

Understanding Your Body Composition Analysis Results

A Guide to Reading Your DEXA Scan Report

What is a DEXA Scan?

DEXA (Dual-Energy X-ray Absorptiometry) is a reference method widely used in research to measure body composition. Unlike scales or BMI calculations, DEXA directly measures and differentiates between fat tissue, lean tissue (muscle, organs, water), and bone mineral content throughout your entire body.

This guide will help you understand each section of your report and what the numbers mean for your health.

Patient Information Header

The top of your report displays your demographic information, measurement date/time, and referring physician. Always verify this information is correct.

Composition Reference: Total (Graph)

This graph shows your Tissue % Fat (body fat percentage) plotted against your age, compared to a reference population. The colored bands represent percentile ranges:

- Higher percentiles (75th-90th+) indicate higher body fat compared to others your age
- Middle percentiles (25th-75th) represent the average range
- Lower percentiles (10th-25th) indicate lower body fat compared to others your age

Composition Trend: Total (Graph)

This graph tracks your Fat Free Mass (lean mass + bone) over time across multiple scans. An upward trend indicates you are gaining lean mass; a downward trend may indicate muscle loss. This is particularly important for monitoring sarcopenia (age-related muscle loss) and tracking fitness progress.

Trend: Total (Enhanced Analysis) Table

This table provides detailed measurements from each scan date:

Column	What It Means
Tissue (%Fat)	Your body fat percentage. This is the primary metric for overall body composition.
Centile	How you compare to others of your age and sex. 50th = average; lower = leaner than average.
Total Mass (lbs)	Your total body weight as measured by the DEXA scanner.
Region (%Fat)	Body fat percentage including bone mass in the calculation (slightly different from Tissue %Fat).
Tissue (lbs)	Total soft tissue weight (fat + lean mass, excluding bone).
Fat (lbs)	Total fat mass in pounds. Track this number over time to monitor fat loss.
Lean (lbs)	Lean soft tissue (muscle, organs, water) in pounds. Higher is generally better.
BMC (lbs)	Bone Mineral Content - the weight of your bones. Important for bone health assessment.
Fat Free (lbs)	Everything that is not fat (Lean + BMC). This is your metabolically active tissue.

Trend: Fat Distribution (Enhanced Analysis) Table

This table shows WHERE your fat is distributed, which is often more important than total body fat for health risk assessment:

Column	What It Means
Android (%Fat)	Fat percentage in your midsection/abdominal area (between ribs and pelvis). This is visceral fat territory and is metabolically active - higher values increase health risks.
Gynoid (%Fat)	Fat percentage in your hip and upper thigh region. This subcutaneous fat is less metabolically dangerous and may even be protective.
Trunk (%Fat)	Fat percentage in the torso region (neck, chest, abdomen, pelvis). This encompasses both android and gynoid areas.
A/G Ratio	Android fat divided by Gynoid fat. This "apple vs. pear" ratio is a key indicator of metabolic health risk. Targets are in the A/G ratio table below.
Total Body (%Fat)	Your overall body fat percentage for reference.

Recommended Target Values

Recommended Body Fat Percentage by Age and Sex

These ranges represent healthy body fat levels. Individual goals may vary based on health status and objectives.

WOMEN

Age	Low/Athletic	Fitness	Acceptable	Overfat	Obese
20-29	< 21%	21-24%	25-31%	32-38%	> 38%
30-39	< 22%	22-25%	26-32%	33-38%	> 38%
40-49	< 23%	23-26%	27-33%	34-39%	> 39%
50-59	< 24%	24-27%	28-34%	35-40%	> 40%
60+	< 25%	25-28%	29-35%	36-41%	> 41%

MEN

Age	Low/Athletic	Fitness	Acceptable	Overfat	Obese
20-29	< 11%	11-14%	15-20%	21-25%	> 25%
30-39	< 12%	12-15%	16-21%	22-26%	> 26%
40-49	< 14%	14-17%	18-22%	23-27%	> 27%
50-59	< 15%	15-18%	19-23%	24-28%	> 28%
60+	< 16%	16-19%	20-24%	25-29%	> 29%

Android/Gynoid (A/G) Ratio Targets

The A/G ratio indicates fat distribution pattern ("apple" vs. "pear" shape). Lower values indicate healthier fat distribution with less abdominal/visceral fat.

Category	Women	Men
Optimal	< 0.8	< 1.0
Acceptable	0.8 - 1.0	1.0 - 1.2
Elevated Risk	> 1.0	> 1.2

Note: An A/G ratio greater than 1.0 means you carry more fat in your midsection than your hips - this "apple shape" pattern is associated with increased risk of cardiovascular disease, type 2 diabetes, and metabolic syndrome.

Fat Mass Ratio Targets

These ratios assess how fat is distributed between your trunk (torso) and limbs. Healthier patterns show more fat in the limbs relative to the trunk.

Ratio	What It Measures	Ideal Value
Trunk/Total	Proportion of total fat mass located in your trunk	< 0.50
Legs/Total	Proportion of total fat mass located in your legs	0.35 - 0.45
(Arms+Legs)/Trunk	Limb fat compared to trunk fat; higher = healthier distribution	> 1.0

Note: A Trunk/Total ratio above 0.50 or an (Arms+Legs)/Trunk ratio below 1.0 suggests excess fat is concentrated in the torso, which is associated with higher metabolic risk.

Key Takeaways for Interpretation

- Body fat percentage is important, but WHERE you carry fat matters more for health risk. Abdominal (android) fat is more metabolically dangerous than hip/thigh (gynoid) fat.
- A lower A/G ratio is better: below 0.8 for women and below 1.0 for men is optimal. A ratio under 1.0 means you carry more fat in your hips and thighs than in your midsection.
- Lean mass (muscle) is metabolically active and protective. Maintaining or building lean mass supports metabolic health, bone density, and functional fitness.
- Track trends over time rather than focusing on single measurements. DEXA is most valuable for monitoring changes across multiple scans.
- For best accuracy when comparing scans: test at the same time of day, with similar hydration status, and avoid intense exercise 24 hours prior.
- DEXA results often differ from other methods (skinfold calipers, bioelectrical impedance scales), so compare each DEXA result with your earlier DEXA results rather than with numbers from other methods.
- Individual goals should be discussed with your provider. "Optimal" ranges vary based on age, health conditions, activity level, and personal objectives.

Reference data compiled from American Council on Exercise, NHANES body composition studies, and published DEXA research. Recommended ranges are general guidelines - individual targets should be established with your healthcare provider.