ESPEN Experts' Course
Indirect calorimetry
(Course director: Prof. Pierre Singer)
Tel Aviv, Rabin Medical Center, Israel
January 5-6, 2014

After the success of last year course and in an attempt to improve good clinical practice in the field of clinical nutrition, the General Intensive Care Department and the Institute for Nutrition Research of the Rabin Medical Center (Tel Aviv University) is happy to share more than 30 years of experience in practicing indirect calorimetry measurements.

A course for health practitioners (MD, RD, RN) is organized for ESPEN members to learn the practical approach of this technique in intensive care patients, hospitalized and community patients as well**.**

The course will include:

- Explanation of the theoretical aspects of the technique
- Hands on approach with rounds for indications
- Explanation on calibration aspects including calibration with burning alcohol,
- Comparison of the measurement results with predictive equation
- Discussion about contra indications to the measurement and pitfalls
- Demonstration on most of the metabolic monitors available.
- Development of strategies to ensure the success of the implementation of such a technique in the department of origin.

Our center has acquired the expertise and the reputation of practice of indirect calorimetry. Many physicians and dieticians from Belgium, Russia, China, U.S.A., Finland, Kenya, India, Brazil, Australia and more have already visited our center and participated to previous courses. The center of expertise team has published several articles, reviews and chapters in most of the well known critical care text books on this topic and numerous conferences have been delivered all over the world from Chile to Japan. This unique experience is today shared by many and our team is proud to propose it to ESPEN initiative.

The course will be held during 1.5 days at **the department of Intensive care medicine** of the RMC, Beilinson Hospital in Petah Tikva and will focus on clinical applications of indirect calorimetry. **Professor Pierre Singer** assisted by **Dr Shaul Lev**, **Dr Miriam Theilla** and **Ronit Anbar** (all members of ESPEN) will organize the course.

Publications of the team on this topic will be provided to each participant on a disk on key.

The course will **accept** no more than **20 participants** to allow hands-on demonstrations and the time will be shared between theoretical and practical aspects.

The course is open to **physicians**, **nurses** and **dieticians** that will learn the technique and use it back in their unit. A particular importance will be given to the interpretation of the results, which is not accessible from the literature.

The course will be concluded by a test to assess the level of knowledge acquired as well as an evaluation sent directly by mail to ECPC.

Travel and housing will not be provided but **lunch, dinner and coffees are included**.

Further information on the program, on how to reach the course venue and on convenient housing can be obtained by sending an e-mail to Prof. Pierre Singer secretary. Send applications (including CV and, in case the applicant is a resident, letter of presentation by the Head of the Unit/Residency program) to Prof. Pierre Singer (Ilanada4@clalit.org.il) . The course is open to all health care professionals that apply on a first come first served basis.

The program is as followed:

Sunday, 5.01.2014

08:30 – 09:00	Welcome and introduction	Dr. B.Tadmor, Beilinson hospital Director Prof. Pierre Singer, ICU director
09:00-10:00	Theoretical framework of energy metabolism	Prof. Pierre Singer
10:00-11:00	Methods of measurement and pitafalls	Dr. Shaul Lev
11:00-12:30	Hands –on in the department for ventilated and non ventilated	Dr. Shaul Lev, Ronit Anbar
12:30-13:00	L U N C H	
13:30-15:00	Measurements of ICU patients and out clinic patients	Dr. Miriam Theilla, Ronit Anbar
15:00-16:00	Indirect calorimetry better than equations	Prof. Pierre Singer
Dinner together		

Monday 06.01.2014

09:00-10:00	TICACOS in ICU and in geriatric patients. Is it possible	Ronit Anbar, Ph.D student, Rd
10:15-11:00	Discussion on results and theoretical cases	All
11:00-12:00	Fuel utilization: more information from indirect calorimetry	Prof. Pierre Singer
12:00-12:30	Conclusions and final exam	

At the end of the course, the participant will be able to consider:

1. Principles of Indirect Calorimetry
2. 3. Correct application of the technique
3. Accuracy and the limits of indirect calorimetry
4. Commercially available instruments allowing continuous and discontinuous measurement
5. Indications for measurement of energy expenditure in the ICU: to assess energy balance, to evaluate the metabolic effect of drugs
6. Use of indirect calorimetry as a diagnostic tool (sepsis, brain injury and brain death)
7. Non-metabolic applications: ventilatory assessment, hemodynamic assessment.
8. Applications for substrate utilization with nitrogen excretion measurement