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Journals, Websites & Newspapers Articles

Spotlight

ILSI-India & ILSI

- The Videos and the Presentations of ILSI Annual Meeting and Science Symposium (held in January 2019) have been uploaded on ILSI website: www.ilsi.org.

Uploaded on ILSI-India Website

- Monograph On Prebiotics In Foods And Their Beneficial Effects
- Presentations of Conference on Role of Probiotics in Promoting Healthy Microbiome for Health and Immunity, December 6, 2018, New Delhi.

Visit ILSI-India Website to Download Publications and for More Information on its Activities

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ILSI-India Publications

- Compendium Of Conference On Role Of Probiotics In Promoting Healthy Microbiome For Health And Immunity
- Compendium Of Seminar On Food Additives: A Global Perspective On Safety Evaluation And Use
- Report Of Seminar On Recent Developments In Food Science And Technology For Better Nutrition
- Report Of Workshop On Alternatives To Animal Testing For Food Safety
- 2017-18 ILSI-India Activity Report

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Nutrition And Health Research

Flaxseed Fiber Could Help Reduce Obesity

Flaxseed has many culinary uses, most commonly in granola and smoothies. They are rich in many nutrients — including fiber, protein, minerals, and vitamins. Scientists have shown that adding these seeds to the diet can help manage cholesterol and fight inflammation. In a new study in mice, a team found that flaxseed fibers ferment in the gut and influence the gastrointestinal microbiota.

Source: University Of Copenhagen, Denmark And The University Of Gothenburg, Sweden, American Journal Of Physiology: Endocrinology And Metabolism

Fruit And Vegetables May Be Important For Mental As Well As Physical Well-Being

A new study shows a positive association between the quantity of fruit and vegetables consumed and people's self-reported mental well-being. Specifically, the findings indicate that eating just one extra portion of fruits and vegetables a day could have an equivalent effect on mental well-being as around 8 extra days of walking a month (for at least 10 minutes at a time). A key feature of this work is that the study was able to follow the same individuals over time.

Source: Dr. Neel Ocean & Dr. Peter Howley (University Of Leeds) And Dr. Jonathan Ensor (University Of York), Social Science & Medicine, 2019; DOI: 10.1016/j.socscimed.2018.12.017

Quality Of Overall Diet Is Key To Lowering Type 2 Diabetes Risk

Researchers have shown that a high-quality diet defined by low intake of animal foods such as red meat, and high intake of plant foods such as vegetables, fruits and whole grains, and reduced intake of sweetened beverages could be associated with reduced risk of diabetes.

Source: Professor Rob Van Dam, NUS Saw Swee Hock School Of Public Health, American Journal Of Epidemiology

Consuming Walnuts Linked To Lower Prevalence Of Depression Symptoms

A new epidemiological study suggests that consuming walnuts may be associated with a lower prevalence and frequency of depression symptoms among American adults. After evaluating study participants for depression, researchers found that depression scores were 26 percent lower for walnut consumers and eight percent lower for consumers of other nuts, compared to those who did not consume nuts at all.

Source: Dr. Lenore Arab Of The David Geffen School Of Medicine At The University Of California, Los Angeles, <https://www.news-medical.net>

Looking To Choose A Healthy Post-Workout Snack? Decide Early

A post-exercise snack can threaten to undo the gains (or losses) of a workout. But the decision itself may depend on when the decision is made. Participants asked to choose between an apple and brownie were about one-third more likely to favor the fruit when deciding before vs. after their workouts.

Source: Karsten Koehler, Christopher Gustafson, University Of Nebraska-Lincoln, Nutrients

Roadmap To A Healthy And Sustainable Food Future

Despite substantial scientific evidence linking diets with human health and environmental sustainability, historically there has been a lack of globally-agreed upon targets for healthy diets and sustainable food production.

However, on January 17, 2019, the EAT-Lancet Commission (a group of 37 scientists from 16 countries working in the fields of human health, nutrition, economics, agriculture, political sciences, and environmental sustainability) assessed existing evidence and developed the world's first scientific targets that define a "safe operating space" for food systems.

The report calls for global cooperation and commitment to shift diets toward healthy, largely plant-based patterns; make large reductions in food loss and waste; and implement significant sustainability improvements in food production practices.

Source: <https://www.hsph.harvard.edu>

Not All Saturated Fats Are Equal When It Comes To Heart Health

The type of saturated fats that is consumed can affect the risk of a heart attack. According to this new study, people whose diets contain relatively little palmitic and stearic acid -- saturated fats composed of 16 or more carbon atoms (longer-chain saturated fats) that are typically found in meats -- and eat plant-based proteins instead have decreased chances of myocardial infarction. Moreover, individuals who eat more saturated fats with 14 or fewer carbon atoms (shorter-chain saturated fats) that are typically found in dairy products have lower risk of myocardial infarction.

The study investigated whether saturated fats with chains varying in length from 4 to 18 carbon atoms are associated with the risk of developing a myocardial infarction. Data from approximately 75,000 people in the UK and Denmark were analyzed. Of these two groups, nearly 3,500 people experienced myocardial infarction in the period between the study's initial outreach and follow-up 13 years later (in Denmark) and 18 years later (in the UK).

The researchers found that eating relatively little of the longer chained saturated fatty acids and consuming plant-based proteins instead was associated with a lowered risk. Substitution of those saturated fats with other energy sources such as carbohydrates did not affect the risk to develop myocardial infarction.

Source: Ivonne Stuijls, PhD, Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht University, Utrecht, Netherlands, International Journal of Cardiology

Leaving 2-Hour Gap Between Dinner And Bedtime May Not Affect Blood Glucose

Leaving a two-hour gap between the last meal of the day and bedtime doesn't seem to be associated with any discernible difference in blood glucose levels among healthy adults over the long term, suggests Japanese research.

Source: Journal BMJ Nutrition, Prevention & Health

Healthy Diet Can Beat Symptoms Of Depression

A recent study suggests that weight loss, nutrient boosting and fat reduction diets can reduce the symptoms of depression. In this study, researchers brought together all existing data from clinical trials of diets for mental health conditions.

Source: Dr. Joseph Firth, Honorary Research Fellow, University Of Manchester, United Kingdom, Journal Psychosomatic Medicine

Western Diet May Up Severe Sepsis Risk

A Western diet high in fat and sugar can put a person at increased risk of developing severe sepsis — one of the most common causes of death worldwide. The researchers took a closer look at how the Western diet affects the severity and outcome of Sepsis. Sepsis, the body's reaction to fighting an infection, can lead to shock and organ failure. It is the 11th most common cause of death worldwide.

The findings can help hospitals better monitor the diets of patients in the intensive care unit since they're already the ones most likely to develop sepsis.

Source: Brooke Napier, Assistant Professor, Portland State University (PSU), Journal Proceedings Of The National Academy Of Sciences

Beer Before Wine Does Not Change Hangover Severity

Despite popular belief, drinking beer before wine does not reduce the severity of veisalgia, otherwise known as a hangover, the following day. This statement was confirmed by a recent study. The study showed that hangover intensity was best predicted by whether the patients themselves felt that they were getting drunk, or if they threw up during their drinking. These predictors were the secondary endpoints. These metrics are useful, as they reflect the physiology and tolerance of alcohol of the individual.

Source: Liji Thomas, American Journal Of Clinical Nutrition

Individualized Diet May Be Best Course For People With Diabetes

A new study concludes that an individualized diet that considers microbiome, genetics, and lifestyle is more effective at controlling blood sugar levels than a diet that only considers types of food. Scientists found that people can respond differently to similar foods due to their gut microbiome — the groups of bacteria that exist in the digestive system.

Source: Helena Mendes-Soares, PhD, Assistant Professor, Surgery, Mayo Clinic, Rochester, Minnesota

Eating Lots Of Meat Tied To Higher Risk Of Liver Disease

People who eat a lot of animal protein may be more likely to have excessive fat in their livers and higher risk of liver disease than individuals whose main source of protein is vegetables. Researchers focused on what is known as non-alcoholic fatty liver disease (NAFLD), which is usually associated with obesity and certain eating habits. While dietary changes are recommended to treat this type of liver disease, research to date has not clearly demonstrated whether these changes can work for prevention.

Source: Dr. Sarwa Darwish Murad, Hepatologist, Erasmus MC University Medical Center, Rotterdam, The Netherlands, Journal Gut

Inexpensive Supplement For Women Increases Infant Birth Size

For women in resource-poor settings, taking a certain daily nutritional supplement before conception or in early pregnancy may provide enough of a boost to improve growth of the fetus, according to a study funded by the National Institutes of Health. The inexpensive supplement consists of dried skimmed milk, soybean and peanut extract blended into a peanut butter-like consistency. Weighing less than an ounce, the supplement is fortified with essential vitamins and minerals and provides protein and fatty acids often lacking in the women's diets.

Researchers distributed the supplement to women in rural areas of the Democratic Republic of the Congo, Guatemala, India and Pakistan. Roughly 7,300 women were randomized to either receive the supplement three months before conception or during the first trimester (third) of pregnancy or receive no supplement other than what they may have received from local health services. Women in the supplement groups were 31 percent less likely to have an infant that was of shorter length (stunted) at birth and 22 percent less likely to have an infant that was small for gestational age. According to the authors, these findings show that it's possible in poor areas to inexpensively improve maternal nutrition before and in the early stages of pregnancy.

Source: Marion Koso-Thomas, M.D., NICHD Pregnancy And Perinatology Branch, Eunice Kennedy Shriver National Institute Of Child Health And Human Development (NICHD) Global Network For Women's And Children's Health Research, <<https://www.nih.gov/news-events/news-releases>

Food Safety & Technology

Canada's New Food Safety Regulations

The Safe Food for Canadians Regulations (SFCR) went into effect in January 2019 with an official announcement from the Honorable Ginette Petitpas Taylor, Canada's Minister of Health. The new food safety regulations, which Canadian Food Inspection Agency says are consistent with international standards, focus on prevention, along with speedy removal of unsafe food products from the marketplace. The regulations also grant Canada more opportunities to export their food products abroad. The new regulations aim to diminish unnecessary administrative burden by replacing 14 previous sets of laws into just one.

Source: <https://www.foodsafetymagazine.com>

EFSA To Share Data On Open-Access Platform

EFSA has taken a major step towards becoming a fully open data organization by committing to publish the scientific data it uses for EU-wide monitoring programmes and surveys and many of its risk assessments.

EFSA lays out how it intends to share data collected in areas such as: food consumption habits; pesticide residues in food; chemical contaminants and additives in food; foodborne disease outbreaks; and antimicrobial resistance.

The data will be made available on Knowledge Junction, EFSA's curated, open repository, which was set up to improve transparency, reproducibility and reusability of evidence in food and feed safety risk assessments. The first datasets will be published this year. Knowledge Junction is a community on the Zenodo platform and can be accessed by anyone with a web browser.

Source: <http://www.efsa.europa.eu>

U.S. FDA To Strengthen The Framework That Governs Dietary Supplements

The use of dietary supplements, such as vitamins, minerals or herbs, has become a routine part of the American lifestyle. Three out of every four American consumers take a dietary supplement on a regular basis. For older Americans, the rate rises to four in five. And one in three children take supplements, either given to them by their parents or, commonly in teens, taking them on their own.

In the 25 years since Congress passed the Dietary Supplement Health and Education Act (DSHEA), the law that transformed the FDA's authority to regulate dietary supplements, the dietary supplement market has grown significantly. What was once a \$4 billion industry comprised of about 4,000 unique products, is now an industry worth more than \$40 billion, with more than 50,000 – and possibly as many as 80,000 or even more – different products available to consumers.

USFDA is concerned that changes in the supplement market may have outpaced the evolution of its own policies and the capacity to manage emerging risks. To continue to fulfill the public health obligations there is a need to modernize and strengthen their overall approach to these products and lay down priorities.

USFDA has announced new steps. These steps include: communicating to the public as soon as possible when there is a concern about a dietary supplement on the market, ensuring that the regulatory framework is flexible enough to adequately evaluate product safety while also promoting innovation, continuing to work closely with the industry partners, developing new enforcement strategies and continuing to engage in a public dialogue to get valuable feedback from dietary supplement stakeholders, continue to take actions to protect public health, and engage a public dialogue around whether additional steps to modernize DSHEA are necessary.

As part of its comprehensive efforts, they have sent 12 warning letters and five online advisory letters to companies whose products, many of which are marketed as dietary supplements, are being illegally marketed as unapproved new drugs because the products bear unproven claims to prevent, treat or cure Alzheimer's disease, as well as a number of other serious diseases and health conditions, including diabetes and cancer. Dietary supplements can, when substantiated, claim a number of potential benefits to consumer health, but they cannot claim to prevent, treat or cure diseases like Alzheimer's.

Source: Statement From FDA Commissioner Scott Gottlieb, M.D., <https://www.fda.gov/>

International Conference Aims To Improve Food Safety

Greater international cooperation is needed to prevent unsafe food from causing ill health and hampering progress towards sustainable development, world leaders said at the opening session of the First International Food Safety Conference, in Addis Ababa, Ethiopia on February 12. The event was organized by the African Union (AU), the Food and Agriculture Organization of the United Nations (FAO), the World Health Organization (WHO), and the World Trade Organization (WTO).

Around 130 countries are participated in the two-day conference, including ministers of agriculture, health, and trade. A central theme of the conference is that food safety systems need to keep pace with the way food is produced and consumed. This requires a sustained investment and coordinated, multi-sectoral approaches for regulatory legislation, suitable laboratory capacities, and adequate disease surveillance and food monitoring programs, all of which need to be supported by information technologies, shared information, training, and education.

A follow-up event—the International Forum on Food Safety and Trade—which will focus on interlinkages between food safety and trade, is scheduled to be hosted by the WTO in Geneva, April 23–24. The two meetings are expected to galvanize support and lead to actions in the key areas that are strategic for the future of food safety.

Source: <https://www.who.int/>

Ancient Grains May Help Lower Acrylamide Content Of Flatbreads

A study suggests that using ancient grains like brown rice, buckwheat, cornmeal, millet, oat, and quinoa instead of wheat may lower the acrylamide content of flatbreads. The literature showed that processed potato- and cereal-based products are two major food types that seem to contribute the highest amounts of acrylamide to the diet worldwide. In this study, the researchers determined the acrylamide content of 15 experimental flatbreads made from a variety of flours and 21 commercial flatbreads.

Source: Journal of Food Science

Non Communicable Diseases

Absence Of Gut Bacteria Might Influence Depression

While gut bacteria can largely impact physical wellbeing, a recent study suggests a significant link between gut bacteria and mental health. Researchers conducted a study in which they gathered and analysed health data of a large group of people in an attempt to find out which gut bacteria may play a role in causing depression.

Researchers involved in the study named the gut bacteria that are linked to mental wellbeing the team revealed that two types of bacteria — those from the genera Coprococcus and Dialister — were absent from the guts of people with a diagnosis of depression. This even applied to those who took antidepressant medication. Researchers concluded that many bacteria can produce substances called neuroactive that can interact with the nervous system.

For the study, researchers studied the fecal microbiome data in conjunction with diagnoses of depression in 1,054 people taking part in the Flemish Gut Flora Project.

Source: Prof. Raes, Professor, VIB-KU Leuven Center For Microbiology, Belgium, Journal Nature Microbiology

Some Gut Cells Slow Down Metabolism, Accelerate Cardiovascular Disease

Researchers have discovered how specific cells “intraepithelial T lymphocytes (or natural IELs)”, in the guts of mice slow down metabolism and eventually contribute to obesity, diabetes, hypertension and atherosclerosis.

When the cells are not present, researchers discovered, the metabolism of mice goes into overdrive. The mice become metabolically hyperactive and, even when consuming a diet very high in fat and sugar, are able to resist metabolic diseases such as obesity, hypertension, hypercholesterolemia, diabetes, and atherosclerosis. The findings could have important implications for the prevention and treatment of these kinds of metabolic diseases in humans.

Source: Filip Swirski, Ph.D., Associate Professor, Harvard Medical School And Massachusetts General Hospital, Boston, Nature

Women More Susceptible To Alzheimer's Disease

A study of 300 elderly individuals who underwent PET (positron emission tomography) scans showed that women are more likely to develop the toxic proteins (Tau) known to trigger the disease. The current study looked specifically at tau deposits in the brains of patients aged an average of 74 years who were all cognitively healthy.

As reported by the scientists, the scans revealed that men had fewer of the disease-causing tau and beta-amyloid deposits in their brains than women did. These proteins are present in all grey matter, but when large amounts of them aggregate to form tangles or clumps, this can destroy neurons and lead to memory loss and confusion seen in Alzheimer's.

The study could help to explain why around two-thirds of dementia patients are female, a fact that has previously been attributed to women living longer than men and having more time to develop the condition. However, many scientists suspected that other mechanisms may be contributing to the gender gap in Alzheimer's prevalence.

Source: Dr. Rachel Buckley, Department Of Neurology, Massachusetts Hospital, Harvard Medical School, Boston, Journal JAMA Neurology

Programs To Reduce Childhood Obesity Must Include All Family Members

A new study shows programs to reduce childhood obesity and other nutrition programs should incorporate all family members who regularly take care of children, not just their mothers.

Source: Ann Cheney, Assistant Professor, Center For Healthy Communities, UC Riverside School Of Medicine, <https://news.ucr.edu>

Fasting Boosts Metabolism And Fights Aging

The latest study to explore the impact of fasting on the human body concludes that it increases metabolic activity more than previously realized and may even impart anti-aging benefits.

Source: Dr. Takayuki Teruya, Okinawa Institute Of Science And Technology Graduate University, Japan, Journal Scientific Reports

Physical Activity And Lifestyle

Researchers Are Worried That People With Chronic Disease Are Not Being Active Enough

In a new study researchers measured the duration and intensity of physical activity levels over seven days and compared those participants with, and those without, chronic disease. They found that those with chronic disease, even those conditions that don't directly limit capacity for exercise, spent less time active.

Source: Terry Dwyer, Professor, Epidemiology, George Institute, University Of Oxford, International Journal Of Epidemiology

Mindfulness And Sleep Can Reduce Exhaustion In Entrepreneurs

When entrepreneurs are feeling exhausted but can't afford the time for adequate sleep, they may be able to replenish their energy with mindfulness exercises such as meditation. Sleep cannot be replaced with mindfulness exercises, but they might help compensate and provide a degree of relief. As little as 70 minutes a week, or 10 minutes a day, of mindfulness practice may have the same benefits as an extra 44 minutes of sleep a night.

Source: Charles Murnieks, Assistant Professor, Strategy And Entrepreneurship, OSU's College Of Business, Oregon State University

Exercise And Thinking

Fitness experts have always stressed on the fact that exercise can improve cognitive functions. A recent study states that aerobic exercise, if done regularly, can help in improving thinking capabilities of people even in their 20s.

The study had examined people within the age group 20 to 67. The chosen participants were divided into toning and stretching groups and aerobic exercise groups. Apparently, those who were into aerobic exercise gained much on executive functioning tests, than those that were 10 to 20 years younger than their own physical age.

Researchers found that all participants who exercised not only showed improvements in executive function but also increased the thickness in an area of the outer layer of their brain.

Source: Yaakov Stern, Columbia University, New York, Medical Journal Of The American Academy Of Neurology

Sedentary Lifestyle Could Increase Risk Of Colorectal Cancer In Young Women

A scientific study has identified sedentary behavior as a potential risk factor to explain the sharp rise in colorectal cancer among those under 50. A study looked at TV viewing as well as other sedentary behavior in nearly 90,000 American women, found that more than one hour of daily TV viewing was associated with a 12 percent increase in risk of colorectal cancer. Among those watching more than two hours per day, there was a striking 70 percent increase in risk.

Source: Yin Cao, Cancer Epidemiologist, Washington University School Of Medicine, St. Louis, JNCI Cancer Spectrum

Low Bone Density From Cycling Could Be Putting Skeleton At Risk

Low impact sports like cycling are known to put very little pressure on bones which affects bone density. Recent research has confirmed this but a recent study on the bone density in elite cyclists and runners suggests that cycling can put a person's bones at risk. Despite the pro cyclists studied being young, otherwise healthy and eating a balanced diet, they consistently had thinner bones than athletes in sports that put more pressure on bones.

Source: Norwegian School Of Sport Sciences And The Norwegian Olympic Training Center, Oslo, BMJ Open Sport & Exercise Medicine

Extreme Exercise Does Not Raise Heart Disease Risk Or Mortality

Coronary calcium scanning is an imaging test that helps physicians classify patients without cardiac symptoms as low, intermediate, or high risk for heart attack. It represents how much calcium (and thus cholesterol deposits) has accumulated in the blood vessels that supply the heart. The scan can help physicians determine the need for medication, lifestyle modification, and other risk-reducing measures. High-volume, high-intensity exercise was defined in this study as at least five to six hours per week at a pace of 10 minutes per mile. The average amount of high-intensity exercise in this group was eight hours per week.

The majority of high-intensity athletes had low levels of coronary calcium, though their odds of having higher levels were 11 percent greater than men who exercised less. Most importantly, the researchers found that higher calcium scores did not raise the high-intensity athletes' risk for cardiovascular or all-cause mortality.

Source: Dr. Benjamin Levine, Professor Of Internal Medicine And Director, Institute For Exercise And Environmental Medicine, JAMA Cardiology, 2019; DOI: 10.1001/jamacardio.2018.4628

Contact With Nature Can Improve Mood

Spending time outside, in the proximity of nature has always been touted as a good practice. But it has more benefits that one could anticipate. According to a study apparently spending even five minutes outdoors can give a considerable boost to one's mood.

Source: Katherine D. Arbutnott, Campion College, Journal Of Positive Psychology

Early Risers Less Likely To Suffer From Depression

Sleeping habits and patterns have always been important. However, according to a new study, those who are early risers are less prone to develop mental health problems. The study states that early risers are biologically programmed to be less susceptible to depression and schizophrenia and might just be happier than others.

Source: University Of Colorado Boulder And The Channing Division Of Network Medicine, Brigham And Women's Hospital, Boston, MA, Nature Communications, Journal Of Psychiatric Research

Get Less Sleep, Feel More Pain

A new study confirms that sleep deprivation has a direct effect on how our brains process pain, leading to more intense pain the following day. The study sheds light on the perpetuating relationship between chronic pain and poor sleep — a vicious cycle. People can be so drastically changed by losing sleep.

Source: Adam Krause, University Of California, Berkeley, The Journal Of Neuroscience

Neuroscientists Zap Patient's Brain To Induce Laughter ... During Surgery

Brain surgery is normally no laughing matter, but now neuroscientists at Emory University may have found a way to make it so. The team discovered that electrically stimulating a brain region known as the cingulum creates a mild euphoria complete with laughter, and used this to calm down a patient undergoing brain surgery where the patient needed to stay awake. The technique could be put to use as a kind of sedative or a treatment for anxiety, depression or chronic pain.

Source: Emory Health Sciences, Journal Of Clinical Investigation

Exercise Best Defence Against Deep Abdominal Belly Fat

Exercise may combat internal, visceral fat that cannot be seen or felt, this type of fat is particularly dangerous as it may lead to insulin resistance, diabetes, heart disease and inflammation. For the study, researchers analysed two types of interventions -- lifestyle modification (exercise) and pharmacological (medicine) -- to find out what is the best way to cut down deep abdominal belly fat. The findings revealed that the reductions were more significant per pound of body weight lost with exercise. To get the deeper analysis, the researchers evaluated changes in visceral fat in 3,602 participants over a six-month period measured by a CT or MRI exam.

Source: Jan J. Neeland, Assistant Professor, UT Southwestern Medical Centre, Journal Mayo Clinic Proceedings

Walking Cadence Appears To Be A Reliable Measure Of Exercise Intensity

In an ongoing study exploring walking for health across the adult lifespan, researchers found that walking cadence is a reliable measure of exercise intensity and set simple steps-per-minute guidelines for moderate and vigorous intensity.

The researchers concluded that for adults, age 21-40, walking about 100 steps per minute constitutes moderate intensity, while vigorous walking begins at about 130 steps per minute. The study aimed to establish the relationship between walking cadence (steps per minute) and intensity (metabolic rate) across the adult lifespan, from age 21 to 85.

Source: Catrine Tudor-Locke, Professor, Kinesiology, University Of Massachusetts Amherst Kinesiology, International Journal Of Behavioral Nutrition And Physical Activity

Agriculture & Climate Change

Climate Change Can Affect Immune System

According to a recent study, heat waves can reduce the body's immune response to flu.

Source: Takeshi Ichinohe, University Of Tokyo

Transforming India's Green Revolution For Sustainable Food Supplies

A multi-institutional, multidisciplinary research project entitled "Transforming India's Green Revolution by Research and Empowerment for Sustainable Food Supplies (TIGR2ESS)" has been awarded to teams of Indian and United Kingdom (UK) scientists.

The project comprises six different flagship programs (FP) addressing different agriculture related issues in India. FP 1 aims to tackle the requirements of second green revolution in India, leading to policy output. FP 2 and 3 collectively aim at use of fundamental scientific approaches to address key issues in crop sciences. FP 4 & 5 targets water use efficiency for sustainable cropping systems and Flagship program 6 aims to undertake research to promote gender equality in terms of opportunities and education in rural communities.

A total of nine institutes from UK and equal number from India are collaborating for catalyzing second green revolution in India. Punjab Agricultural University (PAU) is an important partner in TIGR2ESS for FP3 and FP5.

Source: <http://www.nuffoodsspectrum.in>

Bt Crop Adoption May Suppress Pest Populations

A comprehensive review summarizes the existing literature on Bt crops from laboratory and field-based studies. *Bacillus thuringiensis* (Bt) is bacteria that naturally produces a crystal protein that is toxic to many pest insects. Bt crops are genetically engineered to produce the same toxin as Bt in every cell of the plant, with the goal of protecting the crop from pests.

The authors report that Bt crops have been grown on more than 1 billion acres over the past 20+ years, and on 100 million hectares in 2017 alone. A major concern related to this technology is that the proteins could harm non-target organisms, specifically those that provide important ecosystem services such as biological control. However, studies show that proteins from Bt crops did not harm natural enemies. Furthermore, the authors highlight the beneficial aspects of Bt crops, which include supporting the conservation of natural enemies and contributing to more effective biological control of both target and secondary pests, leading to a reduction in insecticide use.

The paper concludes that the efficacy of Bt crops in controlling important target pests has been very high. The large-scale adoption of Bt crops in some parts of the world has led to area-wide suppressions of target pest populations that benefited both the farmers that adopted the technology and those that did not.

Source: Biological Control

Surveys

New WHO Progress Report Reveals That Levels Of Physical Activity Are Stalling

Three years after European Member States committed to implementing the Physical activity strategy for the WHO European Region 2016-2025, an assessment of progress reveals that levels of physical activity are stalling. It states that immediate action must be taken in order to improve physical activity across the Region, and prioritizes areas where improvement needs to occur first. The report prioritizes 5 areas for improvement:

Miscellaneous

4th Spices Committee Meeting Underway In Kerala, India

Delegates from over 30 countries met in Thiruvananthapuram (Kerala), India from 21 January 2019 to discuss draft Codex standards for selected spices and herbs that will eliminate trade barriers and strengthen food supply chains with safe food. The committee was founded in 2013 to develop and expand worldwide standards for spices and culinary herbs. India is the host country and the Spices Board India serves as the Secretariat for organizing the sessions of the committee.

Source: <http://www.fao.org/>

Ten Threats To Global Health In 2019

The world is facing multiple health challenges. These range from outbreaks of vaccine-preventable diseases like measles and diphtheria, increasing reports of drug-resistant pathogens, growing rates of obesity and physical inactivity to the health impacts of environmental pollution and climate change and multiple humanitarian crises.

To address these and other threats, 2019 sees the start of the World Health Organization's new 5-year strategic plan – the 13th General Programme of Work. This plan focuses on a triple billion target: ensuring 1 billion more people benefit from access to universal health coverage, 1 billion more people are protected from health emergencies and 1 billion more people enjoy better health and well-being. Reaching this goal will require addressing the threats to health from a variety of angles.

The many issues that will demand attention from WHO and health partners in 2019 include: Air pollution and climate change, Noncommunicable diseases, Global influenza pandemic, Fragile and vulnerable settings, Antimicrobial resistance, Ebola and other high-threat pathogens, Weak primary health care, Vaccine hesitancy, Dengue and HIV.

As regards non-communicable diseases, such as diabetes, cancer and heart disease, these are collectively responsible for over 70% of all deaths worldwide, or 41 million people. This includes 15 million people dying prematurely, aged between 30 and 69. Among many things, this year WHO will work with governments to help them meet the global target of reducing physical inactivity by 15% by 2030 – through such actions as implementing the ACTIVE policy toolkit to help get more people being active every day.

Source: <https://www.who.int>

- *Focusing on children and adolescents;*
- *Promoting physical activity in the workplace and through the health-care system;*
- *Providing leadership and coordination for the promotion of physical activity;*
- *Engaging the older population; and*
- *Supporting action through surveillance, evaluation and research.*

Source: www.euro.who.in

Americans Concerned About Weight, But Don't Understand Link To Heart Conditions, Health

A new survey finds that while most Americans (88 percent) understand that there is a connection between a healthy heart and a healthy weight, most aren't doing enough -- or anything -- to combat their own weight issues. The survey found 65 percent are worried about getting heart disease due to extra pounds, yet less than half (43 percent) of Americans have tried to make dietary changes to lose weight.

Part of the problem may be that Americans aren't sure what to eat for heart health. Nearly one-in-five (18 percent) believe their diet has nothing to do with their heart health, and a mere 14 percent knew that a Mediterranean diet is healthiest for heart health.

Source: Cleveland Clinic

Almost 96 Per Cent Children Living In EU In Good Or Very Good Health

In 2017, 95.9 per cent of children under 16 living in the European Union were considered to be in good or very good general health. According to a study 95.2 per cent had no health problems limiting their activity. Geographical variations exist, however. Romania leads the way in the general state of children's' health, with 99.4 per cent of children under 16 considered in good or very good health. This drops to 90.2 per cent in Portugal. Countries such as France (95.1 per cent), Luxembourg (95.1 per cent), the Netherlands (95.3 per cent) and the UK (94.9 per cent) fall below the European average.

Eurostat observed that the percentage of children in good or very good general health falls slightly with age. While 96.5 per cent of children under five were considered to be in good or very good general health, this dropped to 95.2 per cent for those aged ten to fifteen.

Source: Eurostat

New Study Shows How Vegans, Vegetarians And Omnivores Feel About Eating Insects

Consumption of foods of insect origin is encouraged as a response to the environmental impact of meat production. Foods made from insects have a relatively low ecological footprint, and due to their high nutrition content, they can be a sustainable supplement to our existing sources of protein. Many non-vegan vegetarians and omnivores are open to including insects in their diet. For vegans, however, that is not an option, a new study shows.

Researchers examined consumers' intentions to consume foods of insect origin among vegans, non-vegan vegetarians and omnivores. They examined the attitude, subjective norm, perceived behavioral control and food neophobia toward the consumption of foods of insect origin, as well as the conditions for eating insect-based foods among these dietary groups. Out of the respondents, 73% were omnivores, 22% were non-vegan vegetarians and 5% were vegans.

Source: University Of Eastern Finland, Nutrients

Activities Update

ILSI-India

Activities Under Discussions- 2019

- ILSI-India Annual Meeting – 26 April, 2019
- Workshop on How to build Robust Food Safety System
- Workshop on Protein Availability, Quality and Way Forward
- Value Addition to Natural Foods through Food Processing

Research Projects / Monographs

- Study On Prebiotic Contents In Indian Food-Completed
- Monograph Of Role Of Probiotics In Promoting Healthy Microbiome For Health And Immunity - Ongoing
- Assessment Of Sugar Consumption Levels Among Rural And Urban Population In India- Ongoing
- Assessment Of Fat / Saturated Fat Consumption Levels Among Rural And Urban Population In India- Ongoing
- Monograph On Risk Assessment - Ongoing
- Study On Healthy Foods and Healthy Diets- Ongoing
- Standardization of Methodologies for Research on Microbiome – Under Discussion

Contact: ILSI-India for further Information

Email: info@ilsi-india.org

Other ILSI Entities

ILSI Mesoamerica

Curso: Validación de las medidas de control para garantizar la inocuidad de tres productos lácteos artesanales de la región mesoamericana.

2019-03-28, San José, Costa Rica

Course: Validation of control measures to ensure the safety of three artisanal dairy products from the Mesoamerican region.

2019-03-28, San José, Costa Rica

ILSI North Brasil

X Congresso Nacional / Reunião Anual

2019-04-10 – 2019-04-12, Águas de São Pedro, Brasil

ILSI Europe

Workshop 'The Use of AOPs in Safety Evaluation of Food Additives'

2019-02-26 – 2019-02-27, Brussels, Belgium

SUSFANS Final Conference

2019-03-07, Brussels, Belgium

ILSI Research Foundation

Technical Training Program: Safety Assessment of Foods and Feeds Derived from Genetically Engineered Plants (Phase I)

2019-03-04 – 2019-03-08, Beijing, China

Genetic Biocontrol for Invasive Species

2019-03-31, Tarragona, Spain

OECD Task Force on the Safety of Novel Foods and Feeds

2019-04-04 – 2019-04-05, Paris, France

OECD Working Group on the Harmonization of Regulatory Oversight in Biotechnology

2019-04-08 – 2019-04-10, Paris, France

ILSI Southeast Asia Region

Seminar on Food Safety Risk Communication in ASEAN

2019-04-02, Bangkok, Thailand

Human Variability in Food and Nutrition: The Challenges and Opportunities for Industry and Academic Research

2019-05-14 – 2019-05-15, Sydney, Australia

Nutrition Reviews Of ILSI

Volume 77, Issue 1 & 2

January & February 2019

Lead Article

Veganism, vegetarianism, bone mineral density, and fracture risk: a systematic review and meta-analysis

Facts and hypotheses about the programming of neuroplastic deficits by prenatal malnutrition

Special Articles

Effect of high-carbohydrate or high-monounsaturated fatty acid diets on blood pressure: a systematic review and meta-analysis of randomized controlled trials

Carotenoids, vitamin A, and their association with the metabolic syndrome: a systematic review and meta-analysis

Fatty acids as biomarkers of total dairy and dairy fat intakes: a systematic review and meta-analysis

Effects of prebiotics on affect and cognition in human intervention studies

Dietary restrictions for people with glucose-6-phosphate dehydrogenase deficiency

Food sources and biomolecular targets of tyramine

Nutrition In Clinical Care

Effect of nonmeat, high-protein supplementation on quality of life and clinical outcomes in older residents of care homes: a systematic review and meta-analysis

Browse ILSI Recent Publications at www.ilsi.org

Identification of a Surrogate to Validate Irradiation Processing of Selected Spices

LWT - Food Science and Technology, 2018 - ILSI North America

This study was conducted to determine the relationship between the populations of inoculated *E. faecium* and *S. enterica* after irradiation processing of selected spices.

Dinâmica da Composição do Leite Humano e Suas Implicações Clínicas

2018- ILSI Brasil

Volume 8 da Série de Publicações ILSI Brasil: Nutrição da Criança

Analyzing chemical substitution decisions among chemical and product manufacturers

Clean Technologies and Environmental Policy, 2018 - Health and Environmental Sciences Institute

The HESI Sustainable Alternatives Committee completed a study to understand potential tradeoffs concerning final product design and redesign decisions using a set of six factors affecting product design: business strategy, economic considerations, functionality and performance, health/environmental endpoints, public perception, and regulatory factors. The results are published here.

Mineral Intake Ratios Are a Weak but Significant Factor in Blood Pressure Variability in US Adults

The Journal of Nutrition, 2018 - ILSI North America

Higher intakes of potassium, calcium, and magnesium and lower intakes of sodium have been associated with a lower risk of hypertension and cardiovascular disease. In this study, the associations of mineral intake and mineral-sodium intake ratios with blood pressure were investigated.

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