



Addressing the dual challenge: Managing smoking cessation in patients with diabetes

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Abstract

Smoking increases complications and mortality in people with diabetes. Quitting delivers major benefits, but physiological (weight gain, insulin sensitivity shifts) and psychological barriers make cessation harder in this group. Our review article examined strategies tailored to people with diabetes. All smokers with diabetes should receive clear, personalized advice to quit, embedded in routine care. Among the available medications, varenicline has the strongest evidence in this population. Nicotine replacement therapy and bupropion may help but have limited diabetes-specific data, so they should be used with caution. Tobacco harm reduction (e-cigarettes, heated tobacco products) may facilitate switching away from combustible cigarettes and reduce exposure, although the long-term safety and efficacy in diabetes remain uncertain. Glucagon-like peptide-1 receptor agonists can aid weight and glycemic control and may indirectly support cessation. Digital tools (apps, wearables, and remote monitoring) offer real-time support and adherence tracking, although diabetes-specific effectiveness is still being established. Smoking cessation in people with diabetes requires urgent attention. Evidence-based interventions should be integrated into routine care, with particular attention given to early monitoring of glucose, body weight, and blood pressure after quitting, plus structured follow-up. More research should develop and test tailored, long-term strategies for this high-risk group, including pragmatic trials integrating harm reduction and digital support.

Key Words: Diabetes; Smoking cessation; Harm reduction; Glucagon-like peptide 1 analogues; Digital health technologies; Wearable sensors

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Core Tip: This expert review addresses the dual challenge of smoking cessation in patients with type 2 diabetes - a high-risk group experiencing synergistic vascular damage from chronic hyperglycemia and tobacco smoke toxicants. It underscores the evidence for (and limitations of) standard smoking cessation medications (*i.e.*, nicotine replacement therapy, bupropion, and varenicline) while introducing emerging harm reduction strategies (*i.e.*, e-cigarettes and heated tobacco products) and cutting-edge innovations (*i.e.*, glucagon-like peptide-1 analogues and digital health tools). Adopting a holistic, patient-centered approach is crucial for improving the lives of people with diabetes who smoke, but further research to enhance long-term cessation success and improve metabolic outcomes will be necessary.

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INTRODUCTION

Diabetes is a chronic, metabolic disease characterized by elevated levels of blood glucose, which leads to severe damage to the heart, blood vessels, eyes, kidneys and nerves over time. It has become a major global health concern, with its prevalence rising dramatically over the past few decades. In 2022, an estimated 828 million adults worldwide were living with diabetes, marking a staggering increase of 630 million cases since 1990[1]. This rapid growth is driven by multiple factors, including population aging, urbanization, sedentary lifestyles, and rising obesity rates.

Smoking, in particular, poses a serious additional risk for people with diabetes. Globally, tobacco use affects 1.3 billion people and causes more than 7 million deaths annually from smoking-related diseases[2,3]. Smoking is a key driver of lung cancer, chronic obstructive pulmonary disease, and cardiovascular disease[4]. It also contributes to the onset of diabetes and worsens its complications[5-7]. Furthermore, in individuals with diabetes, smoking amplifies the harmful effects of elevated blood glucose levels, accelerating vascular damage[8,9].

While global age-standardized smoking prevalence among the general population declined significantly from 1990 to 2019[10], smoking prevalence among individuals with diabetes has not shown comparable reductions over the same period[11,12].

Smoking exacerbates health risks for individuals with diabetes, significantly increasing the likelihood of severe complications, including macrovascular and microvascular damage, and results in higher overall mortality rates than nonsmoking people with diabetes[6,13,14]. These complications place a heavy burden on healthcare systems, diminish productivity, and incur considerable economic costs[15,16].

At the organ and tissue level, smoking contributes to endothelial dysfunction, inflammation, and thrombosis, accelerating the progression of atherosclerosis, which is a major concern in diabetes[17]. Additionally, smoking negatively impacts glycemic control in diabetic patients. The combined effects of hyperglycemia and smoking-induced oxidative stress increase the risk of diabetes complications[7]. At the cellular level, tobacco exposure promotes insulin resistance by increasing oxidative stress and the production of inflammatory cytokines (*e.g.*, tumor necrosis factor- α and interleukin-6)[18]. These inflammatory mediators interfere with insulin signaling, reducing glucose uptake in peripheral tissues. Dinardo *et al*[19] identified smoking as an independent factor for elevated glycated hemoglobin A1c (HbA1c) levels, while Braffett *et al*[20] reported that HbA1c levels were 0.31% higher in people who smoke than in never smokers, with a further 0.22% increase in those with more than 10 pack-years of smoking *vs* less than 10 pack-years. Studies in animal models have shown that, at the molecular level, exposure to cigarette smoke can disrupt insulin production, processing, and secretion while also reducing β -cell viability and proliferation. These effects are linked to increased oxidative stress, endoplasmic reticulum stress, and ceramide accumulation[21], which may contribute to pancreatic dysfunction and the progression of diabetes.

Conversely, although the effects of smoking cessation on glycemic control, insulin resistance, and lipid parameters remain unclear[22], cessation has been shown to significantly reduce the risk of cardiovascular events, including myocardial infarction, ischemic stroke, and diabetic nephropathy[7,14,23].

Patients with type 2 diabetes who smoke may present a distinct clinical phenotype characterized by the combined harmful vascular effects of chronic hyperglycemia and toxicants from cigarette smoke, as well as adverse impacts on glycemic control and lipid profiles. These factors jointly accelerate vascular damage. Thus, while reducing exposure to cigarette smoke is a public health priority for everyone, it is especially critical for individuals with type 2 diabetes[24]. The latest American Diabetes Association guidelines emphasize that smoking cessation is an essential component of diabetes management, recognizing this high-risk phenotype with significant clinical, prognostic, and therapeutic implications[25].

A multidisciplinary approach is therefore vital, integrating behavioral counseling and pharmacological support. In addition, emerging strategies, such as novel pharmacotherapies and alternative nicotine delivery systems, offer potential harm-reduction approaches to aid cessation. Given the unique risks faced by this population when quitting smoking, this review highlights key health considerations and underscores the importance of individualized care strategies. Drawing on current evidence and clinical expertise, we propose a comprehensive framework to assist clinicians in addressing this pressing health challenge.

In view of the limited data on the health impacts of smoking cessation and complete cigarette substitution with combustion-free nicotine alternatives in individuals with diabetes, we conducted an expert review of available human studies on current and novel strategies to aid cessation in this vulnerable population. The primary goal of this review is to provide clinicians with up-to-date evidence on the potential health effects of stopping smoking and substituting conventional cigarettes with e-cigarettes (ECs) or heated tobacco products (HTPs) in the context of diabetes management, specifically examining how these products may influence glycemic control, lipid profiles, postcessation weight management, and vascular health. This evidence is intended to inform clinical recommendations and management strategies. A secondary objective is to improve health literacy among patients with type 2 diabetes, especially those considering or currently using potentially harm-reducing nicotine products, by clarifying how these alternatives might affect the metabolic and vascular outcomes that are critical to their health.

LITERATURE REVIEW

Although the article was conceptualized as an expert review, we applied the rigorous methodology of systematic review. Therefore, from October to November 2024, we conducted a thorough search of published English literature from the following databases: PubMed, EMBASE, Web of Science, and Scopus. A combination of keywords and Medical Subject Headings terms included “smoking cessation” AND “diabetes”, “tobacco use” AND “type 2 diabetes”, “nicotine replacement therapy” AND “diabetes”, “e-cigarettes” OR “electronic cigarettes” AND “diabetes”, “GLP-1 analogues” AND “smoking”, “digital health” AND “smoking cessation” AND “diabetes”, “weight gain after quitting smoking” AND “diabetes”, “glycemic control” AND “smoking cessation”. Additional search strings included terms such as “vaping”, “vape*”, “Alternative Nicotine Delivery Systems”, “Heated Tobacco Products”, and specific product names such as “IQOS”, “glo”, and “PLOOM”. The search was filtered to include only human studies published after January 2000. Exclusion criteria included studies involving adolescents or pregnant individuals and articles without full-text availability. Titles, abstracts, and full texts were sequentially screened by our team of reviewers independently, with any disagreements resolved through consensus. Several types of studies were identified, including cross-sectional, case-control, and cohort studies; randomized clinical trials; observational clinical studies; and systematic reviews and meta-analyses. Relevant studies were included in the expert review.

Considering the variety of interpretations and outcomes in the available clinical studies, this review does not aim to conclusively determine the positive or negative health impact of one intervention over the other in patients with diabetes. Instead, this article highlights the current gaps in the scientific literature and emphasizes the need for high-quality, controlled research to assess the long-term effects of smoking cessation and harm reduction on individuals with type 2 diabetes, especially in relation to vascular health, glycemic control, and lipid metabolism.

MANAGEMENT OF THE PATIENT WITH DIABETES WHO SMOKES

Health care providers, including diabetologists and endocrinologists, play a pivotal role in educating patients with diabetes about the heightened risks associated with smoking and actively supporting smoking cessation efforts. However, the addictive nature of tobacco smoking poses significant challenges, often requiring multiple attempts and extended treatment to achieve sustained abstinence. This difficulty is compounded by behavioral and psychological factors, such as stress, environmental triggers, and ingrained habits, which intensify over time and increase the risk of relapse[26]. Smoking relapse is particularly common among people with depression[27], a condition commonly associated with diabetes[28,29].

For many individuals with diabetes, smoking is perceived as a coping mechanism to manage weight, boredom, anxiety, depression, and stress, including stress specific to their condition[30,31], thereby contributing to the challenges associated with behavioral and psychological factors. Alarming, people with diabetes commonly fail to recognize the detrimental impact of smoking on their diabetes management and overall health[32,33]. These misconceptions contribute to the consistently low cessation rates observed within this population[34]. Addressing these barriers requires tailored interventions that acknowledge and address this interplay of psychological and behavioral challenges, coupled with comprehensive education to correct misconceptions.

Individuals with diabetes often struggle with chronic stress related to the daily management of their condition, monitoring blood glucose levels, adhering to dietary restrictions, and taking medications regularly[35]. This chronic stress can lead to increased levels of anxiety and depression, which can significantly hinder attempts to quit smoking. The stress associated with chronic illness, health concerns, and the need to follow strict guidelines can lead a person to seek relief by smoking and treating cigarettes to temporarily alleviate tension[36]. Diabetes, especially its chronic complications, can be associated with feelings of hopelessness and anxiety about the future, as well as concerns about deteriorating health. These emotions can lead to decreased motivation to take health-promoting actions, including quitting smoking.

The increased risk of failure in smoking cessation among individuals with chronic illnesses such as diabetes has been well documented in research[37,38]. People with diabetes may face greater challenges in quitting smoking, not only because of nicotine addiction but also because of psychological defense mechanisms that contribute to avoiding this issue. These mechanisms, such as denial, projection, or reversal, can prevent individuals from fully addressing their smoking habit[39]. These psychological factors can lead to a cycle of failed attempts at quitting, increasing feelings of frustration and hopelessness, which, in turn, reinforce the reliance on smoking as a coping mechanism.

Social stigmatization is a process in which individuals are perceived or treated negatively by others on the basis of traits or behaviors that are considered “different” or “unacceptable” in society. On average, four out of five adults with diabetes experience diabetes-related stigma, and one in five experiences discrimination (*i.e.*, unfair and harmful treatment) due to diabetes, such as in healthcare, education, and employment[40]. Disease-related stigma can lead to many negative emotions, such as shame, guilt, and social isolation. The stigma of diabetes is associated with depressive and anxiety symptoms, as well as decreased overall emotional well-being[40]. For many individuals with diabetes, smoking may help them escape these difficult emotions. Smoking can serve as a form of “hidden” coping with anxiety, shame, or feelings of rejection. Nicotine affects the nervous system, providing a temporary sense of relief or relaxation. In this case, smoking becomes a mechanism that creates the illusion of control over emotions, although in reality, it worsens health and exacerbates problems related to diabetes. Individuals experiencing stigmatization may also avoid participating in smoking cessation therapy programs. They often fear being perceived as “worse” or “weaker” in the context of their health problems. They may feel ashamed of their lack of success in quitting smoking, leading to the avoidance of further support. To effectively support individuals with diabetes in the smoking cessation process, it is essential to address the psychological and emotional barriers related to stigma.

People with diabetes, especially those with lower income levels, may have difficulty accessing regular medical care or support for tobacco addiction treatment. In some cases, the lack of adequate health insurance or geographical distance from specialized medical centers can limit access to therapies. Nicotine addiction treatment programs, such as behavioral therapies, smoking cessation medications (*e.g.*, nicotine replacement therapy or pharmacotherapy), and psychological support sessions or support groups, may be out of reach for individuals who lack the necessary financial resources.

Healthcare professionals can utilize structured frameworks to guide smoking cessation interventions effectively. One such model is the 5-A method (ask, advice, assess, assist, and arrange) framework, which involves five key steps: Ask about tobacco use, advise quitting, assess the willingness to quit, assist in providing support and resources, and arrange for follow-up. This approach helps healthcare professionals deliver comprehensive, personalized support to patients seeking to quit smoking.

Systematically identifying all patients who smoke during every clinical visit is crucial (ask). All identified smokers with diabetes should be encouraged to quit through clear and personalized advice. For example, “By quitting, you will not only enhance your overall health but also reduce the complications associated with diabetes. Did you know that?” (advice). Physicians should assess each patient’s readiness to make a serious quit attempt (assess). For patients unwilling to quit, a brief intervention aimed at increasing their motivation for future quit attempts should be provided. It is often

more effective to wait until these patients feel ready and confident in their ability to quit rather than pressuring them prematurely. Smoking reduction can be a practical interim strategy to encourage eventual abstinence among smokers who are not prepared to make a quit attempt. Alternatively, physicians can suggest switching to less harmful nicotine products, such as ECs or HTPs, as a harm-reduction approach. Emerging options such as glucagon-like peptide-1 (GLP-1) analogues, digital health technologies, and wearable sensors may also support these patients. For patients ready to quit, physicians should promptly engage them in developing a tailored cessation plan (assist). This personalized plan should include setting a realistic quit date and identifying strategies to address nicotine addiction effectively. Such strategies may involve pharmacotherapy designed to manage common withdrawal symptoms such as cravings, irritability, anxiety, restlessness, depressed mood, and increased appetite, all of which are significant risk factors for relapse. Combining pharmacotherapy with intensive behavioral cessation support sessions has been shown to significantly increase abstinence rates among individuals with diabetes[41]. Additionally, addressing common concerns such as potential weight gain, poor glycemic control, and elevated blood pressure should be an integral part of the personalized plan. Providing patients with proactive strategies to manage these challenges can enhance their confidence and adherence to the cessation process, ultimately increasing the likelihood of sustained success. Regular follow-ups are essential to monitor progress and reinforce commitment (arrange). For patients facing more significant challenges, referral to specialized cessation centers should be considered. This structured, stepwise approach not only increases the likelihood of successful cessation but also ensures comprehensive support tailored to the unique needs of diabetic smokers. An algorithm for assisting patients with diabetes to quit smoking is provided in **Figure 1**.

In the general population, smoking cessation rates can be doubled or tripled when smoking cessation counseling is combined with pharmaceutical interventions such as varenicline[42], bupropion[43], nicotine replacement therapy[44], and cytisine[45]. However, the efficacy and tolerability of these treatments in individuals with diabetes remain insufficiently studied, with some interventions, such as cytisine, lacking efficacy data specific to diabetic populations.

For patients with diabetes, only a moderate recommendation can be made for nicotine replacement therapy and bupropion due to limited evidence, with much of the supporting data derived from a single study[46], thereby reducing confidence in the reproducibility of the results. Conversely, robust evidence supports the use of varenicline as a smoking cessation aid in individuals with diabetes. Findings from three key studies[47-49] demonstrated that varenicline at least triples the likelihood of sustained abstinence during the critical early phase of cessation, when the risk of relapse is highest[50,51]. The commonly reported side effects of varenicline, including nausea and abnormal dreams, align with observations in the general population and are generally mild, rarely leading to treatment discontinuation[42]. This finding suggests that varenicline is a particularly promising intervention for people with diabetes seeking to quit smoking.

The presence of polycyclic aromatic hydrocarbons in cigarette smoke has been shown to affect the metabolism of antidiabetic drugs by altering the activity of critical biotransformation enzymes *via* cytochrome P450 1A1/1A2/1B1 induction and uridine diphosphate glucuronosyltransferase detoxification activity[52,53]. This necessitates vigilant patient monitoring and, where appropriate, dosage adjustments for both active smokers and those in the process of quitting to ensure optimal pharmacotherapy[54].

Generally, smoking cessation treatments exhibit no clinically significant interactions with antidiabetic medications[54]. However, certain safety considerations must be taken into account when these treatments are prescribed. Caution should be used with nicotine replacement therapy in patients with acute cardiovascular events, such as recent myocardial infarction, serious cardiac arrhythmias, worsening or unstable angina pectoris, or accelerated hypertension. Bupropion is contraindicated in patients with a seizure disorder, a current or prior diagnosis of anorexia nervosa or bulimia, or those undergoing abrupt discontinuation of benzodiazepines, barbiturates, or antiepileptic drugs. Varenicline should be avoided in patients with a history of psychiatric illness, epilepsy, or a predisposition to seizures. Careful patient assessment, tailored treatment plans, close monitoring, and clear communication with patients are essential to minimize risks and optimize smoking cessation outcomes.

EMERGING ALTERNATIVE STRATEGIES

Further personalized approaches to smoking cessation may provide a viable solution for individuals who face challenges with conventional methods.

GLP-1 analogues

In recent decades, significant progress has been made in the development of pharmacological treatments for diabetes. Among the most notable innovations are the use of GLP-1 receptor agonists and sodium-glucose cotransporter 2 inhibitors. These medications not only improve glycemic control but also provide additional benefits, including cardiovascular and renal protection. For individuals with diabetes, who are often at high risk for complications such as heart disease and kidney dysfunction, these treatments offer a promising approach to reduce overall morbidity and improve long-term health outcomes.

Emerging evidence suggests that GLP-1 analogues may play a role in addiction physiology, appetite regulation, and weight control[55,56]. Experimental studies in mice have shown that the GLP-1 analogue exenatide can abolish nicotine reward and reduce nicotine intake[56]. In humans, a preliminary study evaluating extended-release exenatide combined with a nicotine patch in individuals with prediabetes and/or overweight demonstrated higher smoking abstinence rates at six weeks compared to placebo (46.3% *vs* 26.8%)[57]. Additionally, abstainers in the exenatide group experienced reductions in cravings, withdrawal symptoms, and weight gain. However, findings from a larger randomized, double-

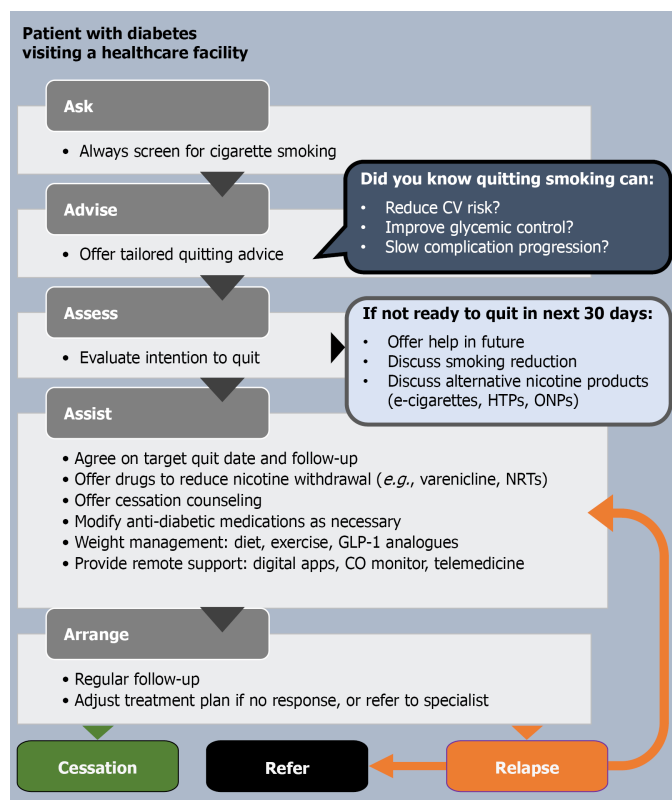


Figure 1 A five-step algorithm for assisting people with diabetes who smoke. This flowchart outlines the decision-making process for addressing smoking cessation, relapse, and harm reduction in people with diabetes. It begins by identifying smoking behavior and progresses to personalized advice and interventions on the basis of the individual's smoking status and preferences. A nonjudgmental, supportive approach is emphasized, focusing on the benefits of cessation, including reduced cardiovascular risk, improved glycemic control, and slower progression of diabetes complications such as nephropathy. Key steps include assessing readiness to quit and addressing concerns about cessation therapies, alternative nicotine products (e.g., e-cigarettes), weight gain, and stress management. For patients ready to quit, the framework advocates a quit plan combining psychological counseling with pharmacological support, adjusting antidiabetic medications, and incorporating weight management strategies such as exercise or glucagon-like peptide-1 receptor agonists. For patients who relapse, the framework recommends re-engagement with renewed support and referral to specialized cessation services when needed. For those not ready to quit, maintaining open dialogue, offering harm-reduction strategies (e.g., e-cigarettes), and preparing for future cessation support are emphasized. CV: Cardiovascular; HTP: Heated tobacco product; ONP: Oral nicotine pouches; CO: Carbon monoxide; GLP-1: Glucagon-like peptide-1.

blind, placebo-controlled trial of the GLP-1 analogue dulaglutide revealed no significant effect on smoking abstinence rates[58]. The interpretability of this trial is limited due to coadministration with varenicline, which likely enhanced efficacy in the control group. Additionally, very few participants had diabetes. One notable limitation of GLP-1 analogues is their temporary impact on postcessation weight gain, with a high rate of weight regain observed after discontinuation of the medication[59]. These findings underscore the need for further research to evaluate the utility of GLP-1 analogues in smoking cessation, particularly in diabetic populations, where weight management and sustained abstinence are critical.

Inhaled nicotine

Nicotine substitution products, such as ECs, which vaporize a solution typically containing propylene glycol and/or vegetable glycerin with nicotine and flavors, have gained popularity as a smoking cessation tool. While not entirely risk-free, ECs expose users to significantly fewer harmful substances than do conventional tobacco cigarettes[60-62]. Chronic smokers who switch to ECs have demonstrated early improvements in blood pressure, heart rate, and myocardial and vascular function[63,64]. Whether these changes are sustained in the longer term is unclear. Regulatory agencies, including the United States Food and Drug Administration, have authorized ECs as harm reduction options for individuals unable or unwilling to quit smoking through other means[65]. Similarly, the United Kingdom's National Institute for Health and Care Excellence recognized that switching to nicotine-containing ECs is likely far less harmful than continued smoking and should be included in cessation interventions[66]. A recent Cochrane review further underscored the efficacy of ECs, suggesting that they are more effective than nicotine replacement therapy and bupropion in stopping smoking[67]. HTPs and oral nicotine products, resembling oral nicotine replacement therapies, are also designed to deliver nicotine without combustion. In an initial open-label, actual-use study of nicotine pouches, self-reported 7-day smoking cessation rates of 27% were reported after one week of product trial followed by six weeks of use [68]. However, clinical evidence supporting the use of combustion-free nicotine products specifically for smoking cessation in diabetic populations is lacking. In a large global internet-based survey of EC users, 574 respondents with diabetes were included, with 40.1% reporting improvements in their condition after switching to ECs[69]. This underscores the urgent need for more rigorous research to confirm these observations and guide healthcare providers in

counseling patients with diabetes who are using or considering the use of ECs.

Combination therapy

Compared with monotherapy, combining smoking cessation treatments has demonstrated incremental benefits in the general population. Specifically, the combination of varenicline with ECs has shown promising results in randomized controlled trials (RCTs). One RCT assessed the combination of ECs, which provide rapid nicotine delivery, with varenicline, which provides basal partial agonism of nicotinic acetylcholine receptors[70]. This combination trended toward greater efficacy than did varenicline alone, with a 43% lower hazard of relapse in the combination group. Similarly, another RCT focusing on individuals who dual-used conventional tobacco cigarettes and ECs reported that adding varenicline significantly increased continuous smoking abstinence rates between week 4 and week 24 (49% *vs* 14% for placebo)[71]. Interestingly, EC e-liquid consumption increased in the varenicline group but not in the placebo group, suggesting a synergistic interaction between ECs and varenicline. These findings highlight the potential of combination therapy as a more effective approach for smoking cessation, particularly for individuals struggling with monotherapy. However, further research is needed to confirm these benefits and optimize treatment protocols.

Digital and mobile health technologies

While pharmacologic approaches remain valuable in smoking cessation, complementary digital and mobile health technologies provide innovative solutions for smoking detection and cessation. Examples include smartphone cessation apps, portable carbon monoxide monitors, and wearable technologies, which leverage real-time data and personalized feedback to support users. These technologies, combined with advancements in wearable sensors, machine learning models, and smartphone applications, have demonstrated significant promise for smoking detection and cessation. By providing real-time feedback and personalized support, digital health solutions have the potential to increase user motivation and adherence, ultimately improving quit rates[72-74]. Furthermore, integrating remote carbon monoxide monitoring into smoking cessation programs may parallel the success of remote glucose monitoring in diabetes care. Tools such as the SmokeBeat app, SmokeWatch, and Pivot provide real-time feedback and personalized support, significantly assisting in smoking abstinence by increasing awareness, counteracting habitual behaviors, and fostering adherence[75,76]. These approaches are particularly advantageous in optimizing the limited time and resources available to physicians during office visits while extending their reach to patients' homes through continuous monitoring, 365 days a year. Despite these advancements, evidence on the effectiveness of digital and mobile health technologies specifically for smoking cessation among patients with diabetes remains limited, warranting further research to explore their potential in this population.

HEALTH CONCERNS FOR PATIENTS WITH DIABETES QUITTING SMOKING

When individuals with diabetes decide to quit smoking, they may encounter specific health challenges that require careful attention. Increased appetite, weight gain, fluctuations in glucose levels, poor glycemic control, and elevated blood pressure can complicate diabetes management. To address these concerns effectively, it is essential for individuals with diabetes to collaborate with healthcare professionals to develop a comprehensive quitting strategy that addresses their specific health concerns and optimizes diabetes management.

Weight gain

Quitting smoking often leads to weight gain, which can be particularly challenging for individuals who smoke as a strategy for weight control, particularly for those concerned about weight gain. This is a significant concern for many people with type 2 diabetes, as they are often overweight or obese[77], which results in a proatherogenic metabolic profile that is associated with increased cardiovascular risk and all-cause mortality. Weight gain following smoking cessation is common among people with diabetes and significantly greater than that in comparable nondiabetic individuals[78,79]. Weight gain is a cause of concern for many individuals with diabetes[30,31], because it is associated with increased cardiovascular risk and all-cause mortality[79,80]. For example, while quitters without weight gain exhibit a significantly reduced risk of cardiovascular disease compared with people who smoke (hazard ratio = 0.77, 95% confidence interval: 0.62-0.95), this benefit is nullified in those who gain more than 5 kg (hazard ratio = 0.99; 95% confidence interval: 0.70-1.41)[79]. The analysis of weight change from the varenicline clinical trials of Tonstad and Lawrence[47] and Russo *et al* [49] provides important additional insight into the broader implications of smoking cessation for individuals with diabetes. Specifically, both studies suggest that varenicline may help prevent significant postcessation weight gain, offering reassurance to clinicians and patients that the metabolic and cardiovascular benefits of quitting are not undermined.

Glycemic control

Postcessation weight gain and the resulting increase in insulin resistance can also raise concerns about glycemic control [81,82]. A United Kingdom-based retrospective cohort study of 10692 adults with type 2 diabetes reported a modest (0.21%) increase in HbA1c levels among individuals who quit smoking and remained abstinent for at least one year, with HbA1c levels returning to baseline after prolonged abstinence[83]. Conversely, studies in Asiatic populations suggest that quitting smoking is associated with a gradual improvement in glycemic control, although the observed differences in HbA1c rarely exceed 0.5% [84,85]. The overall impact of smoking cessation on glycemic control in people with diabetes is unpredictable, emphasizing the need for careful monitoring and potential therapeutic adjustments.

Arterial hypertension

Hypertension is prevalent among individuals with diabetes and is a critical component of comprehensive care[86]. However, the interaction between smoking cessation and blood pressure is complex and not fully understood[87]. Recent studies suggest a reduced risk of hypertension following smoking cessation[88], whereas older research indicates the opposite[89]. Similar discrepancies have been reported when comparing cross-sectional with prospective studies. For example, a Spanish nationwide cross-sectional study revealed no significant difference in blood pressure between smokers and ex-smokers with type 2 diabetes[90]. However, a one-year prospective study revealed better blood pressure control among quitters than among those who continued smoking, despite modest weight gain[91]. Given these discrepancies, the impact of smoking cessation on blood pressure in people with diabetes remains unclear. However, the avoidance of tobacco-related toxicants and their impacts on longer-term endothelial function and vascular stiffness are unequivocally beneficial. Postcessation weight gain may act as an important confounder, necessitating a precautionary approach that includes careful blood pressure monitoring throughout the cessation process. Future studies are needed to clarify these interactions and guide best practices for managing blood pressure in diabetic patients during smoking cessation.

SUPPLEMENTAL CLINICAL GUIDANCE

Unpleasant surprises can undermine smoking cessation efforts, so it is essential to prepare patients with knowledge of what to expect. Healthcare providers should discuss potential withdrawal symptoms, emphasizing that while some individuals may experience no symptoms, others may experience several. The severity and duration of withdrawal symptoms vary greatly between individuals; most people find that symptoms peak within the first few days and subside within 2 weeks to 4 weeks. Additionally, patients should be informed that smoking cessation may temporarily affect glycemic control and advised about the importance of more frequent glucose monitoring and the possibility of requiring therapeutic adjustments in the initial months after quitting smoking[75]. For individuals experiencing glycemic instability, a temporary increase in antidiabetic medication may be necessary to maintain control. Equipping patients with this knowledge and providing proactive strategies to manage withdrawal symptoms and glycemic changes can significantly improve their chances of successful smoking cessation.

In clinical practice, identifying risk factors that predict relapse is essential for tailoring smoking cessation interventions; this can help identify individuals who may benefit from more comprehensive support or emerging alternative strategies to sustain motivation and prevent relapse[65]. Common predictors of failure include an early age of smoking onset, short duration of prior quit attempts, coexisting depression, a high degree of nicotine dependence, alcohol-related problems, and a lack of sustained motivation[92]. While these predictors have been well documented in the general population, they have not been specifically studied in people with diabetes.

CONCLUSION

Smoking cessation for individuals with diabetes demands a critical and urgent solution because of the heightened health risks posed by these coexisting conditions. The complex relationships among smoking, cardiovascular risk, weight management, and glycemic control require a multifaceted and personalized approach.

Evidence-based strategies, such as behavioral counseling and smoking cessation medications, should be routinely offered to people with diabetes as part of their diabetes care. While varenicline has demonstrated robust efficacy in diabetic populations, the limited number of high-quality trials underscores the need for further research to evaluate its long-term safety and effectiveness.

Diabetes education programs must be strengthened to provide healthcare professionals with the skills and knowledge needed to maximize their patients' chances of successfully quitting smoking. These programs should focus on addressing the unique challenges faced by diabetic smokers, including weight gain, psychological stress, and misconceptions about smoking's impact on diabetes management.

There remains a significant unmet need for effective alternative options for patients with diabetes who struggle to quit smoking or are not yet ready to attempt cessation. While complete cessation is the ideal outcome, it may not always be the optimal goal if it leads to failure or relapse. Physicians should explore all available pathways and tailor interventions to reduce exposure to combustible cigarettes and increase the likelihood of sustained abstinence. Emerging strategies include tobacco harm reduction approaches (*i.e.*, ECs and HTPs) as well as the use of GLP-1 analogues, digital health technologies, and wearable sensors. For some patients with diabetes, transitioning to vaping or the long-term use of GLP-1 analogues may represent an acceptable trade-off, balancing minimal residual risk with a greater chance of achieving successful and sustainable cessation outcomes. Furthermore, the incorporation of innovative technologies, such as wearable sensors and digital health platforms, offers new avenues for personalized and continuous support.

Despite the well-documented health risks associated with continued smoking in this vulnerable group, smoking cessation in individuals with diabetes remains a largely neglected area, with only 135 cessation studies published over the past 30 years. Many individuals with diabetes continue to smoke, underscoring the urgent need for advancements in technology and pharmacology to address this dual challenge effectively. Future research must prioritize the unique needs of this vulnerable group, refine cessation interventions to achieve significantly higher quit rates and improve long-term health outcomes. Adopting a holistic, patient-centered approach is crucial to improving the lives of people with diabetes.

who smoke and addressing this pressing public health issue.

FOOTNOTES

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REFERENCES

- 1 **NCD Risk Factor Collaboration (NCD-RisC).** Worldwide trends in diabetes prevalence and treatment from 1990 to 2022: a pooled analysis of 1108 population-representative studies with 141 million participants. *Lancet* 2024; **404**: 2077-2093 [RCA] [PMID: 39549716 DOI: 10.1016/S0140-6736(24)02317-1] [FullText] [Full Text(PDF)]
- 2 **GBD 2015 Tobacco Collaborators.** Smoking prevalence and attributable disease burden in 195 countries and territories, 1990-2015: a systematic analysis from the Global Burden of Disease Study 2015. *Lancet* 2017; **389**: 1885-1906 [RCA] [PMID: 28390697 DOI: 10.1016/S0140-6736(17)30819-X] [FullText] [Full Text(PDF)]
- 3 **Cai Y, Chen G, Bai P.** Global, Regional, and National Burden of Smoking-Related Diseases and Associations With Health Workforce Distribution, 1990-2021: Analysis From the Global Burden of Disease Study 2021. *Int J Public Health* 2025; **70**: 1608217 [RCA] [PMID: 40671918 DOI: 10.3389/ijph.2025.1608217] [FullText] [Full Text(PDF)]
- 4 **Cheng HG, Noggle B, Flora JW.** Comparative disease risks associated with cigarette smoking and use of moist smokeless tobacco and snus: an umbrella review of epidemiological evidence from the United States and Western Europe. *BMC Public Health* 2025; **25**: 3765 [RCA] [PMID: 41184935 DOI: 10.1186/s12889-025-23280-4] [FullText] [Full Text(PDF)]
- 5 **Pan A, Wang Y, Talaei M, Hu FB, Wu T.** Relation of active, passive, and quitting smoking with incident type 2 diabetes: a systematic review and meta-analysis. *Lancet Diabetes Endocrinol* 2015; **3**: 958-967 [RCA] [PMID: 26388413 DOI: 10.1016/S2213-8587(15)00316-2] [FullText]

- 6 **Durlach V**, Vergès B, Al-Salameh A, Bahougne T, Benzerouk F, Berlin I, Clair C, Mansourati J, Rouland A, Thomas D, Thuillier P, Tramunt B, Le Faou AL. Smoking and diabetes interplay: A comprehensive review and joint statement. *Diabetes Metab* 2022; **48**: 101370 [RCA] [PMID: 35779852 DOI: 10.1016/j.diabet.2022.101370] [FullText]
- 7 **Walicka M**, Krysiński A, La Rosa GRM, Sun A, Campagna D, Di Ciaula A, Dugal T, Kengne A, Le Dinh P, Misra A, Polosa R, Raza SA, Russo C, Sammut R, Somasundaram N; DiaSmokeFree Working Group. Influence of quitting smoking on diabetes-related complications: A scoping review with a systematic search strategy. *Diabetes Metab Syndr* 2024; **18**: 103044 [RCA] [PMID: 38810420 DOI: 10.1016/j.dsx.2024.103044] [FullText]
- 8 **Knapp M**, Tu X, Wu R. Vascular endothelial dysfunction, a major mediator in diabetic cardiomyopathy. *Acta Pharmacol Sin* 2019; **40**: 1-8 [RCA] [PMID: 29867137 DOI: 10.1038/s41401-018-0042-6] [FullText]
- 9 **Kondo T**, Nakano Y, Adachi S, Murohara T. Effects of Tobacco Smoking on Cardiovascular Disease. *Circ J* 2019; **83**: 1980-1985 [RCA] [PMID: 31462607 DOI: 10.1253/circj.CJ-19-0323] [FullText]
- 10 **GBD 2019 Tobacco Collaborators**. Spatial, temporal, and demographic patterns in prevalence of smoking tobacco use and attributable disease burden in 204 countries and territories, 1990-2019: a systematic analysis from the Global Burden of Disease Study 2019. *Lancet* 2021; **397**: 2337-2360 [RCA] [PMID: 34051883 DOI: 10.1016/S0140-6736(21)01169-7] [FullText]
- 11 **Noubiap JJ**, Nansseu JR, Endomba FT, Ngouo A, Nkeck JR, Nyaga UF, Kaze AD, Bigna JJ. Active smoking among people with diabetes mellitus or hypertension in Africa: a systematic review and meta-analysis. *Sci Rep* 2019; **9**: 588 [RCA] [PMID: 30679752 DOI: 10.1038/s41598-018-37858-z] [FullText] [Full Text(PDF)]
- 12 **Roderick P**, Turner V, Readshaw A, Dogar O, Siddiqi K. The global prevalence of tobacco use in type 2 diabetes mellitus patients: A systematic review and meta-analysis. *Diabetes Res Clin Pract* 2019; **154**: 52-65 [RCA] [PMID: 31202865 DOI: 10.1016/j.diabres.2019.05.035] [FullText]
- 13 **Chang SA**. Smoking and type 2 diabetes mellitus. *Diabetes Metab J* 2012; **36**: 399-403 [RCA] [PMID: 23275932 DOI: 10.4093/dmj.2012.36.6.399] [FullText] [Full Text(PDF)]
- 14 **Pan A**, Wang Y, Talaei M, Hu FB. Relation of Smoking With Total Mortality and Cardiovascular Events Among Patients With Diabetes Mellitus: A Meta-Analysis and Systematic Review. *Circulation* 2015; **132**: 1795-1804 [RCA] [PMID: 26311724 DOI: 10.1161/CIRCULATIONAHA.115.017926] [FullText]
- 15 **Sicras-Mainar A**, Rejas-Gutiérrez J, Navarro-Artieda R, Ibáñez-Nolla J. Effect of smoking status on healthcare costs and resource utilization in patients with type 2 diabetes in routine clinical practice: a retrospective nested case-control economic study. *Eur Addict Res* 2014; **20**: 94-104 [RCA] [PMID: 24192535 DOI: 10.1159/000355171] [FullText]
- 16 **Ye BZ**, Wang XY, Wang YF, Liu NN, Xie M, Gao X, Liang Y. Impact of Tobacco Smoking on Health Care Utilization and Medical Costs in Chronic Obstructive Pulmonary Disease, Coronary Heart Disease and Diabetes. *Curr Med Sci* 2022; **42**: 304-316 [RCA] [PMID: 35391619 DOI: 10.1007/s11596-022-2581-9] [FullText]
- 17 **Ishida M**, Sakai C, Kobayashi Y, Ishida T. Cigarette Smoking and Atherosclerotic Cardiovascular Disease. *J Atheroscler Thromb* 2024; **31**: 189-200 [RCA] [PMID: 38220184 DOI: 10.5551/jat.RV22015] [FullText] [Full Text(PDF)]
- 18 **Mukharjee S**, Bank S, Maiti S. Chronic Tobacco Exposure by Smoking Develops Insulin Resistance. *Endocr Metab Immune Disord Drug Targets* 2020; **20**: 869-877 [RCA] [PMID: 32065107 DOI: 10.2174/1871530320666200217123901] [FullText]
- 19 **Dinardo MM**, Sereika SM, Korytkowski M, Baniak LM, Weinzierl VA, Hoenstine AL, Chasens ER. Current Smoking: An Independent Predictor of Elevated A1C in Persons With Type 2 Diabetes. *Diabetes Educ* 2019; **45**: 146-154 [RCA] [PMID: 30755104 DOI: 10.1177/0145721719829068] [FullText]
- 20 **Braffett BH**, Rice MM, Young HA, Lachin JM. Mediation of the association of smoking and microvascular complications by glycemic control in type 1 diabetes. *PLoS One* 2019; **14**: e0210367 [RCA] [PMID: 30615671 DOI: 10.1371/journal.pone.0210367] [FullText] [Full Text(PDF)]
- 21 **Tong X**, Chaudhry Z, Lee CC, Bone RN, Kanojia S, Maddatu J, Sohn P, Weaver SA, Robertson MA, Petrache I, Evans-Molina C, Kono T. Cigarette smoke exposure impairs β -cell function through activation of oxidative stress and ceramide accumulation. *Mol Metab* 2020; **37**: 100975 [RCA] [PMID: 32283079 DOI: 10.1016/j.molmet.2020.100975] [FullText] [Full Text(PDF)]
- 22 **Walicka M**, Russo C, Baxter M, John I, Caci G, Polosa R. Impact of stopping smoking on metabolic parameters in diabetes mellitus: A scoping review. *World J Diabetes* 2022; **13**: 422-433 [RCA] [PMID: 35800409 DOI: 10.4239/wjd.v13.i6.422] [FullText] [Full Text(PDF)]
- 23 **Qin R**, Chen T, Lou Q, Yu D. Excess risk of mortality and cardiovascular events associated with smoking among patients with diabetes: meta-analysis of observational prospective studies. *Int J Cardiol* 2013; **167**: 342-350 [RCA] [PMID: 22251416 DOI: 10.1016/j.ijcard.2011.12.100] [FullText]
- 24 Standards of medical care in diabetes--2015: summary of revisions. *Diabetes Care* 2015; **38** Suppl: S4 [RCA] [PMID: 25537706 DOI: 10.2337/dc15-S003] [FullText]
- 25 **American Diabetes Association Professional Practice Committee**. 5. Facilitating Positive Health Behaviors and Well-being to Improve Health Outcomes: Standards of Care in Diabetes-2025. *Diabetes Care* 2025; **48**: S86-S127 [RCA] [PMID: 39651983 DOI: 10.2337/dc25-S005] [FullText]
- 26 **Livingstone-Banks J**, Norris E, Hartmann-Boyce J, West R, Jarvis M, Hajek P. Relapse prevention interventions for smoking cessation. *Cochrane Database Syst Rev* 2019; **2**: CD003999 [RCA] [PMID: 30758045 DOI: 10.1002/14651858.CD003999.pub5] [FullText]
- 27 **Brown RA**, Niaura R, Lloyd-Richardson EE, Strong DR, Kahler CW, Abrantes AM, Abrams D, Miller IW. Bupropion and cognitive-behavioral treatment for depression in smoking cessation. *Nicotine Tob Res* 2007; **9**: 721-730 [RCA] [PMID: 17577801 DOI: 10.1080/14622200701416955] [FullText] [Full Text(PDF)]
- 28 **Anderson RJ**, Freedland KE, Clouse RE, Lustman PJ. The prevalence of comorbid depression in adults with diabetes: a meta-analysis. *Diabetes Care* 2001; **24**: 1069-1078 [RCA] [PMID: 11375373 DOI: 10.2337/diacare.24.6.1069] [FullText]
- 29 **Holt RI**, de Groot M, Lucki I, Hunter CM, Sartorius N, Golden SH. NIDDK international conference report on diabetes and depression: current understanding and future directions. *Diabetes Care* 2014; **37**: 2067-2077 [RCA] [PMID: 25061135 DOI: 10.2337/dc13-2134] [FullText] [Full Text(PDF)]
- 30 **Chau TK**, Fong DY, Chan SS, Wong JY, Li WH, Tan KC, Leung AY, Wong DC, Leung DY, Lam TH. Misconceptions about smoking in patients with type 2 diabetes mellitus: a qualitative analysis. *J Clin Nurs* 2015; **24**: 2545-2553 [RCA] [PMID: 25950711 DOI: 10.1111/jocn.12854] [FullText]
- 31 **Georges A**, Galbiati L, Clair C. Smoking in men and women with type 2 diabetes: A qualitative gender-sensitive exploration of barriers to smoking cessation among people with type 2 diabetes. *PLoS One* 2019; **14**: e0221783 [RCA] [PMID: 31461485 DOI: 10.1371/journal.pone.0221783] [FullText]

- 10.1371/journal.pone.0221783] [FullText] [Full Text(PDF)]
- 32 **Thresia CU**, Thankappan KR, Nichter M. Smoking cessation and diabetes control in Kerala, India: an urgent need for health education. *Health Educ Res* 2009; **24**: 839-845 [RCA] [PMID: 19332439 DOI: 10.1093/her/cyp020] [FullText]
 - 33 **Jenssen TG**, Tonstad S, Claudi T, Midthjell K, Cooper J. The gap between guidelines and practice in the treatment of type 2 diabetes A nationwide survey in Norway. *Diabetes Res Clin Pract* 2008; **80**: 314-320 [RCA] [PMID: 18279994 DOI: 10.1016/j.diabres.2007.12.025] [FullText]
 - 34 **Scemama O**, Hamo-Tchatchouang E, Le Faou AL, Altman JJ. Difficulties of smoking cessation in diabetic inpatients benefiting from a systematic consultation to help them to give up smoking. *Diabetes Metab* 2006; **32**: 435-441 [RCA] [PMID: 17110898 DOI: 10.1016/s1262-3636(07)70301-4] [FullText]
 - 35 **Kalra S**, Jena BN, Yeravdekar R. Emotional and Psychological Needs of People with Diabetes. *Indian J Endocrinol Metab* 2018; **22**: 696-704 [RCA] [PMID: 30294583 DOI: 10.4103/ijem.IJEM_579_17] [FullText] [Full Text(PDF)]
 - 36 **Perski O**, Theodoraki M, Cox S, Kock L, Shahab L, Brown J. Associations between smoking to relieve stress, motivation to stop and quit attempts across the social spectrum: A population survey in England. *PLoS One* 2022; **17**: e0268447 [RCA] [PMID: 35580121 DOI: 10.1371/journal.pone.0268447] [FullText] [Full Text(PDF)]
 - 37 **Holm M**, Schiöler L, Andersson E, Forsberg B, Gislason T, Janson C, Jogi R, Schlünssen V, Svanes C, Torén K. Predictors of smoking cessation: A longitudinal study in a large cohort of smokers. *Respir Med* 2017; **132**: 164-169 [RCA] [PMID: 29229092 DOI: 10.1016/j.rmed.2017.10.013] [FullText]
 - 38 **Clement L**, Gencer B, Muller O, Klingenberg R, Räber L, Matter CM, Lüscher TF, Windecker S, Mach F, Rodondi N, Nanchen D, Clair C. Smoking Cessation in People With and Without Diabetes After Acute Coronary Syndrome. *Nicotine Tob Res* 2023; **25**: 58-65 [RCA] [PMID: 35788681 DOI: 10.1093/ntr/ntac161] [FullText]
 - 39 **Marchini F**, Caputo A, Convertino A, Napoli A. Psychodynamics in Diabetes: The Relevance of Deepening the Symbolic in Treatment Adherence. *Front Psychol* 2021; **12**: 661211 [RCA] [PMID: 34017293 DOI: 10.3389/fpsyg.2021.661211] [FullText] [Full Text(PDF)]
 - 40 **Speight J**, Holmes-Truscott E, Garza M, Scibilia R, Wagner S, Kato A, Pedrero V, Deschênes S, Guzman SJ, Joiner KL, Liu S, Willaig I, Babbott KM, Cleal B, Dickinson JK, Halliday JA, Morrissey EC, Nefs G, O'Donnell S, Serlachius A, Winterdijk P, Alzubaidi H, Arifin B, Cambron-Kopco L, Santa Ana C, Davidsen E, de Groot M, de Wit M, Deroze P, Haack S, Holt RIG, Jensen W, Khunti K, Kragelund Nielsen K, Lathia T, Lee CJ, McNulty B, Naranjo D, Pearl RL, Prinjha S, Puhl RM, Sabidi A, Selvan C, Sethi J, Seyam M, Sturt J, Subramaniam M, Terkildsen Maingdal H, Valentine V, Vallis M, Skinner TC. Bringing an end to diabetes stigma and discrimination: an international consensus statement on evidence and recommendations. *Lancet Diabetes Endocrinol* 2024; **12**: 61-82 [RCA] [PMID: 38128969 DOI: 10.1016/S2213-8587(23)00347-9] [FullText]
 - 41 **National Centre for Smoking Cessation and Training**. The clinical case for smoking cessation for diabetic patients. [cited 5 January 2025]. Available from: <https://www.ncsct.co.uk/library/view/pdf/CC%20diabetes%20Final.pdf>
 - 42 **Livingstone-Banks J**, Fanshawe TR, Thomas KH, Theodoulou A, Hajizadeh A, Hartman L, Lindson N. Nicotine receptor partial agonists for smoking cessation. *Cochrane Database Syst Rev* 2023; **5**: CD006103 [RCA] [PMID: 37142273 DOI: 10.1002/14651858.CD006103.pub8] [FullText] [Full Text(PDF)]
 - 43 **Hajizadeh A**, Howes S, Theodoulou A, Klemperer E, Hartmann-Boyce J, Livingstone-Banks J, Lindson N. Antidepressants for smoking cessation. *Cochrane Database Syst Rev* 2023; **5**: CD000031 [RCA] [PMID: 37230961 DOI: 10.1002/14651858.CD000031.pub6] [FullText] [Full Text(PDF)]
 - 44 **Meng Y**, Xiang S, Qu L, Li Y. The efficacy and acceptability of pharmacological monotherapies and e-cigarette on smoking cessation: a systemic review and network meta-analysis. *Front Public Health* 2024; **12**: 1361186 [RCA] [PMID: 38841681 DOI: 10.3389/fpubh.2024.1361186] [FullText]
 - 45 **Puljević C**, Stjepanović D, Meciar I, Kang H, Chan G, Morphet K, Bendotti H, Kunwar G, Gartner C. Systematic review and meta-analyses of cytosine to support tobacco cessation. *Addiction* 2024; **119**: 1713-1725 [RCA] [PMID: 38965792 DOI: 10.1111/add.16592] [FullText]
 - 46 **Anthenelli RM**, Benowitz NL, West R, St Aubin L, McRae T, Lawrence D, Ascher J, Russ C, Krishen A, Evins AE. Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial. *Lancet* 2016; **387**: 2507-2520 [RCA] [PMID: 27116918 DOI: 10.1016/S0140-6736(16)30272-0] [FullText]
 - 47 **Tonstad S**, Lawrence D. Varenicline in smokers with diabetes: A pooled analysis of 15 randomized, placebo-controlled studies of varenicline. *J Diabetes Investig* 2017; **8**: 93-100 [RCA] [PMID: 27223809 DOI: 10.1111/jdi.12543] [FullText] [Full Text(PDF)]
 - 48 **Tønnesen P**, Lawrence D, Tonstad S. Medication-assisted quit rates in participants with smoking-related diseases in EAGLES: Post hoc analyses of a double-blind, randomized, placebo-controlled clinical trial. *Tob Induc Dis* 2022; **20**: 46 [RCA] [PMID: 35611069 DOI: 10.18332/tid/146567] [FullText] [Full Text(PDF)]
 - 49 **Russo C**, Walicka M, Caponnetto P, Cibella F, Maglia M, Alamo A, Campagna D, Frittitta L, Di Mauro M, Caci G, Kryszinski A, Franek E, Polosa R. Efficacy and Safety of Varenicline for Smoking Cessation in Patients With Type 2 Diabetes: A Randomized Clinical Trial. *JAMA Netw Open* 2022; **5**: e2217709 [RCA] [PMID: 35727580 DOI: 10.1001/jamanetworkopen.2022.17709] [FullText] [Full Text(PDF)]
 - 50 **Herd N**, Borland R, Hyland A. Predictors of smoking relapse by duration of abstinence: findings from the International Tobacco Control (ITC) Four Country Survey. *Addiction* 2009; **104**: 2088-2099 [RCA] [PMID: 19922574 DOI: 10.1111/j.1360-0443.2009.02732.x] [FullText]
 - 51 **Prochaska JJ**, Benowitz NL. The Past, Present, and Future of Nicotine Addiction Therapy. *Annu Rev Med* 2016; **67**: 467-486 [RCA] [PMID: 26332005 DOI: 10.1146/annurev-med-111314-033712] [FullText]
 - 52 **Rao PS**, Kumar S. Polycyclic aromatic hydrocarbons and cytochrome P450 in HIV pathogenesis. *Front Microbiol* 2015; **6**: 550 [RCA] [PMID: 26082767 DOI: 10.3389/fmicb.2015.00550] [FullText] [Full Text(PDF)]
 - 53 **Vergara AG**, Watson CJW, Chen G, Lazarus P. Altered Metabolism of Polycyclic Aromatic Hydrocarbons by UDP-Glycosyltransferase 3A2 Missense Variants. *Chem Res Toxicol* 2020; **33**: 2854-2862 [RCA] [PMID: 32993298 DOI: 10.1021/acs.chemrestox.0c00233] [FullText]
 - 54 **Bellanca CM**, Augello E, Di Benedetto G, Burgaletto C, Cantone AF, Cantarella G, Bernardini R, Polosa R; DiaSmokeFree Working Group. A web-based scoping review assessing the influence of smoking and smoking cessation on antidiabetic drug metabolism: implications for medication efficacy. *Front Pharmacol* 2024; **15**: 1406860 [RCA] [PMID: 38957391 DOI: 10.3389/fphar.2024.1406860] [FullText]
 - 55 **Klausen MK**, Thomsen M, Wortwein G, Fink-Jensen A. The role of glucagon-like peptide 1 (GLP-1) in addictive disorders. *Br J Pharmacol* 2022; **179**: 625-641 [RCA] [PMID: 34532853 DOI: 10.1111/bph.15677] [FullText]

- 56 **Tuesta LM**, Chen Z, Duncan A, Fowler CD, Ishikawa M, Lee BR, Liu XA, Lu Q, Cameron M, Hayes MR, Kamenecka TM, Pletcher M, Kenny PJ. GLP-1 acts on habenular avoidance circuits to control nicotine intake. *Nat Neurosci* 2017; **20**: 708-716 [RCA] [PMID: 28368384 DOI: 10.1038/nn.4540] [FullText] [Full Text(PDF)]
- 57 **Yammine L**, Green CE, Kosten TR, de Dios C, Suchting R, Lane SD, Verrico CD, Schmitz JM. Exenatide Adjunct to Nicotine Patch Facilitates Smoking Cessation and May Reduce Post-Cessation Weight Gain: A Pilot Randomized Controlled Trial. *Nicotine Tob Res* 2021; **23**: 1682-1690 [RCA] [PMID: 33831213 DOI: 10.1093/ntr/ntab066] [FullText]
- 58 **Lengsfeld S**, Burkard T, Meienberg A, Jeanloz N, Vukajlovic T, Bologna K, Steinmetz M, Bathelt C, Sailer CO, Vogt DR, Hemkens LG, Speich B, Urwyler SA, Kühne J, Baur F, Lutz LN, Erlanger TE, Christ-Crain M, Winzeler B. Effect of dulaglutide in promoting abstinence during smoking cessation: a single-centre, randomized, double-blind, placebo-controlled, parallel group trial. *EClinicalMedicine* 2023; **57**: 101865 [RCA] [PMID: 36874396 DOI: 10.1016/j.eclim.2023.101865] [FullText] [Full Text(PDF)]
- 59 **Abdullah Bin Ahmed I**. A Comprehensive Review on Weight Gain following Discontinuation of Glucagon-Like Peptide-1 Receptor Agonists for Obesity. *J Obes* 2024; **2024**: 8056440 [RCA] [PMID: 38765635 DOI: 10.1155/2024/8056440] [FullText] [Full Text(PDF)]
- 60 Public Health Consequences of E-Cigarettes. Washington (DC): National Academies Press (US); 2018-Jan-23 [PMID: 29894118] [FullText]
- 61 **McNeill A**, Brose L, Robson D, Calder R, Simonavicius E, East K, Taylor E, Zulkova E. Nicotine vaping in England: An evidence update including health risks and perceptions, 2022. 29 Sept 2022. Available from: <https://www.gov.uk/government/publications/nicotine-vaping-in-england-2022-evidence-update>
- 62 **Dai H**, Benowitz NL, Achutan C, Farazi PA, Degarege A, Khan AS. Exposure to Toxicants Associated With Use and Transitions Between Cigarettes, e-Cigarettes, and No Tobacco. *JAMA Netw Open* 2022; **5**: e2147891 [RCA] [PMID: 35142830 DOI: 10.1001/jamanetworkopen.2021.47891] [FullText] [Full Text(PDF)]
- 63 **Yan XS**, D'Ruiz C. Effects of using electronic cigarettes on nicotine delivery and cardiovascular function in comparison with regular cigarettes. *Regul Toxicol Pharmacol* 2015; **71**: 24-34 [RCA] [PMID: 25460033 DOI: 10.1016/j.yrtph.2014.11.004] [FullText]
- 64 **Farsalinos KE**, Tsiapras D, Kyrzopoulos S, Savvopoulou M, Voudris V. Acute effects of using an electronic nicotine-delivery device (electronic cigarette) on myocardial function: comparison with the effects of regular cigarettes. *BMC Cardiovasc Disord* 2014; **14**: 78 [RCA] [PMID: 24958250 DOI: 10.1186/1471-2261-14-78] [FullText] [Full Text(PDF)]
- 65 **United States Food and Drug Administration**. FDA Authorizes Marketing of Four Menthol-Flavored E-Cigarette Products After Extensive Scientific Review. 21 June 2024. Available from: <https://www.fda.gov/news-events/press-announcements/fda-authorizes-marketing-four-menthol-flavored-e-cigarette-products-after-extensive-scientific>
- 66 **National Institute for Health and Care Excellence**. Tobacco: preventing uptake, promoting quitting and treating dependence. 30 Nov 2021. Available from: <https://www.nice.org.uk/guidance/ng209/resources/tobacco-preventing-uptake-promoting-quitting-and-treating-dependence-pdf-66143723132869>
- 67 **Lindson N**, Butler AR, McRobbie H, Bullen C, Hajek P, Wu AD, Begh R, Theodoulou A, Notley C, Rigotti NA, Turner T, Livingstone-Banks J, Morris T, Hartmann-Boyce J. Electronic cigarettes for smoking cessation. *Cochrane Database Syst Rev* 2025; **1**: CD010216 [RCA] [PMID: 39878158 DOI: 10.1002/14651858.CD010216.pub9] [FullText] [Full Text(PDF)]
- 68 **Becker E**, McCaffrey S, Lewis J, Vansickel A, Larson E, Sarkar M. Characterization of Ad Libitum Use Behavior of On! Nicotine Pouches. *Am J Health Behav* 2023; **47**: 428-449 [RCA] [PMID: 37596760 DOI: 10.5993/AJHB.47.3.1] [FullText]
- 69 **Farsalinos KE**, Romagna G, Tsiapras D, Kyrzopoulos S, Voudris V. Characteristics, perceived side effects and benefits of electronic cigarette use: a worldwide survey of more than 19,000 consumers. *Int J Environ Res Public Health* 2014; **11**: 4356-4373 [RCA] [PMID: 24758891 DOI: 10.3390/ijerph110404356] [FullText] [Full Text(PDF)]
- 70 **Tattan-Birch H**, Kock L, Brown J, Beard E, Bauld L, West R, Shahab L. E-cigarettes to Augment Stop Smoking In-person Support and Treatment With Varenicline (E-ASSIST): A Pragmatic Randomized Controlled Trial. *Nicotine Tob Res* 2023; **25**: 395-403 [RCA] [PMID: 35738868 DOI: 10.1093/ntr/ntac149] [FullText] [Full Text(PDF)]
- 71 **Caponnetto P**, Spicuzza L, Campagna D, Ahluwalia JS, Russell C, Maglia M, Riela PM, Longo CF, Caci G, Quattropani MC, Signorelli MS, Polosa R. Varenicline for smoking cessation in individuals who smoke cigarettes and use electronic cigarettes: a double-blind, randomised, placebo-controlled phase 3 trial. *EClinicalMedicine* 2023; **66**: 102316 [RCA] [PMID: 38192585 DOI: 10.1016/j.eclim.2023.102316] [FullText] [Full Text(PDF)]
- 72 **Maguire G**, Chen H, Schnall R, Xu W, Huang MC. Smoking Cessation System for Preemptive Smoking Detection. *IEEE Internet Things J* 2022; **9**: 3204-3214 [RCA] [PMID: 36059439 DOI: 10.1109/jiot.2021.3097728] [FullText]
- 73 **Santiago-Torres M**, Mull KE, Sullivan BM, Rigotti NA, Bricker JB. Acceptance and Commitment Therapy-Based Smartphone Applications for Cessation of Tobacco Use among Adults with High Nicotine Dependence: Results from the iCanQuit Randomized Trial. *Subst Use Misuse* 2023; **58**: 354-364 [RCA] [PMID: 36683573 DOI: 10.1080/10826084.2022.2161317] [FullText]
- 74 **Whittaker R**, McRobbie H, Bullen C, Rodgers A, Gu Y, Dobson R. Mobile phone text messaging and app-based interventions for smoking cessation. *Cochrane Database Syst Rev* 2019; **10**: CD006611 [RCA] [PMID: 31638271 DOI: 10.1002/14651858.CD006611.pub5] [FullText]
- 75 **Marler JD**, Fujii CA, Utley MT, Balbierz DJ, Galanko JA, Utley DS. Long-Term Outcomes of a Comprehensive Mobile Smoking Cessation Program With Nicotine Replacement Therapy in Adult Smokers: Pilot Randomized Controlled Trial. *JMIR Mhealth Uhealth* 2023; **11**: e48157 [RCA] [PMID: 37585282 DOI: 10.2196/48157] [FullText]
- 76 **Masaki K**, Tateno H, Nomura A, Muto T, Suzuki S, Satake K, Hida E, Fukunaga K. A randomized controlled trial of a smoking cessation smartphone application with a carbon monoxide checker. *NPJ Digit Med* 2020; **3**: 35 [RCA] [PMID: 32195370 DOI: 10.1038/s41746-020-0243-5] [FullText] [Full Text(PDF)]
- 77 **Chandrasekaran P**, Weiskirchen R. The Role of Obesity in Type 2 Diabetes Mellitus-An Overview. *Int J Mol Sci* 2024; **25**: 1882 [RCA] [PMID: 38339160 DOI: 10.3390/ijms25031882] [FullText] [Full Text(PDF)]
- 78 **Clair C**, Rigotti NA, Porneala B, Fox CS, D'Agostino RB, Pencina MJ, Meigs JB. Association of smoking cessation and weight change with cardiovascular disease among adults with and without diabetes. *JAMA* 2013; **309**: 1014-1021 [RCA] [PMID: 23483176 DOI: 10.1001/jama.2013.1644] [FullText]
- 79 **Liu G**, Hu Y, Zong G, Pan A, Manson JE, Rexrode KM, Rimm EB, Hu FB, Sun Q. Smoking cessation and weight change in relation to cardiovascular disease incidence and mortality in people with type 2 diabetes: a population-based cohort study. *Lancet Diabetes Endocrinol* 2020; **8**: 125-133 [RCA] [PMID: 31924561 DOI: 10.1016/S2213-8587(19)30413-9] [FullText]
- 80 **Strelitz J**, Lawlor ER, Wu Y, Estlin A, Nandakumar G, Ahern AL, Griffin SJ. Association between weight change and incidence of cardiovascular disease events and mortality among adults with type 2 diabetes: a systematic review of observational studies and behavioural

- intervention trials. *Diabetologia* 2022; **65**: 424-439 [RCA] [PMID: 34859263 DOI: 10.1007/s00125-021-05605-1] [FullText] [Full Text(PDF)]
- 81 **Inoue K**, Takeshima F, Kadota K, Yoda A, Tatsuta Y, Nagaura Y, Yoshioka S, Nakamichi S, Nakao K, Ozono Y. Early effects of smoking cessation and weight gain on plasma adiponectin levels and insulin resistance. *Intern Med* 2011; **50**: 707-712 [RCA] [PMID: 21467702 DOI: 10.2169/internalmedicine.50.4600] [FullText]
- 82 **Pani LN**, Nathan DM, Grant RW. Clinical predictors of disease progression and medication initiation in untreated patients with type 2 diabetes and A1C less than 7%. *Diabetes Care* 2008; **31**: 386-390 [RCA] [PMID: 18083790 DOI: 10.2337/dc07-1934] [FullText] [Full Text(PDF)]
- 83 **Lycett D**, Nichols L, Ryan R, Farley A, Roalfe A, Mohammed MA, Szatkowski L, Coleman T, Morris R, Farmer A, Aveyard P. The association between smoking cessation and glycaemic control in patients with type 2 diabetes: a THIN database cohort study. *Lancet Diabetes Endocrinol* 2015; **3**: 423-430 [RCA] [PMID: 25935880 DOI: 10.1016/S2213-8587(15)00082-0] [FullText]
- 84 **Ohkuma T**, Iwase M, Fujii H, Kaizu S, Ide H, Jodai T, Kikuchi Y, Idewaki Y, Hirakawa Y, Nakamura U, Kitazono T. Dose- and time-dependent association of smoking and its cessation with glycemic control and insulin resistance in male patients with type 2 diabetes mellitus: the Fukuoka Diabetes Registry. *PLoS One* 2015; **10**: e0122023 [RCA] [PMID: 25822499 DOI: 10.1371/journal.pone.0122023] [FullText] [Full Text(PDF)]
- 85 **Su J**, Qin Y, Shen C, Gao Y, Pan EC, Pan XQ, Tao R, Zhang YQ, Wu M. [Association between smoking/smoking cessation and glycemic control in male patients with type 2 diabetes]. *Zhonghua Liu Xing Bing Xue Za Zhi* 2017; **38**: 1454-1459 [RCA] [PMID: 29141328 DOI: 10.3760/cma.j.issn.0254-6450.2017.11.003] [FullText]
- 86 **Grossman A**, Grossman E. Blood pressure control in type 2 diabetic patients. *Cardiovasc Diabetol* 2017; **16**: 3 [RCA] [PMID: 28056987 DOI: 10.1186/s12933-016-0485-3] [FullText] [Full Text(PDF)]
- 87 **Primates P**, Falaschetti E, Gupta S, Marmot MG, Poulter NR. Association between smoking and blood pressure: evidence from the health survey for England. *Hypertension* 2001; **37**: 187-193 [RCA] [PMID: 11230269 DOI: 10.1161/01.hyp.37.2.187] [FullText]
- 88 **Choi JW**, Kim TH, Han E. Smoking Cessation, Weight Change, Diabetes, and Hypertension in Korean Adults. *Am J Prev Med* 2021; **60**: 205-212 [RCA] [PMID: 33153837 DOI: 10.1016/j.amepre.2020.08.024] [FullText]
- 89 **Lee DH**, Ha MH, Kim JR, Jacobs DR Jr. Effects of smoking cessation on changes in blood pressure and incidence of hypertension: a 4-year follow-up study. *Hypertension* 2001; **37**: 194-198 [RCA] [PMID: 11230270 DOI: 10.1161/01.hyp.37.2.194] [FullText]
- 90 **Luque-Ramírez M**, Sanz de Burgo V; en nombre de los participantes del estudio DIABETES. Impact of smoking cessation on estimated cardiovascular risk in Spanish type 2 diabetes mellitus patients: The DIABETES study. *Rev Clin Esp (Barc)* 2018; **218**: 391-398 [RCA] [PMID: 29891175 DOI: 10.1016/j.rce.2018.04.014] [FullText]
- 91 **Voulgari C**, Katsilambros N, Tentolouris N. Smoking cessation predicts amelioration of microalbuminuria in newly diagnosed type 2 diabetes mellitus: a 1-year prospective study. *Metabolism* 2011; **60**: 1456-1464 [RCA] [PMID: 21489578 DOI: 10.1016/j.metabol.2011.02.014] [Full Text]
- 92 **Vangeli E**, Stapleton J, Smit ES, Borland R, West R. Predictors of attempts to stop smoking and their success in adult general population samples: a systematic review. *Addiction* 2011; **106**: 2110-2121 [RCA] [PMID: 21752135 DOI: 10.1111/j.1360-0443.2011.03565.x] [FullText]



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