

The Experts View

"A simple, portable device such as this is long overdue and should enhance our ability to provide the appropriate nutrition for each individual patient on a routine basis."

- **George Blackburn, MD, Ph.D.**
Harvard Medical School,
Beth Israel Deaconess Medical Center

Success with Microlife

Microlife ensures your success by providing the best after-sales support in the industry.

- 🔥 Full access to our expert staff
- 🔥 Toll free customer support 1-866-950-1404

Included with each MedGem device

- **Quick Start Guide** includes training, user manual, and marketing/branding guidelines on a convenient USB drive.
- **Single-use Mouthpieces** that ensure sanitary use of the MedGem among different patients/clients.

Additional Tools

Marketing and Advertising Material: Tools to help market the MedGem for your business or organization such as:

- **Education brochures**
- **Posters and other promotional materials**

Remember. You can only take advantage of the latest technology and most convenient product in metabolic measurement technology if you act today.

1. RMR is calculated using the Weir Equation and a constant RQ value of 0.85 (RMR=6.913xVO₂), Weir, J.B., New Methods for Calculating Metabolic Rate with Special Reference to Protein Metabolism. J Physiol, 1949. 109: pages 1-9.

2. Nieman, David C., Trone, Greg A. and Austin, Melanie D., "A new handheld device for measuring resting metabolic rate and oxygen consumption." Journal American Dietetic Association 2003:103 (May), 588-593.

3. Stewart, C., Branson, R., Goody, C.M., "A Comparison of Two Systems for Measuring Energy Expenditure". Journal of Parenteral and Enteral Nutrition 2005:29 (May/June), 212-217.

4. Storer, T.W., et al. "Validation of the MedGem Device for Measurement of Resting Metabolic Rate", Abstract May 2004 ACSM conference, Indianapolis, IN.

5. James R. Mault, et al. "Efficacy of a Resting Metabolic Rate Based Energy Balance Prescription in a Weight Management Program" Nutrition Week, San Diego, CA. Feb. 2002

6. Foster, G. et al. (1988). Resting Energy Expenditure, Body Composition, and Excess Weight in the Obese. Metabolism, 37(5), 467-472.

7. HealthTech Technical Report #2 - Comparison of the BodyGem to a Mechanical Simulation Device.

8. Melanson, E. L. et al., Validation of the BodyGem Handheld Calorimeter. International Journal of Obesity 2004:28, 1479-1484.

9. Frankenfield, D., Roth-Yousey, and C. Compher, Comparison of Predictive Equations for Resting Metabolic Rate in Healthy Nonobese and Obese Adults: A Systematic Review. J Am Diet Assoc., 2005. 105: p. 775-789.

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Metabolism-Based Weight Management Solutions



MedGem®

Indirect Calorimeter

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The MedGem Indirect Calorimeter

Provide a higher level of care to your patients or clients with scientifically determined resting metabolic rate (RMR) measurements ⁽¹⁾. A wide variety of health professionals – Dietitians, Endocrinologists, Cardiologists, Bariatricians, Research Scientists, and many others – use the MedGem to ensure accurate and reliable measurements for use in their weight management, nutritional, or other medically supervised programs.

- **SIMPLE** – To perform a measurement, your patient or client simply breathes into the device, which measures their oxygen consumption (VO₂). The resulting RMR number is clearly displayed on the device's LCD screen.
- **ACCURATE** – The MedGem has been validated against the gold standard Douglas Bag, and other commonly used metabolic carts. ^(2, 3, 4)
- **CONVENIENT** – The MedGem is portable, self-calibrating, easy to administer, and provides a result in 10 minutes or less.
- **AFFORDABLE** – The MedGem is available in different measurement capacities to ensure your organization has the right device for your needs.
- **REIMBURSABLE** – Medicare and most insurance companies reimburse healthcare providers for metabolic assessments. Average reimbursement is between \$75-\$85.00. The AMA CPT Code is 94690.*

You have questions about your patient's metabolism... the MedGem has answers

Provide the personalized health information your patients/clients need to achieve their best results. MedGem users have found the following benefits:

- **Individualization of calorie budgets or nutrition programs to account for differences in metabolic rates – particularly among obese, unhealthy, ill, or inactive patients/clients.**
- **Elimination of the errors and re-adjustments that are common with the use of population based estimation equations.**
- **Increased success rates and reduced costs associated with weight management programs.**
- **Increased revenue with an RMR measurement that is a high value service to your patients/clients.**

*The AMA CPT Information Services has verbally confirmed that 94690 is the most appropriate code for the MedGem measurement. This coding list is not all-inclusive; for a complete list of coding options and descriptions, consult your CPT manual.

“The validation study that we performed in our laboratories concluded that the MedGem is a valid and reliable device for measuring oxygen consumption and calculating RMR.”

- David Nieman, Dr.PH
Director, Human Performance Laboratory, Appalachian State University, Boone, NC

Reference System	Measured RMR Reference vs. MedGem
Mechanical Simulation ⁽⁷⁾	1,263 vs. 1,283 Kcal
Douglas Bag ⁽²⁾	1,657 vs. 1,650 Kcal
Sensormedics 2900 VH ⁽⁶⁾	1,530 vs. 1,559 Kcal
Delta Trac VH ⁽³⁾	1,484 vs. 1,494 Kcal
Vmax 29N ⁽⁴⁾	1,451 vs. 1,494 Kcal

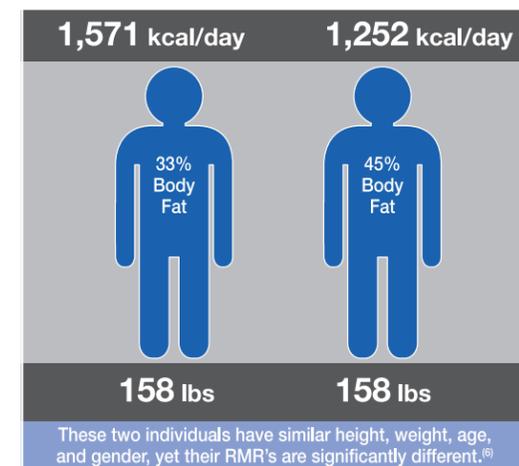
The MedGem Analyzer Software – Putting the Measurements to Work

(Included with every MedGem device)

Utilize your patient's/client's RMR measurement with the Analyzer software (Windows compatible) to create a daily calorie budget (or a nutrition or weight management plan) that is based on their unique characteristics and activity level. The Analyzer Software allows you to create a personalized plan based on a patient's/client's:

- **RMR measurement**
- **Lifestyle factors**
- **Exercise habits**
- **Weight management goals**

Each patient/client will be able to review their plan with you, and then take their plan home to follow and track their progress. A copy of the report, as well as the professional report that contains their measurement, is stored in the Analyzer software for future reference. The measurement report can be printed or saved as a PDF to email the client.



“The MedGem is an indispensable tool in our weight-management program. I have found that measuring resting metabolic rate (RMR) is essential if you are trying to achieve the best possible results for your patients.”

- James O. Hill, Ph.D.
Director, Center of Human Nutrition at the University of Colorado at Denver Health Sciences Center

Metabolism: Measuring vs. Estimating

Predictive equations, like the Harris-Benedict Equation, do not take into account variability among individuals, underlying conditions, or other confounding factors such as:

- **Body Composition**
- **Obesity**
- **Medications**
- **Genetics**
- **Illness**

Many other factors can significantly impact metabolism as well, further compromising the application of predictive formulas. Research has demonstrated that RMR can vary substantially even among individuals that share the same height, weight, age, and sex ⁽⁶⁾. For the best care, the American Dietetics Association recommends using indirect calorimetry to measure RMR for the most accurate assessment of nutritional needs ⁽⁹⁾.