

## NEWS

## Nonrecreational Physical Activity Reduces Cardiovascular Risk

The Prospective Urban Rural Epidemiology (PURE) study has shown that any kind of physical activity lowers the risk of heart disease and death. The prospective cohort study led by the Population Health Research Institute of McMaster University and Hamilton Health Sciences recruited more than 130,000 subjects from 17 countries – Canada, Sweden, United Arab Emirates, Argentina, Brazil, Chile, Poland, Turkey, Malaysia, South Africa, China, Colombia, Iran, Bangladesh, Pakistan, and Zimbabwe, including India. The PURE study, published on September 22, 2017, in *The Lancet*, not only examined leisure-time physical activity but also evaluated nonrecreational activities such as active commuting, having an active job, or even doing housework, which are more prevalent in low- and middle-income countries.<sup>[1]</sup> Moreover, any activity was found to meet the current recommendations of 30 min of activity a day or 150 min a week. It has been recommended that the nonrecreational activities such as routine household works reduce the risk of developing cardiovascular diseases (CVDs). However, though some of the recommendations of the PURE study, 2017 are inconclusive, the importance was given to practice standard and healthy nutrition to reduce the CVD risks.

The PURE study in 2009 was conducted in a large-scale epidemiological study that recruited approximately 140,000 individuals residing in >600 communities in 17 low-, middle-, and high-income countries around the world. Individual data collection included medical history, lifestyle behaviors (physical activity and dietary profile), blood collection and storage for biochemistry and future genetic analysis, electrocardiogram, and anthropometric measures.<sup>[2]</sup> In addition, detailed

information was collected with respect to four environmental domains of interest – the built environment, nutrition and associated food policy, psychosocial/socioeconomic factors, and tobacco environment. A follow-up of 10 years was planned. Its design and extensive data collection were geared toward addressing major questions on causation and development of the underlying determinants of CVD in populations at varying stages of epidemiologic transition.

The main messages of both the PURE studies for nutritional advice have not changed, i.e., follow a healthy dietary pattern that includes abundant amounts of vegetables, fruits, whole grains, legumes, and nuts; moderate amounts of reduced-fat dairy products and seafood; and lower amounts of processed and red meat, sugar-sweetened foods and beverages, and refined grains. Such a dietary pattern does not need to limit total fat intake, but the main types of fat should be unsaturated fats from plant sources rather than animal fat.<sup>[1,2]</sup> Involvement in nonrecreational works is must for prevention of cardiovascular risks.

### REFERENCES

1. Dehghan M, Mentz A, Zhang X, Swaminathan S, Li W, Mohan V, *et al.* Associations of fats and carbohydrate intake with cardiovascular disease and mortality in 18 countries from five continents (PURE): A prospective cohort study. *Lancet* 2017. pii: S0140-6736 (17) 32252-3.
2. Teo K, Chow CK, Vaz M, Rangarajan S, Yusuf S, PURE Investigators-Writing Group *et al.* The Prospective Urban Rural Epidemiology (PURE) study: Examining the impact of societal influences on chronic noncommunicable diseases in low-, middle-, and high-income countries. *Am Heart J* 2009;158:1-70.

## Tuberculosis as a Global Priority for Research and Development

New World Health Organization (WHO) report highlights tuberculosis (TB) as a global priority for research and development in the field of medicine. A recently released new report from the WHO “Antibacterial agents in clinical development – An analysis of the antibacterial clinical development pipeline, including *Mycobacterium tuberculosis*” portrays a grim scenario by highlighting the lack of new antibiotics under development to combat the growing threat of antimicrobial resistance, which has emerged as a serious global public health concern. Along with other priority antibiotic-resistant pathogens and clostridium difficile, the report also focuses on TB as a global

priority for research and development. It draws attention to the fact that only seven new agents for TB are currently in clinical trials. Of these, four are in phase-1, and only one compound is in phase-3. This means that physicians have limited or no options for multidrug-resistant *M. tuberculosis*, particularly extensively drug-resistant *M. tuberculosis*. Perhaps, in acknowledgment of this lack of therapeutic options, the Report also says, “This is especially problematic because treatment of TB infections requires a combination of at least three antibiotics. Novel treatment regimens of short duration that are assembling nontoxic drugs are desperately

needed.” The seven agents being developed specifically for treatment of TB include pretomanid (nitroimidazole), delamanid (oxazolidinone), SQ-109 (diamine), GSK-3036656 (Leu RS inhibitor [oxaborole]), Q-203 (imidazopyridine

amide), PBTZ-169 (DprE1 inhibitor [benzothiazinone]), and OPC-167832 (DPrEq inhibitor). Only two new antibiotics for treatment of MDR-TB, bedaquiline and delamanid, have reached the market in more than seven decades.

## VIEWS

### Cut Down Sugar, but Have Some Fat in Your Diet

As India is the epicenter of diabetes and heart disease, there is a prescription of strict restrictions on carbohydrate and fat intakes. Especially in the families of diabetes and heart diseases, the restrictions are severe. However, if you are frustrated by such very strict dietary guidelines, you are not alone. In the last several years, we have been told to shift our eating habits in significant ways to reduce sugar and fat intakes. Sugar is now the main culprit, which is linked with chronic diseases from diabetes and cancer to heart attack, while fat seems to be off the hook, even in seemingly high doses. Results

of some large-scale new studies that use data from around the globe do not support our understanding on fat restriction. Reports of these research confirm that there is really no upper limit on fat intake though the carbohydrate intake should be moderated and possibly in less quantity.

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