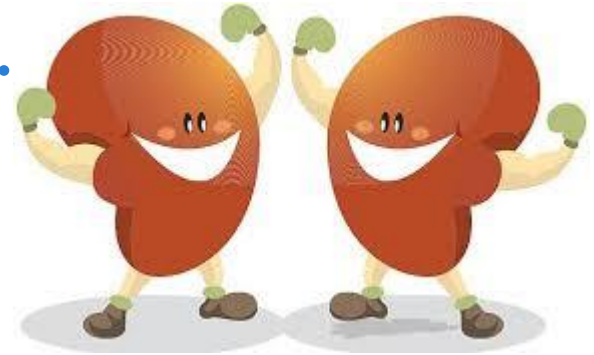


What is the Renal Dietitian's role to help Jack be a transplant candidate?



# WHAT IS THE RENAL DIETITIAN'S ROLE TO HELP JACK BE A TRANSPLANT CANDIDATE?

*Thinking outside the dialysis box.  
Let's work together.*



- Basic weight management education
- Ensuring proper diabetes care; referral to endocrinologist
- Referral to bariatric surgeon: gastric sleeve is preferred method
- Use of apps, Fitbit, social media for personal tracking & accountability

*All good tools for post transplant care*



# THANK YOU...ANY QUESTIONS?

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## Save the Date!

**The 27th Annual Transplant Surgeon  
Designee Symposium for Chronic Kidney Disease Professionals**  
Thursday, April 27, 2016  
Pines Manor, Edison NJ

