



NATIONAL WELLNESS INSTITUTE OF AUSTRALIA INC.



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May 2016 NWIA Members' Newsletter

News & Events

- 8 May 'No socks' day
- 8 May Mothers' Day
- 12 May International Nurses Day
- 18 May International Museum Day
- 22 May Buy A Musical Instrument Day
- 31 May World No Tobacco Day
- 6 June World Environment Day
- 17 June World Juggler's Day
- 17 June Eat Your Vegetables Day
- 17 June International Picnic Day
- 19 June Father's Day

Upcoming Conferences

27-29 June Annual National Wellness Conference <http://www.nationalwellness.org>

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May Floral Emblem: Rose

PRESIDENT'S MESSAGE

Hello Members and Readers,

This month I wish to revisit an issue which our Management Committee debated and I wrote about years ago (President's Message NWIA Newsletter August 2014), but appears to have become a hot topic again – what's in a word? Wellness or Wellbeing?

A paragraph from that message: *“This (NWC 2014) conference was the first time I have heard presenters – not just one – challenge the use of the term ‘wellness’, instead strongly suggesting a change to ‘Wellbeing’. I know that in Australia we hear/see the terms Wellness, Wellbeing and Quality of Life and even Health being used interchangeably - and often in the same breath and paragraph - in all types of official reports, papers, documents, advertisements etc. but in the USA and at the NWC?”*

In that message I provided examples of titles of presentation at other conferences using one or other or both terms. I also stated NWIA's position on the use of the terms 'Wellness' 'Wellbeing' and 'Quality of Life, that being: *“that there are definable differences between them”* and mentioned that we had taken *“the step to task one of the Management Committee (Faisal Barwais) to compile a list of definitions of each term to highlight the differences”* – this list was published as - *“Definitions of Wellness, Quality of Life and Wellbeing”* at the time.

Subsequent to that, Management Committee members Tracy Washington and Jerome Rachele authored a broadsheet titled “Explaining the Concepts” and their text in part is as below:

~WELLBEING~

Two central perspectives of well-being have been distinguished: hedonic and eudaimonic.(Ryan & Deci, 2001) While these perspectives overlap, they are founded on different philosophical views on human needs and desires. The hedonic perspective is that well-being consists of pleasure or happiness, these emotions being the essential goal of human life(Ryan & Deci, 2001). Well-being is achieved by increasing happiness through striving for pleasurable moments and approaching stimuli that increase positive affect.(Lundqvist, 2011) In contrast, the eudaimonic tradition considers well-being as the extent to which an individual develops their potential congruent with their values and engagements.(Ryan & Deci, 2001; Ryff, 2004) These two traditional views of wellbeing are founded on distinct views of human nature and of what constitutes a good society (Ryan & Deci, 2001).

~WELLNESS~

The concept of wellness is an important phenomenon as it offers a point of difference to other health-related concepts. Alternatively, wellness has been described as; a dynamic process maximizing an individual's potential (Dunn, 1977); and, an active process through which the individual becomes aware of and makes choices toward a more successful existence (Hettler, 1980). The World Health Organisation defines wellness as; “the optimal state of health of individuals and groups. There are two focal concerns: the realization of the fullest potential of an individual physically, psychologically, socially, spiritually and economically, and the fulfilment of one's role expectations in the family, community, place of worship, workplace and other settings”. (Smith, Tang, & Nutbeam, 2006)

What has prompted me to revisit is a sudden flurry of posts, articles, blogs etc on the topic especially in the Corporate area. One example is a blog post in the highly respected Huffington Post on 13 March by Susie Ellis, the Chairman and CEO of the Global Wellness Institute titled “Wellness, Well-Being...and What About Spa?” ([HTTP://WWW.HUFFINGTONPOST.COM/SUSIE-ELLIS/WELLNESS-WELLBEINGAND-WHA B 9641722.HTML](http://www.huffingtonpost.com/susie-ellis/wellness-wellbeingand-wha_b_9641722.html))

This blog in part states:

“Wellness. Emerging on the radar in a big way less than a decade ago, the term “wellness” seemed to be a good alternative to the word spa in some settings. While born in the U.S. in the 60's, and introduced in a [60 Minutes segment](#) in 1979, the term “wellness” most notably joined the spa-related conversation in Germany when Brenners Park Hotel added the words “and Spa” to their name while at the same time legally preventing any other businesses in that country from using the word “spa”. As a result, the word “wellness” emerged as a close match. In the U.S., and later in other parts of the world, wellness had the advantage of not being immediately tied to pampering and indulgence the way the word “spa” often was. In addition, it shined

a light on the value of spa experiences in terms of health and prevention. It was a term that governments and corporations began to use.....**Well-Being**. So here comes “well-being”! While used interchangeably with wellness at the moment, I feel that well-being is beginning to set itself apart from wellness. I would argue that the reason for this is the increasing momentum in measuring “happiness” around the world and the importance happiness is being given in many of the well-being indexes and scores that are being referenced.... Currently there are two important indexes increasingly being quoted around the world. The first is the “Gallup Healthways Well-Being Index” which has been around since 2008. The other is the “United Nations World Happiness Index” which was started in 2012 and whose 2015 numbers were released earlier in March 2016.

Examining these scores more carefully, one notices that when happiness is added to the mix, as it is in most well-being scores, it becomes more and more obvious that well-being is not wellness. Just as **happiness is not the same as wellness**..... Going forward when you think about **wellness, think prevention and health**. When you think about **well-being, think happiness**.”

I concluded my August 2014 message with the words: ‘More confused than ever? Perhaps one should heed the words of a long term Wellness Culture researcher “Given the issues associated with encouraging the community to engage with and practice Wellness practices, the public domain is not the place for Wellness professionals to show disconnect over a core concept of the paradigm. Those discussions should be held and vigorously debated and the outcome then be showcased as a united front by all.”

This is not a public place so let’s have our debate. I invite all you Wellness professionals to wade in and pen your definitions and explanations of the terms to the Newsletter editor (Jim Efthimiou – jimmye@gmail.com) for publication in this newsletter – assist us to put a collective input to the debate. ‘

I was hoping to be inundated then, but alas was not. But hey, you can all still surprise me this time.

To finish this month I wish to alert you to the fact that a video made by our Vice President, Tom Cuddihy, a while ago for the Wellness training organisation MyWellnessRegistry, has now been released to youtube. It is his recording of the message, “A Journey to Wellness” that he penned in this newsletter as the stand-in President’s Message for July 2014, but enhanced by flashes of many of the wonderful photos he took while rafting down the Grand Canyon in June that year. Well worth the time to receive your wellness injection for the day (<https://www.youtube.com/watch?v=RL6mbqEhX3w>).

Be Well



NWIA PRESIDENT

Quote for the month



International Wellness Connections

This is the 38th article of a series featuring information from International Wellness Practitioners about the state of Wellness in their country of residence. This and any following International Connections monthly article has appeared in the National Wellness Institute (USA) monthly newsletter, at least 12 months previous to it appearing in this publication.

NWIA extends a sincere thank you to the authors for their contributions to the NWIA newsletter.

[The Italian Way: State of the Art of Corporate Wellness in Italy](#)

Posted By NWI, Tuesday, May 05, 2015

By Massimo Groff, Italy

1. Peculiar characteristics of Public Welfare & Productive Systems in Italy

To understand actual trends in the Italian corporate wellness market, it is necessary to refer to two main traits: on one hand, the structure of the productive system, mainly constituted by micro and small enterprises and, on the other side, the peculiarity of the welfare system that Italy shares with other Southern European countries.

The Italian economy is characterized by a strong presence of **micro** enterprises (less than 10 employees). These enterprises number around 4.3 million (95% of total) and employ 47% of employees.

Twenty-one percent (21%) of employees (around 3.6 million people) work in **small** enterprises (10-49 employees) and 12.4% (nearly 2.2 million) in **average** size enterprises (50-249 employees).

The 3,718 (0.08% of the total) **big** enterprises (> 250 employees) engage 20% (around 3.6 million people) of the employed population.

Nowadays, the corporate wellness sector deals quite exclusively with employees of this last mentioned sector of the workforce--enterprises with economical and managerial resources able to evaluate and appreciate medium/long-term benefits generated by this kind of investment.

Small enterprises consider investment in corporate wellness as unjustifiable and/or out of reach.

An important role is also played by the peculiar Italian "family based welfare." The main characteristic of this is a high level of social coverage granted to the breadwinner, whose role it is to "distribute" resources within the family. Researching the market to "buy" coverage against risks (private insurance) and services such as health or education is not widely practiced.

2. Olivetti's case: a pioneer of corporate wellness

In Italy, the subject of enterprise social responsibility gained normative recognition by the end of the last century. Actually, between 1930 and 1960, the country witnessed an incredibly innovative experience of *ante litteram* corporate wellness.

This refers to the model implemented by Adriano Olivetti in his own enterprise in Ivrea (a small town in the

northwest of Italy). Established in the early 1900s, during Adriano's leadership (from 1932 to 1960), Olivetti became world *leader* in manufacturing calculators and typewriting machines such as the famous "Lettera 22"^[1].

This exceptional captain of industry changed manufacturing rules by operating a factory on "human scale," where employees could feel part of a shared project, guarded by welfare measures unthinkable for that age. Besides salaries, that within Olivetti enterprise were 80% higher by comparison to those paid by other local competitors, social services offered to employees were very remarkable. These services included:

- Nurseries and summer camps; kindergartens, designed with functional and aesthetic excellence.
- A Health Service Factory, equipped with different specialized skills; high standards canteens.
- A transport network that covered the whole territory, intended to ease the costs of commuting and to avoid urbanization. Social housing for employees, designed by highly paid architects.
- The granting of loans and bank guarantees to enable employees restructuring their homes, supported by technical consultants and architectural services free of charge.

A model ahead of its time of more than 50 years that, however, remained quite isolated.

3. Regulatory framework

Currently, corporate welfare regulations are in place in the national legislation in a "disordered" manner, because they can be traced back to several regulatory areas, not just one.

Generally speaking, the "*Act on protection of health and safety in the workplace*," legislated in 2008, reorganized and coordinated various national regulations, updating them with the principles contained in international conventions signed by Italy including those related to work-related stress.

However, the main provision to support the implementation of corporate wellness projects is contained within the "Law on Income Tax". Articles 51 and 100 of this Law provide for tax relief and incentives that make the supply of goods and services by the employer cheaper than the traditional increase in payroll.

Article 51, in particular, defines the income of employees and provides a list of what is not included in taxable income. This exemption defines the areas of intervention currently used by companies in the implementation of corporate welfare plans. These being: contribution to the pension fund, contribution to a health care plan, the premium for insurance against the risk of death and permanent disability, contribution to daycare.

4. Corporate wellness demand (why it is growing?)

Italy, like the rest of the industrialized countries, is facing on the one hand the problem to reconcile the need to contain public expenditure and make sustainable the public welfare system and, on the other hand, the need to protect new and greater risks arising from an aging population, rising health care costs and greater mobility and flexibility of the labor market.

The policies to contain public welfare initiated over the last two decades to achieve the objectives of inflation reduction have generated a growing need for supplementary benefits, not only in the field of pensions and health care but also in the services in favor of family.

If in fact Italy devotes to social spending about 25% of its GDP, in reality the weight of pension benefits for old age alone accounts for 51.4% of this expenditure (versus a European average of 39.6%) while Italy is, however, the second lowest among OECD countries in terms of social policies for children and for the family.

There is therefore a strong and growing demand for supplementary welfare from Italian employees who would be happy to receive services that the public welfare is no longer able to guarantee.

5. Corporate wellness offer (who are the players)

Faced with this *scenario*, an offer coming from multiple suppliers is beginning to be structured.

First of all, there are consulting and service providers who have recently made corporate wellness their core business. One such provider is Eudaimon, a company that promotes the growth of the market working on two fronts. On the one hand, disseminating good practice and raising awareness among employers about the social and economic benefits associated with the introduction of these kind of services in the enterprise, on the other hand, aggregating supply in the territory.

Then there are companies – like Edenred - that were born, developed, and became famous thanks to the provision of meal tickets which have, in recent years, realized the large potential of welfare services supply through prepaid and immediately usable vouchers. Compared to meal tickets, this solution offers the chance for the recipient to choose not only the type of service but also a provider from a list of affiliated companies directly selected by Edenred.

In addition, the market has been enriched by new providers. The Italian Welfare Company specializes in setting up and managing networks for the public and corporate wellness, while the French-Italian Day Ristoservice has proposed to client companies the opportunity to offer employees vouchers for cultural and even "social" initiatives based on the expertise they gained from issuing meal tickets.

6. Success stories

A wide number of large Italian companies have, in the last few years, introduced some kind of welfare. A survey among more than 300 Italian companies shows that, even excluding the supplementary pension, 80 percent of companies with more than 500 employees have done so. Mentioning only some international brands as there are many others, the following companies have implemented systems of corporate wellness: Ferrari, Ferrero (Nutella's producer), Benetton (fashion), Fiat (automotive), Lavazza (coffee), Eni (Oil), Barilla (pasta).

The supplementary pension is present in the vast majority of companies, while the services still not quite popular are interventions for work-life balance, care and long-term care as well as access to housing.

One of the first examples of corporate welfare connected to corporate results is the "welfare package" for employees of the international group Luxottica (sunglasses). The three initiatives that are part of this program are the shopping cart, the health service, and scholarships and reimbursement of textbooks for employees' children. Different from the Welfare Program, but equally innovative, is the project called "Family Care Milan" affecting about 300 employees of the Luxottica Milan office. Developed in 2010 as a result of a questionnaire to identify the needs of family members of employees and executives, it includes several tools for work-life balance: extension of flexible worktime, conventions and economic contributions to kindergartens and summer camps, a babysitting service on demand.

8. The future of *corporate wellness* in Italy

The market of corporate wellness in Italy is definitely growing and there are good prospects for the future; however, many questions remain on the table:

1. The development of corporate welfare is certainly not immune to the great problem of Italy--the gap between North and South and, in general, the accentuated territorial fragmentation. If the economic and social background of some areas stimulate business and service development, in other areas the birth of welfare programs for employees is hampered by problems far greater such as the lack of development of the territory, unemployment and the absence of services.
2. The legislative framework. The aforementioned articles 50 and 100 are detailed in a law which dates back to 1986, and that law requires some changes. The uncertainty of the intent causes employers to be cautious, the outcome of which is that corporate welfare is still underdeveloped and underutilized, especially in

small and medium-sized companies.

3. The "hole" of old age. Another widely debated issue, still with no solution, is the care of elderly family members. Even though some companies are beginning to predict the implementation of paid leave and flexible working solutions insurance solutions are still largely absent even for those of one's own family dependents.
4. The expansion to small and medium enterprises of business welfare systems remains the main challenge. The success of corporate welfare in Italy will then depend not only on the political choices but also on the evolution of industrial relations and the ability of the actors involved to understand the potential not only for the benefits accrued from improvement of the workers' quality of life, but also the competitive gains of the undertaking.

[1] In 1952 "Lettera 22" and "Lexikon 80" models were included in the permanent collection of New York Museum of Modern Art. In 1959 Illinois Institute of Technology joined 100 designer which nominated "Lettera 22" as the first of 100 best manufactured design of 1859-1959 period, nine years after his creation.



Massimo Groff has worked as a project manager for many years in the education and training field and currently works as a project manager in a private development agency that invests in infrastructures on a regional level.

Massimo has always been passionate and highly involved in wellness, at various stages: He is a certified fitness trainer and has attended many training sessions on mindfulness meditation, resiliency techniques, as well as nutrition principles for weight loss. He looks at his involvement in NWI activities on one hand as a way to widen his knowledge and his skills by learning from professionals and on the other hand to understand if this world could one day become something more than a passion



Three-Day Working Week 'Optimal For Over-40s'

Workers aged over 40 perform at their best if they work three days a week, according to economic researchers. Their research analysed the work habits and brain test results of about 3,000 men and 3,500 women aged over 40 in Australia.

Their calculations suggest a part-time job keeps the brain stimulated, while avoiding exhaustion and stress. The researchers said this needed to be taken into consideration as many countries raise their retirement age.

Double-edged sword

Data for the study was drawn from the Household, Income and Labour Dynamics in Australia survey, which is conducted by the Melbourne Institute of Applied Economics and Social Research at the University of Melbourne.

It looks at people's economic and subjective well-being, family structures, and employment. Those taking part were asked to read words aloud, to recite lists of numbers backwards and to match letters and numbers under time pressure.

In general terms, those participants who worked about 25 hours a week tended to achieve the best scores. "Work can be a double-edged sword, in that it can stimulate brain activity, but at the same time, long working hours and

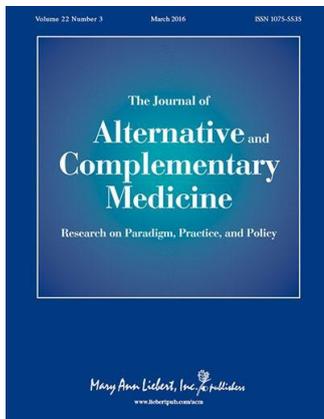
certain types of tasks can cause fatigue and stress which potentially damage cognitive functions," the report said.

Colin McKenzie, professor of economics at Keio University who took part in the research, said it would appear that working extremely long hours was more damaging than not working at all on brain function. The figures suggest that the cognitive ability of those working about 60 hours a week can be lower than those who are not employed.

However, Geraint Johnes, professor of economics at Lancaster University Management School, said: "The research looks only at over-40s, and so cannot make the claim that over-40s are different from any other workers.

"What the authors find is that cognitive functioning improves up to the point at which workers work 25 hours a week and declines thereafter."

He added: "Actually, at first the decline is very marginal, and there is not much of an effect as working hours rise to 35 hours per week. Beyond 40 hours per week, the decline is much more rapid." http://www.melbourneinstitute.com/downloads/working_paper_series/wp2016n16.pdf



Can Changes To Your Diet Help You Sleep Better?

A review of 21 studies that analyzed the effectiveness of modifying nutritional intake as a treatment for improving sleep found mixed results, as reported in the article "[Systematic Review of Dietary Interventions Targeting Sleep Behavior](#)" in *The Journal of Alternative and Complementary Medicine*, a peer-reviewed publication from Mary Ann Liebert, Inc., publishers. The article is available free on [The Journal of Alternative and Complementary Medicine](#) website until May 21, 2016.

In nearly half of the laboratory-based studies, a dietary intervention may have had a significant effect on a key sleep variable, according to the authors of the Review article Adam Paul Knowlden, MBA, PhD, The University of Alabama, Department of Health Science (Tuscaloosa, AL), Christine Hackman, PhD, California Polytechnic State University, Kinesiology Department (San Luis Obispo, CA), and Manoj Sharma, MBBS, PhD, Jackson State University, School of Public Health (Jackson, MS).

Objectives: Nearly 9 million Americans use prescription sleep aids to induce or maintain sleep; however, the long-term effects of these medications are unknown. Considering the number of individuals reporting insufficient sleep, nonpharmacologic methods for improving sleep are needed.

Design: A systematic review of published studies was conducted to determine the efficacy of nutritional intake as a modality for improving sleep behavior. Inclusion criteria for the review were interventions (both *in vivo* and *in natura*), using any quantitative design, employing a dietary intervention as the primary treatment variable, targeting sleep behavior, in nonclinical human populations age 18–50 years.

Results: A total of 21 studies (17 *in vivo* and 4 *in natura*) met the inclusion criteria and were included in the systematic review.

Conclusions: The evidence for nutrition as treatment modality for improving sleep is mixed. Nearly half of the *in vivo* trials suggested a significant change in a primary sleep variable of interest. However, a majority of these trials relied on small sample sizes of healthy sleepers and manipulated nutrition in an acute fashion. Among the *in natura* studies, macronutrient composition appeared to have no effect. However, the small number of studies mainly recruited healthy sleepers, and most had limited control of the diet of participants.

About the Journal

[The Journal of Alternative and Complementary Medicine](#) is a monthly peer-reviewed journal published online with open access options and in print. The Journal provides observational, clinical, and scientific reports and commentary intended to help healthcare professionals and scientists evaluate and integrate therapies into patient care protocols and research strategies. Complete tables of content and a sample issue may be viewed on [The Journal of Alternative and Complementary Medicine](#) website.

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<http://online.liebertpub.com/doi/full/10.1089/acm.2015.0238>



New Genetic Risk Factors For Myopia Discovered

Genes And Environment Determine Short-Sightedness

Myopia, also known as short-sightedness or near-sightedness, is the most common disorder affecting the eyesight and it is on the increase. The causes are both genetic and environmental. The Consortium for Refractive Error and Myopia (CREAM) has now made important progress towards understanding the mechanisms behind the development of the condition. This international group of researchers includes scientists involved in the Gutenberg Health Study of the University Medical Center of Johannes Gutenberg University Mainz (JGU). The team has uncovered nine new genetic risk factors which work together with education-related behavior as the most important environmental factor causing myopia to generate the disorder. The results of the study "Genome-wide joint meta-analyses of genetic main effects and interaction with education level identify additional loci for refractive error: The CREAM Consortium" have recently been published in the scientific journal *Nature Communications*.

There has been a massive rise in the prevalence of short-sightedness across the globe in recent decades and this upwards trend is continuing. It is known from previous studies of twins and families that the risk of acquiring short-sightedness is determined to a large extent by heredity. However, the myopia-causing genes that had been previously identified do not alone sufficiently explain the extent to which the condition is inherited. In addition to the genetic causes of myopia there are also environmental factors, the most significant of which are education-related behavior patterns. "We know from the Gutenberg Health Study conducted at Mainz that the number of years of education increases the risk of developing myopia," said Professor Norbert Pfeiffer, Director of the Department of Ophthalmology at the Mainz University Medical Center.

Meta-analysis of multi-national datasets

With the aim of identifying genetic mutations relating to myopia and acquiring better insight into the development of the condition, the international research group CREAM carried out a meta-analysis of data collected from around the world. The data compiled for this analysis originated from more than 50,000 participants who were analyzed in 34 studies. The second largest group of participants was formed by the more than 4,500 subjects of the Gutenberg Health Study of the Mainz University Medical Center. "In the field of genetic research, international cooperation is of particular importance. This is also borne out by this study, to which we were able to make a valuable contribution in the form of data from our Gutenberg Health Study," continued Professor Norbert Pfeiffer. "And in view of the fact that a survey undertaken by the European Eye Epidemiology Consortium with the help of the Gutenberg Health Study shows that about one third of the adult population of Europe is short-sighted, it is essential that we learn more

about its causes in order to come up with possible approaches for future treatments."

Aware that environmental effects and hereditary factors reinforce one another in the development of myopia, the scientists devised a novel research concept for their investigations. They used a statistical analysis technique that takes into account both the effects of the environmental and hereditary factors and does so in equal measure and simultaneously. Their efforts were crowned with success as they were able to classify nine previously unknown genetic risk factors.

Risk-associated gene involved in the development of short-sightedness

These newly discovered genetic variants are associated with proteins which perform important functions when it comes to the transmission of signals in the eye. One of these genes is of particular interest because it plays a major role in the transmission of the neurotransmitter gamma-aminobutyric acid (GABA) in the eye. Previous studies have shown that there is greater activation of the gene in question in eyes that are myopic. The results of current research substantiate this conclusion. The CREAM researchers interpret this as evidence that this newly discovered risk-related gene is actually involved in the development of short-sightedness. This represents significant initial headway towards understanding how genetic causes interact with the level of education as an environmental factor to produce the heterogeneity of myopia. Further research will be needed to clarify the details of how the mechanisms actually work and interact with one another.

The spread of short-sightedness is a worldwide phenomenon. Particularly in South East Asia the incidence of myopia in school children has increased notably over the last decades. This is likely due to an improvement in educational attainment. People who read a great deal also perform a lot of close-up work, usually in poor levels of daylight. The eye adjusts to these visual habits and the eyeball becomes more elongated than normal as a result. But if it becomes too elongated, the cornea and lens focus the image just in front of the retina instead of on it so that distant objects appear blurry. The individual in question is then short-sighted.

<http://www.nature.com/ncomms/index.html>



Study Links Neighborhood Greenness To Reduction In Chronic Diseases

A new study of a quarter-million Miami-Dade County Medicare beneficiaries showed that higher levels of neighborhood greenness, including trees, grass and other vegetation, were linked to a significant reduction in the rate of chronic illnesses, particularly in low-to-middle income neighborhoods.

Led by researchers at the University of Miami Department of Public Health Sciences at the Miller School of Medicine, and the School of Architecture, the study showed that higher greenness was linked to significantly lower rates of diabetes, hypertension and high cholesterol, as well as fewer chronic health conditions.

The findings, published online April 6 by the *American Journal of Preventive Medicine*, are based on 2010 - 2011 health data reported for approximately 250,000 Miami-Dade Medicare beneficiaries over age 65, and a measure of vegetative presence based on NASA satellite imagery. The study was the first of its kind to examine block-level greenness and its relationship to health outcomes in older adults, and the first to measure the impact of greenness on specific cardio-metabolic diseases.

"This study builds on our research group's earlier analyses showing block level impacts of mixed-use and supportive building features on adults and children," said lead study author Scott Brown, Ph.D., research assistant professor of public health sciences. Brown was a co-principal investigator on the study with Elizabeth Plater-Zyberk, M.Arch., a Malcolm Matheson Distinguished Professor in Architecture. Plater-Zyberk, who was responsible for the rewrite of

the City of Miami's zoning code in 2010, said the study results "give impetus to public agencies and property owners to plant and maintain a verdant public landscape."

Study findings revealed that higher levels of greenness on the blocks where the study's Medicare recipients reside, is associated with a significantly lower chronic disease risk for the residents of high greenness blocks, including a 14 percent risk reduction for diabetes, a 13 percent reduction for hypertension and a 10 percent reduction for lipid disorders.

"Going from a low to a high level of greenness at the block level is associated with 49 fewer chronic health conditions per 1,000 residents, which is approximately equivalent to a reduction in the biomedical aging of the study population by three years," said Brown.

Jack Kardys, Director of the Miami-Dade County Department of Parks, Recreation and Open Spaces, participated in data interpretation along with Miami-Dade County Parks' Chief of Planning, Research, and Design Excellence, Maria Nardi. Kardys said the study findings "illuminate the vital role of parks and greens to health and well-being, and point to the critical need for a holistic approach in planning that draws on research."

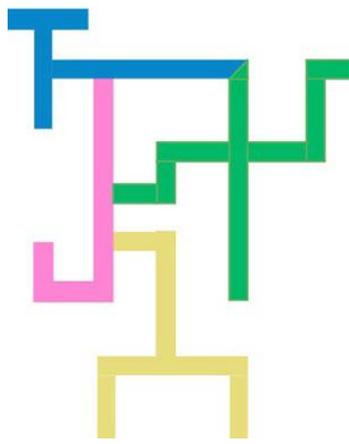
The study findings suggest extensive potential for park, open space, and streetscape design in South Florida and the United States to consider health impacts in strategic planning. Funded by the U.S. Department of Housing and Urban Development (HUD) Office of Policy Development and Research and the Health Foundation of South Florida, the research adds to a growing body of evidence that exposure to higher levels of greenness is associated with better health outcomes, by reducing stress, air pollution, humidity and heat island impacts, and encouraging physical activity, social interaction and community cohesion.

From a design standpoint, study co-author Joanna Lombard, M.Arch., professor of architecture, noted that the goals of the County's Parks and Open Spaces Masterplan already call for residents to have access to greenspace from the minute they walk outside of their homes, through tree-lined streets, as well as greens, parks, and open spaces within a 5 to 10 minute walk of their home, all of which have been shown to be linked to better health outcomes. "There's so much suffering involved in the time, money and energy spent on disease burden in the U.S., which we realize that we can, to some extent, ameliorate through healthy community design," said Lombard. "We collectively need to be attentive to the health impacts of the built environment. The associated harms are evident, and most importantly going forward, the potential benefits are significant."

In examining the results by income level and by race, the research showed that the health benefits of greenness were proportionately stronger among all racial and ethnic groups in lower income neighborhoods. Brown said this aspect of the findings suggests that incorporating more green -- trees, parks and open spaces -- in low income neighborhoods could also address issues of health disparities, which have been recently highlighted in research journals and the national media.

José Szapocznik, Ph.D., professor and chair of public health sciences, and founder of the University of Miami Built Environment, Behavior, and Health Research Group, pointed out that augmenting greenness, particularly in warm climates, potentially contributes to the effectiveness of other aspects of walkability. "Providing a green feature," said Szapocznik, "has been associated with safety, increased time outdoors, physical activity, and social interaction, and may potentially reduce disease burdens at the population level and enhance residents' quality of life."

<http://www.ajpmonline.org/>



Problems Finding Your Way Around May Be Earliest Sign Of Alzheimer's Disease

Navigation skill test could diagnose brain changes long before memory fails

Long before Alzheimer's disease can be diagnosed clinically, increasing difficulties building cognitive maps of new surroundings may herald the eventual clinical onset of the disorder, finds new research from Washington University in St. Louis.

"These findings suggest that navigational tasks designed to assess a cognitive mapping strategy could represent a powerful new tool for detecting the very earliest Alzheimer's disease-related changes in cognition," said senior author Denise Head, associate professor of psychological and brain sciences in Arts & Sciences.

"The spatial navigation task used in this study to assess cognitive map skills was more sensitive at detecting preclinical Alzheimer's disease than the standard psychometric task of episodic memory," she said.

Preclinical Alzheimer's disease denotes the presence of Alzheimer-related changes in the brain that occur prior to the development of symptoms that lead to the diagnosis.

The cognitive findings from this study, published in the April issue of the *Journal of Alzheimer's Disease*, are consistent with where in the brain the ill effects of Alzheimer's disease first surface, as well as with the progression of the disease to other brain regions.

Previous research has shown that navigation problems crop up early in individuals with Alzheimer's disease. These deficits may be associated with the build up of amyloid plaques and tau tangles and other signs of deterioration and shrinkage in the brain's prefrontal cortex, hippocampus and caudate.

The hippocampus, which is associated with long-term memory storage, the recognition of new surroundings and the creation of cognitive maps, is well-established as an early target for Alzheimer's-related damage. Similar damage also turns up in the caudate, which is associated with learning as well as voluntary movement.

"Our observations suggest a progression such that preclinical Alzheimer's disease is characterized by hippocampal atrophy and associated cognitive mapping difficulties, particularly during the learning phase," said first author Samantha Allison, a psychology doctoral student at Washington University. "As the disease progresses, cognitive mapping deficits worsen, the caudate becomes involved, and route learning deficits emerge."

Making a mental map

While these deficits are well documented in patients with early stage Alzheimer's disease, they have not been well studied in seemingly normal patients who may be progressing toward identifiable early stages of the disease, a status known as preclinical Alzheimer's disease.

In this study, researchers used a virtual maze navigation experiment to examine whether specific problems with route learning and cognitive map building, which involve the caudate and the hippocampus, respectively, could be detected in preclinical Alzheimer's. The experiment's design plays on the fact that humans generally find their way in life using two distinct forms of spatial representation and navigation.

With egocentric navigation, people rely on past knowledge to follow well-worn routes, moving sequentially from one landmark to another until they reach their target destination. In allocentric navigation, people become familiar with their big picture surroundings and create a mental map of existing landmarks, allowing them to plot best available routes and find shortcuts to new destinations.

Participants in this study were separated into three groups based on a test of brain and spinal fluids that can detect biomarkers shown to predict the future development of Alzheimer's-related plaques and tangles in the brain. People

who are clinically normal with these markers are considered to have preclinical Alzheimer's disease.

This study included 42 clinically normal individuals who lacked the cerebrospinal fluid markers for Alzheimer's, 13 clinically normal individuals who were positive for these markers and thus had preclinical Alzheimer's, and 16 individuals with documented behavioral symptoms of early stage Alzheimer's.

All 71 study participants spent about two hours on a desktop computer being tested on their ability to navigate a virtual maze consisting of a series of interconnected hallways with four wallpaper patterns and 20 landmarks. Participants were tested on two navigation skills: how well they could learn and follow a pre-set route, and how well they could form and use a cognitive map of the environment. Participants were given 20 minutes to either learn a specified route, or to study and explore the maze with a navigation joystick. They were then tested on their ability to recreate the route or find their way to specific landmarks in the environment.

"People with cerebrospinal markers for preclinical Alzheimer's disease demonstrated significant difficulties only when they had to form a cognitive map of the environment -- an allocentric, place-learning navigation process associated with hippocampal function," Head said. "This same preclinical Alzheimer's disease group showed little or no impairment on route learning tasks -- an egocentric navigation process more closely associated with caudate function."

When compared with cognitively normal study participants who lacked the cerebrospinal fluid markers of Alzheimer's, those with preclinical Alzheimer's disease scored lower on their ability to learn the locations of objects in the environment in relation to each other during the initial study phase.

While these results suggest deficits in the ability to form a cognitive map, preclinical Alzheimer's disease participants eventually managed to overcome these map-learning deficits, performing almost as well as cognitively normal participants during a subsequent wayfinding navigation task.

"These findings suggest that the wayfinding difficulties experienced by people with preclinical Alzheimer's disease are in part related to trouble acquiring the environmental information," Head said. "While they may require additional training to learn new environments, the good news here is that they seem to retain sufficient information to use a cognitive map almost as well as their cognitively normal counterparts."

A more sensitive diagnostic?

Head cautions that the current study has several limitations, including a relatively small sample size and a lack of direct information about brain regions and networks that have a role in spatial navigation and wayfinding.

However, Allison notes, "We are currently investigating how brain regions impacted early during the course of the disease are related to cognitive mapping deficits in a larger sample of individuals with preclinical Alzheimer's disease."

Within the context of these limitations, the current investigation demonstrates significant preclinical Alzheimer's disease-related deficits in aspects of cognitive mapping with relative preservation in route learning. In contrast, people experiencing memory lapses and other behavioral problems associated with early stage Alzheimer's disease had clear difficulties both in learning an established route and in finding their own way to new landmarks.

"This pattern is consistent with decrements in hippocampal integrity prior to changes in the caudate," Head said. "These findings suggest that navigational tasks designed to assess a cognitive mapping strategy could represent a powerful tool for detecting the very earliest Alzheimer's disease-related changes in cognition."

Participants in the study came from an ongoing study at Washington University's Charles F. and Joanne Knight Alzheimer's Disease Research Center. Scientists have been following participants with and without a family history of the disease, with the aim of identifying Alzheimer's disease biomarkers most closely associated with the development of full-blown disease years later.

The research team notes that the presence of cerebrospinal fluid markers for preclinical Alzheimer's does not guarantee that a person will go on to develop full blown Alzheimer's. "Future research should examine whether cognitive mapping deficits in individuals in preclinical Alzheimer's are associated with an increased risk of developing symptomatic Alzheimer's," they said.

Other study co-authors, both from Washington University School of Medicine, include Anne M. Fagan, professor of

neurology, and John C. Morris, MD, director of the Charles F. and Joanne Knight Alzheimer's Disease Research Center and the Harvey A. and Dorismae Hacker Friedman Distinguished Professor of Neurology.

This work was supported by NIH grants P50 AG05861, P01 AG03991, and P01 AG026276. Samantha Allison was supported by National Institute on Aging 5T32AG00030.

<https://source.wustl.edu/2016/04/problems-finding-way-around-may-earliest-sign-alzheimers-disease-study-suggests/>



https://www.youtube.com/watch?v=q_tz2QESGcY

Need To Remember Something? Better Draw It, Study Finds

Researchers at the University of Waterloo have found that drawing pictures of information that needs to be remembered is a strong and reliable strategy to enhance memory.

"We pitted drawing against a number of other known encoding strategies, but drawing always came out on top," said the study's lead author, Jeffrey Wammes, PhD candidate in the Department of Psychology. "We believe that the benefit arises because drawing helps to create a more cohesive memory trace that better integrates visual, motor and semantic information."

The study, by Wammes, along with fellow PhD candidate Melissa Meade and Professor Myra Fernandes, presented student participants with a list of simple, easily drawn words, such as "apple." The students were given 40 seconds to either draw the word, or write it out repeatedly. They were then given a filler task of classifying musical tones to facilitate the retention process. Finally, the researchers asked students to freely recall as many words as possible from the initial list in just 60 seconds.

The study appeared in the the *Quarterly Journal of Experimental Psychology*.

"We discovered a significant recall advantage for words that were drawn as compared to those that were written," said Wammes. "Participants often recalled more than twice as many drawn than written words. We labelled this benefit 'the drawing effect,' which refers to this distinct advantage of drawing words relative to writing them out."

In variations of the experiment in which students drew the words repeatedly, or added visual details to the written letters, such as shading or other doodles, the results remained unchanged. Memory for drawn words was superior to all other alternatives. Drawing led to better later memory performance than listing physical characteristics, creating mental images, and viewing pictures of the objects depicted by the words.

"Importantly, the quality of the drawings people made did not seem to matter, suggesting that everyone could benefit from this memory strategy, regardless of their artistic talent. In line with this, we showed that people still

gained a huge advantage in later memory, even when they had just 4 seconds to draw their picture," said Wammes.

While the drawing effect proved reliable in testing, the experiments were conducted with single words only. Wammes and his team are currently trying to determine why this memory benefit is so potent, and how widely it can be applied to other types of information.

About the University of Waterloo

University of Waterloo is Canada's top innovation university. With more than 36,000 students we are home to the world's largest co-operative education system of its kind. Our unmatched entrepreneurial culture, combined with an intensive focus on research, powers one of the top innovation hubs in the world. Find out more at uwaterloo.ca

<https://uwaterloo.ca/news/news/need-remember-something-better-draw-it-study-finds>



Inspirational Managers May Harm Workers' Health

Managers who inspire their staff to perform above and beyond the call of duty may actually harm their employees' health over time, according to researchers from the University of East Anglia (UEA).

The findings suggest that constant pressure from these 'transformational leaders' may increase sickness absence levels among employees. They also indicate that some vulnerable employees in groups with transformational leaders may in the long term have increased sickness absence rates if they ignore their ill-health and frequently show up for work while ill, known as presenteeism.

The study, published in the journal *Work & Stress*, was led by Karina Nielsen, professor of work and organisational psychology, and Kevin Daniels, professor of organisational behaviour at UEA's Norwich Business School. They looked for the first time at the relationship between presenteeism, transformational leadership and sickness absence rates. The results have implications for how organisations might effectively deal with employees' health and well-being.

Transformational leadership has previously been associated with positive employee well-being, better sleep quality, fewer depressive symptoms and reduced general absenteeism in the short term.

However, the new study suggests that a transformational leader who encourages their group to make an extra effort at work may exacerbate sickness absence, as high levels of presenteeism may result in reduced opportunities for recovery along with the risk of spreading contagious conditions, such as the common cold, in the long term.

Prof Nielsen said the relationship between transformational leadership and sickness absence was complex.

"It is possible that high performance expectations pose a risk to both healthy and vulnerable employees and the motivational aspects of transformational leadership may backfire," said Prof Nielsen. "Transformational leaders may promote self-sacrifice of vulnerable employees for the greater good of the group by encouraging them to ignore their illnesses and exert themselves. This can lead to increased risks of sickness absence in the long term.

"Such leaders express values to perform above and beyond the call of duty possibly at the expense of employees' health because they have a self-interest in demonstrating low sickness absence rates in their work groups. This pattern may be a particular problem in organisations where managers are rated according to their ability to control sickness absence levels."

The research focused on postal workers and their managers in Denmark over three years. In total there were 155 participants in 22 work groups. Employees rated their immediate line manager at the start of the study and were asked about their sickness absence and presenteeism for the previous year. Sickness absence was assessed again in years two and three.

The authors found that transformational leadership increased sickness absence when workers exhibited 14 more days of presenteeism than their colleagues. Transformational leadership in the first year was related to higher levels of sickness absence among staff in the second year, but not the third. Employees working in groups with a

transformational leader and who had high levels of presenteeism reported the highest levels of sickness absenteeism in the third year, but not the second.

The findings suggests that more immediate, short term effects can be found among staff, but for vulnerable workers, such as those with high levels of presenteeism, increasing adverse effects take longer to materialise. Lack of recovery time may also explain this effect, leading to them eventually having to go off sick because they can no longer ignore their symptoms.

Prof Daniels said: "The assumption that 'more transformational leadership is better' does not hold over time. As role models, transformational leaders should display healthy behaviours when motivating people, they should monitor and check them, and encourage workers to look after their own health. Managers need to strike a balance, they can still encourage staff to perform well, but in a way that is not at the expense of their health and well-being."

The authors recommend that transformational leadership training should include health-related elements. For example, intellectual stimulation should not only focus on developing competencies but also on building resilience and coping skills. Leaders could also be trained in incorporating well-being and health into the vision, goals and objectives they develop for work groups.

'The relationship between transformational leadership and follower sickness absence: The role of presenteeism' is published in *Work & Stress* on Friday April 22, 2016. <https://www.uea.ac.uk/about/-/inspirational-managers-may-harm-workers-health>



the
Lowitja
Institute

Australia's National
Institute for Aboriginal
and Torres Strait Islander
Health Research

First Lancet Global Snapshot Of Indigenous Peoples Health Released

A world-first University of Melbourne-led study into the health and wellbeing of more than 154 million Indigenous and tribal people globally reveals the extent of work that needs to be done if the United Nations is to meet its 2030 goals of ending poverty and inequality.

The Indigenous and tribal peoples' health (*The Lancet-Lowitja Institute Global Collaboration*): A Population Study, commissioned by Australia's Lowitja Institute, is the most comprehensive ever compiled by world health experts.

It brings together data from 28 indigenous and tribal groups across 23 countries - accounting for more than half of the world's native populations.

Lead author Professor Ian Anderson, Chair of Indigenous Education and Pro Vice Chancellor of Engagement at the University of Melbourne, said the key to the success of the report was in the international collaboration of 65 world-leading experts in Indigenous health.

"What was absolutely critical and unique to this project was being able to work with authors and contributors across the 23 countries," Prof Anderson said.

Romlie Mokak, chief executive of the Lowitja Institute, said the research represented an important milestone for the institute.

"The Lowitja Institute values the health and wellbeing of Aboriginal and Torres Strait Islander people, and we extend that purpose to our international global Indigenous family," Mr Mokak said.

"The study highlights the importance of global networks that bring together Indigenous health experts, academics and policymakers to effect positive outcomes for First Peoples. Providing leadership in this area is very important."

The study responds to the United Nations 2030 Agenda for Sustainable Development signed in September 2015 with the stated aim to end all forms of poverty, fight inequalities and tackle climate changes, while ensuring that no

one is left behind.

The participating countries included Australia, United States, Canada, New Zealand, Sweden, Norway, Denmark, Russia, China, India, Thailand, Pakistan, Brazil, Colombia, Chile, Myanmar, Kenya, Peru, Panama, Venezuela, Cameroon and Nigeria.

Researchers assessed data on basic population, life expectancy at birth, infant mortality, low and high birthweight, maternal mortality, nutritional status, educational attainment, poverty and economic status. They did not make cross-country comparisons.

Key findings and recommendations include:

- Health and wellbeing is generally poorer for Indigenous and tribal peoples, although the level of disadvantage varies across nations.
- Being Indigenous in a wealthy country does not necessarily lead to better outcomes
- National governments need to develop targeted policy responses to Indigenous health, improving access to health services, and Indigenous data within national surveillance systems.

The Lowitja Institute is Australia's only research organisation focused solely on the health and wellbeing of Aboriginal and Torres Strait Islander peoples. For more information, visit <http://www.lowitja.org.au>

Access the paper here: [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(16\)00345-7/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)00345-7/abstract)



Nutrient Plays Key Role In Internal Clocks

An essential mineral has an unexpected role in helping living things remain adapted to the rhythms of night and day, research shows.

Magnesium – a nutrient found in many foods – helps control how cells keep their own form of time to cope with the natural environmental cycle of day and night.

The discovery in cells is expected to be linked to whole body clocks which influence daily cycles – or circadian rhythms – of sleeping and waking, hormone release, body temperature and other important bodily functions in people.

The surprising discovery may aid the development of chronotherapy – treatment scheduled according to time of day – in people, and the development of new crop varieties with increased yields or adjustable harvesting seasons.

Nutrient levels

Experiments in three major types of biological organisms – human cells, algae, and fungi – found in each case that levels of magnesium in cells rise and fall in a daily cycle.

Scientists found that this oscillation was critical to sustain the 24-hour clock in cells.

They were surprised to discover that it also had an enormous impact on metabolism in cells – how fast cells can convert nutrients into energy – throughout the course of a day.

Body clocks

Researchers at Edinburgh and the MRC Laboratory for Molecular Biology in Cambridge used molecular analysis to find that concentrations of magnesium rose and fell in a 24-hour cycle in all cell types, and that this impacts on the cells' internal clocks.

Further tests showed that magnesium levels were linked to the cells' ability to burn energy.

It was already known that magnesium is essential to help living things convert food into fuel, but scientists were surprised to discover that it also controls when this biological function takes place, and how efficiently. Their study, published in *Nature*, was supported by the Royal Society, the Medical Research Council and the Wellcome Trust.

“Internal clocks are fundamental to all living things. They influence many aspects of health and disease in our own bodies, but equally in crop plants and micro-organisms. It is now essential to find out how these fundamentally novel observations translate to whole tissue or organisms, to make us better equipped to influence them in complex organisms for future medical and agricultural purposes.”

Dr Gerben van Ooijen, School of Biological Sciences

<http://www.ed.ac.uk/news/2016/nutrient-plays-key-role-in-internal-clocks>

Recipe: Artichoke Dip

By Mayo Clinic Staff



Dietitian's tip:

This dip is excellent with raw vegetables, such as sliced cucumbers, red or green bell peppers, carrots, and celery. It is also great with toasted pita triangles — or as a topping for potatoes.

Serves 8

Ingredients

- 2 cups artichoke hearts
- 1 tablespoon black pepper
- 4 cups chopped spinach
- 1 teaspoon minced thyme
- 2 cloves garlic, minced
- 1 tablespoon minced parsley
- 1 cup white beans, prepared
- 2 tablespoons Parmesan cheese
- 1/2 cup low-fat sour cream
-

Directions

Mix all ingredients together. Put in glass or ceramic dish and bake at 350 F for 30 minutes. Serve with whole-grain bread, crackers or vegetables for dipping.

Nutritional analysis per serving

Serving size :About 1/2 cup

Total carbohydrate 14 g

Dietary fiber 6 g

Sodium 71 mg

Saturated fat 1 g

Total fat 2 g

Trans fat 0 g

Cholesterol 6 mg

Protein 5 g

Monounsaturated fat 1 g

Calories 94

Sugars 0 g

<http://www.mayoclinic.org/healthy-lifestyle/recipes/artichoke-dip/rcp-20049969>