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ANTALYA CONGRESS HIGHLIGHTS

COCA-COLA CHAIRMAN ON CONSUMER INSIGHTS AND MACRO TRENDS

INC REWARDS INDUSTRY LEADERSHIP EXCELLENCE

EUROPEAN NUTRITION CONGRESS FEATURES NUTS

Prof. Jordi Salas-Salvadó, Chairman of the INC World Forum for Nutrition Research and Dissemination

2014, THE YEAR OF META-ANALYSES

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The number of new investigations focusing on the study of different health problems is increasing rapidly. Therefore, when it comes to address a particular aspect, it is common to encounter several experimental studies which try to answer it. In this context, systematic reviews and meta-analyses gather systematic, objective and scientific methodology to quantitatively review a number of primary investigations addressing similar topics. Currently, they both represent a fundamental tool to reliably summarize scientific evidence while increasing the validity of those conclusions drawn from single-experimental studies. Additionally, they also serve to easily identify any future prospects where new investigating efforts should be united. Furthermore, they are considered the highest scientific evidence, thus playing a fundamental role in any clinical decision-making within the context of the Evidence-Based Clinical Practice.

Nonetheless, not all meta-analyses may be considered as the highest evidence for a certain health problem. Importantly, their validity largely relies on its methodological quality as well as on the quality of those experimental studies included. Particularly, meta-analyses including high quality randomized-control trials (RCT) -with an adequate randomization of the study participants and following a double blinded design- represent highly reliable evidence to best decide the most suitable and convenient treatment programs for specifics health problems.

The year 2014 held the greatest number of systematic reviews and meta-analyses evaluating the relationship between tree nuts and risk for cardiovascular disease (CVD), type II diabetes (T2D) and all-cause mortality. For instance, two systematic reviews and meta-analyses from RCT´s1,2 from the research groups led by Prof. Jenkins DJ and Prof. Sievenpiper JL (Canada) concluded that tree nuts intake improve glycemic control in diabetic patients, and provide beneficial effects on the metabolic syndrome by slightly reducing fasting glucose and triglycerides. Another recent meta-analysis from RCT´s3 carried out by groups of Dr. Mohammadifard N (Iran) and Prof. Salas-Salvadó J (Spain) clearly showed that tree nut intake reduced systolic blood pressure in non-diabetic patients. Seven other systematic reviews and meta-analyses have been published including a substantial number of large prospective-cohort studies4-10. Of those, six meta-analyses carried out by Ma et al.4(China), Shi et al.5(China), Grosso et al.6(Italy), Zhou et al.7(China), Luo et al.8(China), and Afshin et al.9(USA) evidenced a protective effect of tree nuts intake for the prevention of CVD, all-cause mortality and cancer mortality; whereas the results for the prevention of T2D remained inconclusive in the last three studies. Lastly, one recent meta-analysis from Guo et al.10(China) concluded that intake of more than 2 servings/week of tree nuts was inversely associated to risk for hypertension, but not for T2D.

In conclusion, both systematic reviews and meta-analyses are currently a widely consolidated methodology to apply in all disciplines of Health Sciences. Despite its strict methodology and highly controlled quality process to avoid biased conclusions, the final results should be carefully interpreted.

These meta-analysis analyzing the effect of nuts on health adds an unprecedented quality of evidence of the beneficial effects of nut consumption, and can be used to change current Dietary Guidelines and to substantiate Health Claims.

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