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Post-surgical infections dramatically reduced by specialized nutrition

- *Up to 61% reduction in post-surgical infection with immune enhancing Impact® fed pre- and peri- operatively*
- *46-48% fewer anastomotic leaks in GI patients when Impact® is part of pre- and peri-operative treatment*
- *Average of 2 days reduction in length of hospital stay using Impact®*

Nyon, July 27, 2006 – A meta analysis (covering 17 clinical trials) published online in the ‘World Journal of Surgery’ in June 2006 demonstrates that specialized nutritional support can substantially reduce a wide range of post surgical infectious complications, anastomotic leaks and length of hospital stay for patients undergoing elective surgery. The greatest improvement in postoperative outcomes was observed in patients receiving specialized nutrition support as part of their pre- and peri-operative treatment. Given specialized nutrition is currently only utilized in a minority of pre- and peri-operative situations, a change in clinical practice could significantly reduce the risk of infectious complications and substantially cut healthcare costs.

This is the first time such a meta analysis – which included 17 randomized clinical trials for a total of 2,305 patients – has concentrated exclusively on major elective surgery. This meta-analysis, led by Dr Dan Waitzberg¹, MD, Department of Gastroenterology, University of Sao Paulo, Brazil, revealed that a significant reduction (39-61%) in post-operative infectious complications can be achieved when patients are fed pre- and peri-operatively with the immune modulating formula *Impact*. In addition, the length of hospital stay was on average reduced by two days, leading to overall significant cost savings.

In the randomized clinical trials, patients were supplemented by *Impact* formula before and/or after elective surgery. *Impact* was the only formula that fulfilled the meta analysis inclusion criteria, thus eliminating possibility of formula heterogeneity:

- 10 studies examined the efficacy of pre- or peri-operative *Impact* supplementation in patients undergoing elective surgery
- 7 studies assessed post-operative efficacy.
- 14 studies involved gastrointestinal (GI) surgical patients.

The meta-analysis of post-operative morbidity indicated that *Impact* supplementation was associated with significant reductions of individual infections and anastomotic leaks:

Wound infections	-37%	Abdominal abscesses	-54%
Pneumonia	-47%	Urinary tract	-47%
Anastomotic leaks	-44%		

For GI surgical patients specifically – in addition to significant infection reduction – anastomotic leaks were 46-48% less prevalent when *Impact* supplementation was part of the pre-operative or peri-operative treatment.

Key role in Pro-active infection Control

Dr Dan Waitzberg, MD, and Dr. Hideaki Saito, MD – Chairmen of the meta analysis – along with all the panel members concluded, “Our findings indicate that *Impact* provides therapeutic benefits beyond standard nutrition. *Impact* supplementation appears warranted in surgical patients as part of the pro-active approach to infection control.”

Commenting on the findings of this analysis, Michel Gardet, CEO of Novartis Medical Nutrition said, “The study findings can only increase the usage of specialized nutrition – specifically in this case the usage of *Impact* with its unique formulation. Based on this evidence, our clear goal is to continue to work with the healthcare profession so that specialized nutrition becomes an integral part of surgical clinical practice – especially pre- and peri-operatively when dramatic improvements in patient outcomes and overall cost savings for the healthcare system can be achieved.”

About Impact®

Impact, developed and manufactured by Novartis Medical Nutrition, is a nutritionally complete supplement, with a unique patented mix of arginine, omega 3 fatty acids from fish oil and dietary nucleotides, which together positively influence inflammatory metabolic and immune responses to major surgery. It is specifically formulated to provide optimal nutritional preparation for patients prior to surgery, as well as for use in follow-up nutritional treatment after surgery. The immune system suppression experienced by patients after surgery substantially increases their risk of infection, which in turn leads to statistically higher morbidity and mortality, prolonged hospital stays and consequent increases in healthcare costs.

Disclaimer

This release contains certain forward-looking statements that can be identified by terminology such as “significantly reduce”, “indicate”, “*Impact* supplementation appears warranted”, “can only increase the usage”, “specialized nutrition becomes an integral part”, or similar expressions, or by express or implied discussions regarding any potential future sales of *Impact*. Such statements reflect the result of a meta analysis of 17 randomized clinical trials and are subject to certain risks, uncertainties and assumptions. Management's expectations could be affected by, among other things, competition in general, and other risks referred to in Novartis AG's Form 20-F on file with the US Securities and Exchange Commission. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described herein as anticipated, believed, estimated or expected.

Novartis Medical Nutrition (a unit of Novartis AG) offers a complete range of enteral (tube feeding) and oral nutrition products and devices tailored to the varying needs of patients and healthcare professionals. The product range encompasses supplements, which are taken orally, as well as enteral nutrition formulas, which are administered through specific feeding tubes and medical devices. More information on <http://www.novartisnutrition.com>.

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Notes to editors:

1. In addition to D. L Waitzberg MD (Brazil) the study team included: H. Saito MD, University of Tokyo (Japan), L. D. Plank PhD, University of Auckland (New Zealand), G. G. Jamieson MD, University of Adelaide (Australia), P. Jagannath MD, Lilavati Hospital, Mumbai (India), T.-L. Hwang MD, Chang Gung University, Taipei (Taiwan), J. M. Mijares MD, University of Anahuac, Huixquilucan, Mexico City (Mexico), D. Bihari MD, Dept of Intensive Care, Prince of Wales, Sydney, NSW (Australia)
2. The complete 'World Journal of Surgery' article can be viewed at <http://www.springerlink.com>
3. More information about *Impact* can be found on www.impactinformation.com