Body Composition Assessment

Scholars

PURE HEALTH REGISTERED DIETICIANS
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What can screening with the Inbody 570 do for your school?

• Screening pupils at your school (with parental consent) can give you:
  – idea of the overall health of your school pupils
  – Focus areas to improve their overall wellbeing.

• Pupils that eat healthily and are physically active
  – more energy
  – sick less often
  – learn better
  – better self esteem

• As a school you can say you have done your part in helping to make the children of South Africa lead healthier lives and be more health conscious.

• Screening results =confidential
• Consent from parents is required
WHY?
2014 Active Kids Report

- Urgent need to prevent physical inactivity and obesity in children and young people
- Obesity affects 500 million people worldwide
- Obesity predicted to increase to 1 billion by 2030.
- The current generation of children may experience a shorter life expectancy than their parents.
- The prevalence of obesity and overweight has doubled in adolescent boys over a 6-year period
- Physical inactivity has been described as a global pandemic
  - with a worldwide prevalence of 35%
  - accounts for more than 5 million deaths each year, about the same number as smoking.
• The number of overweight or obese infants and young children (under the age of 5 years) increased from 31 million globally in 1990 to 44 million in 2012.
• 10 million of these children are in Africa.
• The vast majority of overweight or obese children live in developing countries – Where the rate of increase has been more than 30% higher than that of developed countries.
• If current trends continue, the number of overweight or obese infants and young children globally will increase to 70 million by 2025.
• Obesity in childhood → serious health complications & ↑ risk of premature onset of illnesses, including diabetes & heart disease.
What is the InBody 570?

- Designed by Biospace
- Hi-tech, state-of-the-art body scan provides comprehensive body composition analysis.
- Monitoring weight is not enough to see progressive changes in health and body
- **Weight alone does not correctly reflect the effects of exercise and improved diet.**
- The InBody scan shows a **true assessment** of the body.
- InBody takes fitness and weight management to the next level →
  - better understanding how your diet, lifestyle & exercise regimen
  - influence your body composition and overall wellbeing
InBody 570 Analysis Includes:

- weight
- segmental fat and muscle distribution
- intra/extracellular water
- total body water
- lean body mass
- dry lean mass
- visceral fat
- skeletal muscle mass
- body fat mass
- body mass index
- basal metabolic rate
- impedance at each body segment.
Accuracy of the InBody 570?

- Over 500 published articles by renowned journals
- Clinical reliability proven by the world’s medical professionals in numerous articles
- 98% of correlation with the gold standard device DXA
- InBody’s own technologies hold patents in numerous countries around the world.

- The InBody’s body composition data deliver research-level results
  - utilized by thousands of studies to accurately track changes in body composition.

- The InBody Technology Arms, trunk, and legs are measured separately

- High precision
  - using a set of high and low frequencies simultaneously
- Highly reproducible data
  - due to fixed measuring locations on the wrist and ankle.
• **Body Composition Analysis**
  – Body weight is the sum of Total Body Water, Protein, Minerals, and Body Fat Mass. Maintain a balanced body composition to stay healthy.

• **Muscle-Fat Analysis**
  – Compare the bar lengths of Skeletal Muscle Mass and Body Fat Mass. The longer the Skeletal Muscle Mass bar is compared to the Body Fat Mass bar, the stronger the body is.

• **Obesity Analysis**
  – BMI is an index used to determine obesity by using height and weight. PBF is the percentage of body fat compared to body weight.

• **Segmental Lean Analysis**
  – Evaluates whether the muscles = adequately developed

• **Body Composition History**
  – Track the history of the body compositional change
  – Should be done periodically to monitor your progress.
InBody Score
- This score shows the evaluation of your body composition, which includes muscle, fat, and water in the body.

Body Balance Evaluation
- Evaluates the balance of the body based on Segmental Lean Analysis.

Additional data (To see a complete list, please scan the results interpretation QR code)
- Intracellular and Extracellular Water
- Basal Metabolic Rate
- Child obesity degree
- Bone mineral content, Body cell mass.

Impedance:
- resistance value measured when electrical currents are applied throughout the body.
- Based on the measured data, key body composition outputs can be analyzed.
- Impedance is also used for many research purposes.
### Muscle - Fat Analysis

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<tr>
<td><strong>Body Fat Mass</strong></td>
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**Stop!**

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**Decision Time**

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**Keep Going**
BENEFITS FOR SPORTS TEAMS AT YOUR SCHOOL
• Monitor muscle imbalances
• Identify focus areas for improved individual performance
• Monitor injury rehabilitation
  – measure returning muscle mass post injury-associated atrophy.
• ↑ motivation to eat well and train hard according to their own personal basal metabolic rate.
• Small ↑ body fat → ↓ in anaerobic performance
• Untracked changes in body composition can mislead one into believing that his/her program is responsible for changes in performance.
  – Therefore, body composition must be considered for optimal program design.
• Keep lifting/training volume high during the competitive season
• Monitor athletes’ body composition over the course of the season
Body fat percentage also affects athletic performance:

- If you are a tri-athlete, or competitive runner with 20% body fat and a good 5-10kg of fat to lose, you are essentially carrying the equivalent of a 5-10kg dumbbell with you at all times →
  - massive impact on your athletic performance
  - Impact on joints.

- Argument: losing the excess fat (without losing muscle of course) would help performance more than logging extra kilometers.

- What about increasing weight by adding muscle mass. Does that hurt performance?
  - Short answer is no, adding muscle typically helps athletic performance.
  - The power/weight ratio, which is meticulously measured by the cycling community is improved when muscle is gained.
  - In some cases, because of aerodynamics, losing overall body mass (muscle mass and fat) can sometimes help a cyclist go faster, but this has not been proven with sprinters and other power related athletes.
Current Sport Teams using the InBody 570...

- The Los Angeles Lakers NBA basketball team:
- AFL
- Soccer Australia
- Cricket Australia
- NBL
- NRL
- Australian netball league
- Athletics Australia
- Hockey Australia

Head fitness coach for the Los Angeles Lakers Gary Vitti states:

“I can’t get the best out of them unless I have the best equipment, and in terms of trying to determine a player’s physiological make up, it doesn’t get any better than the InBody.”
COSTS...

There are different options available: (normal cost R150/scan)

<table>
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<th>Cost</th>
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<tr>
<td>Once off individual scan and report</td>
<td>R100</td>
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<tr>
<td>Two assessment in a 12 month period</td>
<td>R160</td>
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<tr>
<td>Four assessments in a 12 month period</td>
<td>R240</td>
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<tr>
<td>One assessment per month in a 12 month period</td>
<td>R600</td>
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<tr>
<td>For the whole school to be scanned</td>
<td>Price on request</td>
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Payments must be made:
- Via EFT and proof of payment shown on the day
- Cash (invoice will be given)
- Debit or Credit card