

## 《慢病防控和健康管理战略研究》参考

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中国工程科技知识中心医药卫生专业分中心  
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### [资讯]

#### 1. 2021 ESC Clinical Practice Guidelines on cardiovascular disease prevention in clinical practice

**【European Society of Cardiology】**Recent developments in prediction of cardiovascular disease (CVD) risk and treatment benefit, as well as novel treatments and treatment goals, necessitated new, up-to-date guidelines. Today, Professor Frank Visseren (University Medical Centre Utrecht, the Netherlands) and Professor François Mach (Geneva University Hospital, Switzerland), Chairs of the Guidelines Task Force, unveiled the 2021 ESC Guidelines on CVD prevention in clinical practice.

链接：<https://www.escardio.org/Congresses-&-Events/ESC-Congress/Congress-news/2021-esc-clinical-practice-guidelines-on-cardiovascular-disease-prevention-in-cl>

### [文献速递]

#### 2. Cost-Effectiveness of Initiating Pharmacological Treatment in Stage One Hypertension Based on 10-Year Cardiovascular Disease Risk

文献来源：*Hypertension*

作者：*Constanti, Margaret*

摘要：Antihypertensive drug treatment is cost-effective for adults at high risk of

developing cardiovascular disease (CVD). However, the cost-effectiveness in people with stage 1 hypertension (140-159 mm Hg systolic blood pressure) at lower CVD risk remains unclear. The objective was to establish the 10-year CVD risk threshold where initiating antihypertensive drug treatment for primary prevention in adults, with stage 1 hypertension, becomes cost-effective. A lifetime horizon Markov model compared antihypertensive drug versus no treatment, using a UK National Health Service perspective. Analyses were conducted for groups ranging between 5% and 20% 10-year CVD risk. Health states included no CVD event, CVD and non-CVD death, and 6 nonfatal CVD morbidities. Interventions were compared using cost-per-quality-adjusted life-years. The base-case age was 60, with analyses repeated between ages 40 and 75. The model was run separately for men and women, and threshold CVD risk assessed against the minimum plausible risk for each group. Treatment was cost-effective at 10% CVD risk for both sexes (incremental cost-effectiveness ratio 10 pound 017/quality-adjusted life-year [\$14 542] men, 8635 pound/QALY [\$12 536] women) in the base-case. The result was robust in probabilistic and deterministic sensitivity analyses but was sensitive to treatment effects. Treatment was cost-effective for men regardless of age and women aged >60. Initiating treatment in stage 1 hypertension for people aged 60 is cost-effective regardless of 10-year CVD risk. For other age groups, it is also cost-effective to treat regardless of risk, except in younger women.

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### **3. Sex differences in prevalence, treatment and control of cardiovascular risk factors in England**

文献来源: *Heart*

作者: *Ana Catarina Pinho-Gomes*

摘要: To investigate sex differences in prevalence, treatment and control of major cardiovascular risk factors in England. Data from the Health Survey for England 2012 - 2017 on non-institutionalised English adults (aged  $\geq 16$  years) were used to investigate sex differences in prevalence, treatment and control of major cardiovascular risk factors: body mass index, smoking, systolic blood pressure and hypertension, diabetes, and

cholesterol and dyslipidaemia. Physical activity and diet were not assessed in this study. Overall, 49415 adults (51% women) were included. Sex differences persisted in prevalence of cardiovascular risk factors, with smoking, hypertension, overweight and dyslipidaemia remaining more common in men than in women in 2017. The proportion of individuals with neither hypertension, dyslipidaemia, diabetes nor smoking increased from 32% to 36% in women and from 28% to 29% in men between 2012 and 2017. Treatment and control of hypertension and diabetes improved over time and were comparable in both sexes in 2017 (66% and 51% for treatment and control of hypertension and 73% and 20% for treatment and control of diabetes). However, women were less likely than men to have treated and controlled dyslipidaemia (21% vs 28% for treatment and 15% vs 24% for control, for women versus men in 2017). Important sex differences persist in cardiovascular risk factors in England, with an overall higher number of risk factors in men than in women. A combination of public health policy and individually tailored interventions is required to further reduce the burden of cardiovascular disease in England.

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#### **4. Cardiac $\alpha_1$ -adrenergic receptors: emerging protective roles in cardiovascular diseases**

文献来源: *American Journal of Physiology*

作者: *Jiong Zhang*

摘要: Alpha 1-Adrenergic receptors (ARs) are catecholamine-activated G protein-coupled receptors (GPCRs) that are expressed in mouse and human myocardium and vasculature, and play essential roles in the regulation of cardiovascular physiology. Though  $\alpha_1$ -ARs are less abundant in the heart than  $\alpha_2$ -ARs, activation of cardiac  $\alpha_1$ -ARs results in important biologic processes such as hypertrophy, positive inotropy, ischemic preconditioning, and protection from cell death.

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#### **5. Mechanisms and primary prevention of atherosclerotic cardiovascular disease among people living with HIV**

文献来源: *Current opinion in HIV and AIDS*

作者: *Durstenfeld, Matthew S.*

摘要: Purpose of review To highlight mechanisms of elevated risk of atherosclerotic cardiovascular disease (ASCVD) among people living with HIV (PLWH), discuss therapeutic strategies, and opportunities for primary prevention. Recent findings HIV-associated ASCVD risk is likely multifactorial and due to HIV-specific factors and traditional risk factors even in the setting of treated and suppressed HIV disease. Although a growing body of evidence suggests that inflammation and immune activation are key drivers of atherogenesis, therapies designed to lower inflammation including colchicine and low-dose methotrexate have not improved secondary cardiovascular endpoints among PLWH. Statins continue to be the mainstay of management of hyperlipidemia in HIV, but the impact of newer lipid therapies including proprotein convertase subtilisin/kexin type 9 inhibitors on ASCVD risk among PLWH is under investigation. Aside from the factors mentioned above, healthcare disparities are particularly prominent among PLWH and thus likely contribute to increased ASCVD risk. Our understanding of mechanisms of elevated ASCVD risk in HIV continues to evolve, and the optimal treatment for CVD in HIV aside from targeting traditional risk factors remains unknown. Future studies including novel therapies to lower inflammation, control of risk factors, and implementation science are needed to ascertain optimal ways to treat and prevent ASCVD among PLWH.

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## **6. LncRNAs as Therapeutic Targets for Autophagy-involved Cardiovascular Diseases**

文献来源: *Current medicinal chemistry*

作者: *Lihui*

摘要: Background: Cardiovascular diseases (CVDs) remain the leading cause of death worldwide. The concept of precision medicine in CVD therapy today requires the incorporation of individual genetic and environmental variability to achieve personalized disease prevention and tailored treatment. Autophagy, an evolutionarily conserved intracellular degradation process, has been demonstrated to be essential in the pathogenesis

of various CVDs. Nonetheless, there have been no effective treatments for autophagy-involved CVDs. Long noncoding RNAs (lncRNAs) are noncoding RNA sequences that play versatile roles in autophagy regulation, but much needs to be explored about the relationship between lncRNAs and autophagy-involved CVDs. Summary: Increasing evidence has shown that lncRNAs contribute considerably to modulate autophagy in the context of CVDs. In this review, we first summarize the current knowledge of the role lncRNAs play in cardiovascular autophagy and autophagy-involved CVDs. Then, recent developments of antisense oligonucleotides (ASOs) designed to target lncRNAs to specifically modulate autophagy in diseased hearts and vessels are discussed, focusing primarily on structure-activity relationships of distinct chemical modifications and relevant clinical trials. Perspective: ASOs are promising in cardiovascular drug innovation. We hope that future studies of lncRNA-based therapies would overcome existing technical limitations and help people who suffer from autophagy-involved CVDs.

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## 7. Aspirin in the Prevention of Cardiovascular Disease and Cancer

文献来源: *Annual Review of Medicine*

作者: Ricciotti, Emanuela

摘要: More than a century after its synthesis, daily aspirin, given at a low dose, is a milestone treatment for the secondary prevention of cardiovascular disease (CVD). Its role in primary prevention of CVD is still debated. Older randomized controlled trials showed that aspirin reduced the low incidence of myocardial infarction but correspondingly increased the low incidence of serious gastrointestinal bleeds without altering mortality. More recent trials see the benefit attenuated, perhaps obscured by other cardioprotective practices, while the bleeding risk remains, especially in older patients. Indirect evidence, both preclinical and clinical, suggests that aspirin may protect against sporadic colorectal cancer and perhaps other cancers. However, further studies are still necessary to warrant the consumption of aspirin for primary prevention of CVD and cancer by apparently healthy individuals.

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## **8. The Evidence of Aspirin Use in Prevention of Adverse Pregnancy Outcomes (APOs)**

文献来源: *Current treatment options in cardiovascular medicine*

作者: *Aziz, Aleha*

摘要: Purpose of review Aspirin is one of the only proven therapeutic options for the prevention of preeclampsia, an important adverse pregnancy outcome with detrimental short- and long-term consequences to a woman's health. The goal of this review is to provide information about the current recommendations for the use of aspirin to prevent preeclampsia and whether there is evidence for postpartum continuation. Recent findings Preeclampsia is linked to the development of future cardiovascular disease and adverse outcomes in women including stroke, ischemic heart disease, and heart failure. This is likely due to vascular dysfunction and inflammation as their shared pathophysiology. By decreasing vasoconstriction, aspirin targets these pathways, inhibiting cyclooxygenase-1 activity and thereby the synthesis of thromboxane A<sub>2</sub>. Low-dose aspirin use during pregnancy has been shown to decrease the frequency of preeclampsia and other adverse pregnancy outcomes such as fetal growth restriction and preterm birth. Since adverse pregnancy outcomes and preeclampsia in particular significantly increase the risk for future cardiovascular disease, low-dose aspirin could have the potential to decrease onset and severity of adverse cardiac outcomes in young women. Improving cardiovascular indicators in reproductive-aged women, a demographic that unlike other populations (older, male) has experienced recent substantial increases in cardiovascular disease, has important public health implications.

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## **9. Cardio-Oncology-The Intersection Between Cardiovascular Disease and Cancer**

文献来源: *Journal of the advanced practitioner in oncology*

作者: *JESSICA SHANK COVIELLO*

摘要： Cardio-oncology is a rapidly emerging field, and advanced practitioners (APs) play key roles in the prevention, early detection, and optimal treatment of cardiotoxicities associated with cancer therapies. At JADPRO Live Virtual 2020, Jessica Shank Coviello, DNP, APRN, ANP-BC, and Kejal Amin, PharmD, MBA, BCOP, reviewed patient risk factors and cardiovascular therapeutic agents that APs should be aware of.

链接： [http://pan.ckcest.cn/rcservice//doc?doc\\_id=84711](http://pan.ckcest.cn/rcservice//doc?doc_id=84711)

## **10. Hydroxychloroquine for the treatment of COVID-19 and its potential cardiovascular toxicity**

文献来源： *Best practice & research*

作者： *Egeli, Bugra Han*

摘要： A variety of treatment modalities have been investigated since the beginning of the Coronavirus Disease-19 (COVID-19) pandemic. The use of antimalarials (hydroxychloroquine and chloroquine) for COVID-19 treatment and prevention has proven to be a cautionary tale for widespread, off-label use of a medication during a crisis. The investigation of antimalarials for COVID-19 has also been a driver for a deluge of scientific output in a short amount of time. In this narrative review, we detail the evidence for and against antimalarial use in COVID-19, starting with the early small observational studies that influenced strategies worldwide. We then contrast these findings to later published larger observational studies and randomized controlled trials. We detail the emerging possible cardiovascular risks associated with antimalarial use in COVID-19 and whether COVID-19-related outcomes and cardiovascular risks may differ for antimalarials used in rheumatic diseases.

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## **11. Generalizability of Reduction of Cardiovascular Events with Icosapent Ethyl-Intervention Trial in patients with a history of coronary artery bypass graft surgery**

文献来源： *Current opinion in cardiology*

作者: *Andrew Kosmopoulos*

摘要: Purpose of review Following coronary artery bypass grafting (CABG), there remains persistent risk of ischemic events despite secondary prevention strategies, including low-density lipoprotein cholesterol lowering. Although REDUCE-IT recently demonstrated the benefits of icosapent ethyl (IPE) on reducing ischemic events in a broad population of primary and secondary prevention patients, its generalizability to a contemporary CABG population is not known. This article aims to ascertain the proportion of patients with a history of CABG that would be eligible for IPE treatment. Recent findings A review of recent literature highlights the presence of residual ischemic following CABG. Using the Québec Heart Database, a repository of contemporary Canadian cardiac patient information, was searched between 1 January 2006 and 31 December 2016, to ascertain generalizability of IPE. Summary In a large (N=12641), contemporary, Canadian cohort of patients with a history of CABG and currently on statin therapy, 21.9, 33.6 and 26.4% would be eligible for IPE, according to REDUCE-IT, Health Canada, and Food and Drug Administration criteria, respectively. These analyses would support IPE as an adjunct to secondary prevention therapies post-CABG.

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