

eGFR/ GFR - Estimated Glomerular Filtration Rate Interpretation

Methodology: Calculation proposed by the National Kidney Disease Education Program that is based on the serum/plasma Creatinine level and has gender and age factors.

Description: Dates of birth and gender information are required fields. The calculation is only applicable for those older than 18 years of age.

This calculation also has the limitations of being valid for only results less than 60 mL/min/1.73m². Results greater than 60 mL/min/1.73m², will be reported as such rather than an exact number.

Reference Range: Only results less than 60 mL/min/1.73m² will be reported as a numeric value. All others will be presented as being > 60 mL/min/1.73m².

The GFR is calculated based on the serum creatinine, gender and age, according to the MDRD equation recommended by the NKDEP program.

$$\text{GFR (mL/min/1.73 m}^2\text{)} = 175 \times (\text{Scr})^{-1.154} \times (\text{Age})^{-0.203} \times (0.742 \text{ if female})$$

The interpretation of the results is based on the age of the patient as follows:

> 18 and < 70 years old

- Clinical use of the eGFR result is not recommended if:
 - the patient's basal creatinine production is very abnormal, such as extremes of body size or muscle mass (e.g. obese, severely malnourished, amputees, paraplegics, or other muscle-wasting diseases).
 - the patient has an unusual dietary intake (eg. vegetarian, creatine supplements).
 - the patient has an unstable creatinine level (eg. pregnant women, patients with serious co-morbid conditions, and hospitalized patients, particularly those with acute renal failure).

> 70 years old

- The EGFR calculation has not been validated in patients older than 70, but can be used as an orientative information.
- Clinical use of the eGFR result is not recommended if:
 - the patient's basal creatinine production is very abnormal, such as extremes of body size or muscle mass (eg. obese, severely malnourished, amputees, paraplegics, or other muscle-wasting diseases).
 - the patient has an unusual dietary intake (eg. vegetarian, creatine supplements).
 - the patient has an unstable creatinine level (eg. pregnant women, patients with serious co-morbid conditions, and hospitalized patients, particularly those with acute renal failure).

< 18 years old - result is not calculated or reported

- For patients younger than 18 y/o the Bedside IDMS-traceable Schwartz Equation for Children for EGFR is recommended: Conventional units (creatinine as mg/dL; height in cm):

$$\text{GFR (mL/min/1.73 m}^2\text{)} = (0.41 \times \text{Height in cm}) / \text{Creatinine in mg/dL}$$