BMJ

# BMJ Best Practice 临床实践

# 什么是《BMJ Best Practice 临床实践》

《BMJ Best Practice》(简称BP)是基于循证医学资源的国际一流临床决策支持系统。BP将全球最新的高级别临床研究成果,指南和专家意见进行梳理及整合,通过快速、简单的途径为临床诊疗决策提供及时可靠的信息。

在2016年进行的国际临床决策支持系统独立评价中,《BMJ Best Practice》在疾病覆盖范围、编辑质量和循证方法等各项评比中均排名第一\*。

\*Kwag KH et al., Providing Doctors With High-Quality Information: An Updated Evaluation of Web-Based Point-of-Care Information Summaries. J Med Internet Res 2016;18(1):e15 "《BMJ Best Practice 临床实践》对中国的医疗改革和临床医生都非常重要,有助于规范临床路径,传递最新的诊疗信息,相信未来将对中国医疗全局产生重大影响。"

- 胡大一 教授

## BMJ临床实践

内容 CRITICAL CDSS质量 证据级别 可信性









中文/英文文献库



医学教科书

病例集

搜索引擎



## BMJ临床实践

# BM Best Practice 临床实践

## 世界排名第一\*的循证医学临床决策知识库

1st

国际研究显示:

BP在所有评估指标上 均排名第一 研究《为医生提供高质量的信息,对基于网络的即时诊疗信息系统的最新评估》

国际数字医疗领域排名第一的期刊JMIR于2016年发表

研究范围:53个国际在线临床诊疗决策支持工具

评估指标:

内容编辑质量

循证方法学

疾病覆盖广度

bestpractice.bmj.com

<sup>\*</sup>Kwag KH, González-Lorenzo M, Banzi R, Bonovas S, Moja L
Providing Doctors With High-Quality Information: An Updated Evaluation of Web-Based Point-of-Care
Information Summaries
J Med Internet Res 2016;18(1):e15









在第25届年度传播者大奖 荣获: "综合健康"、"用户体验""最佳实践" 类别冠军



2018英国数字化体验奖 最佳在线B2B用户体验奖 最佳数字化变革与转型奖



2018威尔士在线数字奖: 最佳移动应用程序奖 最佳全球覆盖奖



2018W3奖中获: 最佳用户体验奖 最佳实践奖

## BMJ临床实践



- > 32个临床专科
- ▶ 1009个疾病和症状专题
- ▶ 1200多次更新/年
- 3000+诊断分组和12500+细分诊疗方案
- ▶ 10000+种诊断方法
- ▶ 3000+诊断性检测
- ▶ 6800+篇国际指南
- ▶ 65000+参考文献
- ▶ 4000+医学图像
- ▶ 250个医学计算器
- ▶ 250+中国指南及专家共识





- ✓ 基于最新临床证据,遵循循证方法学制作
- ✓ 监测全球最新数据源,1,600多位全球独立专家梳理、撰写
- ✓ 经同行评审和专业编辑后发表
- ✓ 覆盖诊疗全流程,按临床思维设计
- ✓ 多国作为诊疗标准全国使用

## BMJ临床实践

## 32个学科

变态反应和免疫学

传染病学

耳鼻咽喉科学

儿科与青春期医学

风湿病学

妇产科学

骨科学

姑息治疗

呼吸病学

急诊医学

健康维护

精神病学

老年医学

麻醉学

泌尿科学

内分泌及代谢疾病

皮肤病学

普通外科学

神经病学

神经外科学

肾脏病学

胃肠病与肝病学

危重症医学

血管外科学

血液病学

心血管疾病

胸心外科学

眼科学

遗传学

一级预防

营养学

\_\_\_\_\_

肿瘤学

评估



BMJ临床实践 —— 特点



## BMJ临床实践 特点





服务成本效益提升

## BMJ Best Practice与世界上知名医学院校的合作

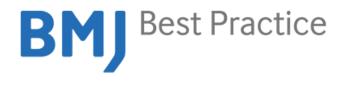
英国剑桥大学、爱丁 堡大学、格拉斯哥大 学等。

Norwegian Electronic
 Health Library
 (Helsebiblioteket)挪威电子
 医疗图书馆 向挪威全国范围内的医学生和医务人员开放的电子图书馆

● 英国伦敦地区医学院校联盟



沙特数字图书馆 由沙特高等教育部提供的阿拉伯国家规模最大的图书馆



## BMJ Best Practice 对医学院的支持



确保医学生获取最新的循证医学研究、指南和专家意见

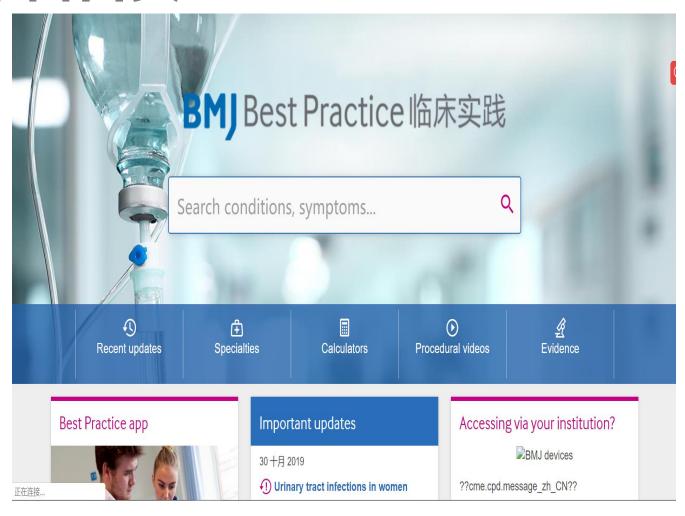


培养临床思维,支持医学生从学校到临床医生的过渡



按疾病诊疗流程设计,适用于案例教学

## 平台首页



您在BP首页可通过以下三种方式获取平台内容:

**内容检索** – 您可直接在检索框输入 疾病或症状名称进行检索。

功能区导航 - BP中文版首页采用功能 区导航的设计,便于您按功能类别访 问平台内容。

**重要更新** – 您可以通过疾病的重要 更新浏览改变临床实践的关键更新。

# 近期更新

## Recent updates

**ALL UPDATES** 

IMPORTANT UPDATES

UPDATES BY SPECIALTY

08 十一月 2019

Topic: Rheumatoid arthritis

07 十一月 2019

Topic: Assessment of nausea and vomiting, adults

05 十一月 2019

Topic: Cutaneous larva migrans

05 十一月 2019

Topic: Cryoglobulinaemia

05 十一月 2019

Topic: Aortic regurgitation

Last reviewed:October 2019

Last updated:October 2019

① IMPORTANT UPDATES

30 十月 2019

EMA's safety committee recommends a 4-week limit for use of high-strength estradiol creams

The European Medicines Agency (EMA) pharmacovigilance risk assessment committee (PRAC) has recommended limiting the use of high-strength estradiol vaginal creams (containing 100 micrograms/g or 0.01%) to a single treatment period of up to 4 weeks.[48]

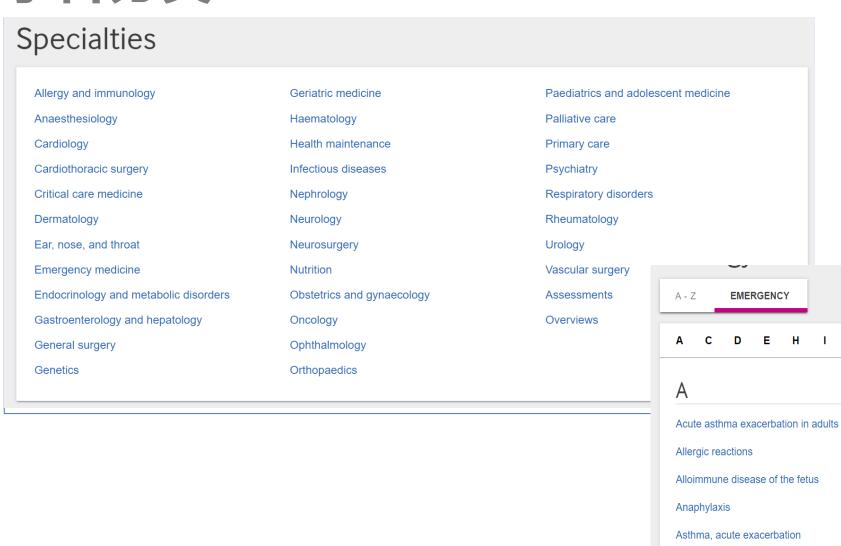
The PRAC review concluded that in postmenopausal women who had used these creams, the levels of estradiol in the blood were higher than normal postmenopausal levels and could result in similar side effects to those seen with systemic (oral or transdermal) hormone replacement therapy (HRT).

The side effects of HRT include venous thromboembolism, stroke, endometrial cancer, and

您可以在【近期更新】<sup>1</sup>内按时间和学科浏览重要和常规更新<sup>2</sup>。其中重要更新的详细内容还会在相关主题页面的显著位置展示<sup>3</sup>。



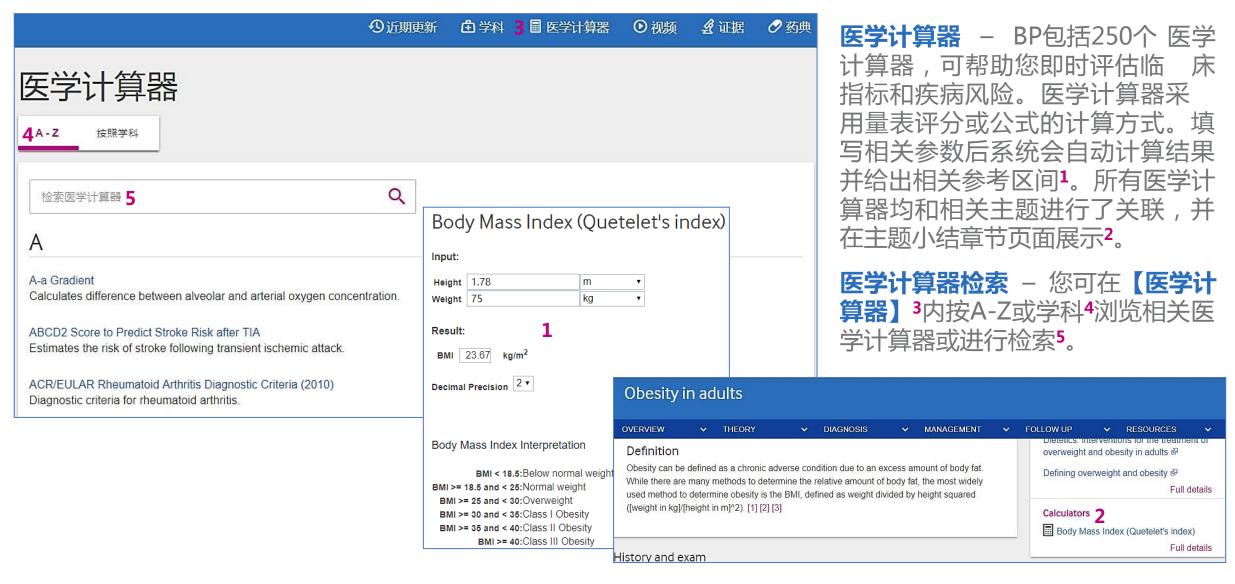
## 学科分类



学科分类 - BP的主题覆盖 32个临床学科。您可以在【学科】 内按学科查找和浏览相关主题<sup>1</sup>。 每个学科内的主题按A-Z排序<sup>2</sup>。

**急症主题** - 在每个学科分类下 , 您可以查找本学科内相关的急 症主 题<sup>3</sup>。

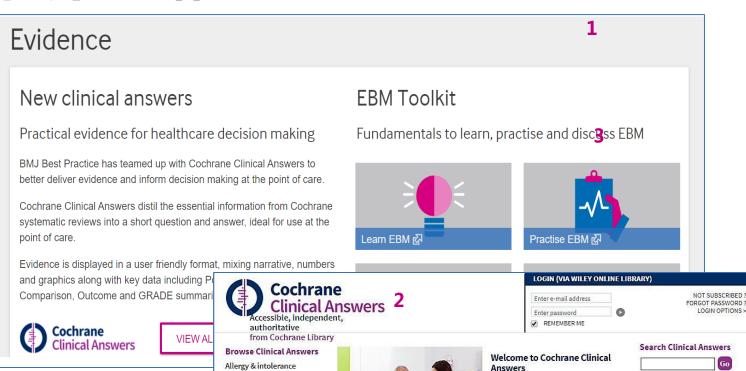
# 医学计算器



# 临床操作视频



# 临床证据



**New Clinical Answers** 

How does mifepristone compare with

levonorgestrel, danazol, or gestrinone

Blood disorders

Complementary &

alternative medicine

Dentistry & oral health

psychosocial & learning

Effective practice & health

Consumer & communication

Cancer Child health

strategies

problems Ear, nose & throat

Developmental

临床证据 - 自推出以来, BP一 直致力为用户实时提供高质量的前沿临 床证据。您可通过【证据】 ¹内的链接访问世界顶级循证医学研究中心证据Cochrane Clinical Answers ( CCA )的内容²。CCA将Cochrane系统评价的重点信息提炼成适合在临床上使用的、简短的问题和答案,使医护人员能更有信心地做出最佳临床决策。此外,EBM工具包³内还收录了大量关于学习、讨论和实践循证医学的信息以及便于实践循证医学的工具和文献⁴。



- How does longer cortico Illuminates the accuracy and precision of diagnostic tests,
  - · Highlights the importance of prognostic markers,

» EBM Toolkit » Learn EBM » What is EBM?

Practical evidence for hea

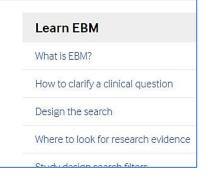
Find CCA background as

Updated Clinical Answer

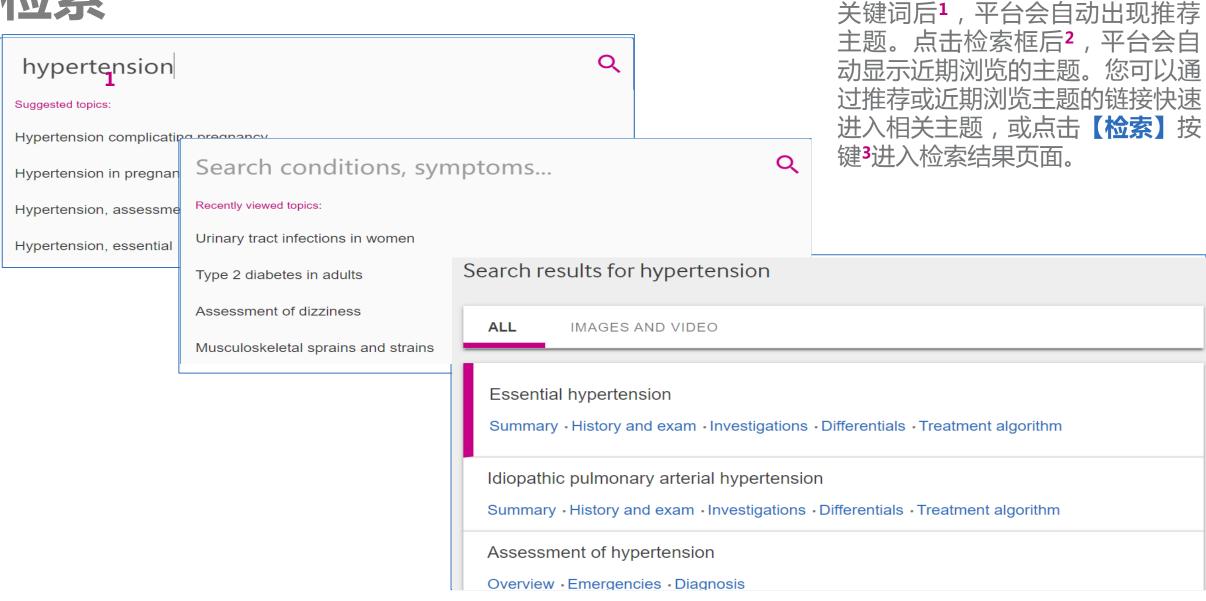
treatment (>7 days) com

materials here

 Establishes the efficacy and safety of therapeutic, rehabilitative, or preventive healthcare strategies, or



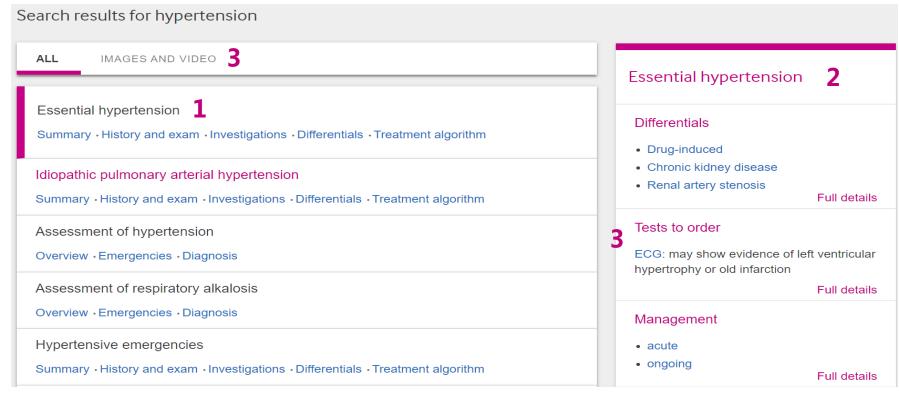
# 检索



检索 - 在检索框内输入症状或疾病

## BMJ Best Practice 临床实践

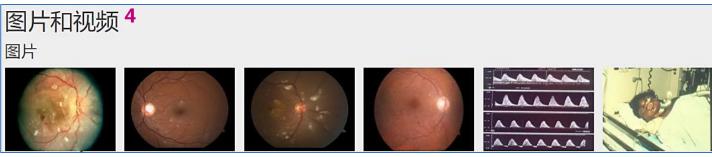
## 检索



**检索结果**按相关度进行排序并显示相关主题各重要章节的链接<sup>1</sup>。

检索结果右侧摘要栏显示相关度最高主题的鉴别诊断和小结等信息<sup>2</sup>,便于您快速获取相关信息。

**图片和视频检索** – BP还 支持图片和视频的检 索。点击【**图片和视频**】<sup>3</sup> 可查看与输入检索词相 关的资源<sup>4</sup>。





# 疾病类主题 – 标准导航

#### Type 2 diabetes in adults **OVERVIEW** THEORY DIAGNOSIS MANAGEMENT FOLLOW UP RESOURCES Summary Epidemiology Approach Monitoring Guidelines Approach Treatment algorithm Images and videos Aetiology History and exam Complications Case history Investigations Emerging Prognosis References Differentials Prevention Calculators Criteria Patient discussions Evidence Screening

Last reviewed: October 2019

Last updated:October 2019

## Summary

The cornerstone of therapy for all patients with diabetes is a personalised self-management programme, usually developed with the patient by a diabetes education nurse or nutritionist...

READ MORE ~



BP包含847个疾病类主题 ,可覆盖大部分临床常见疾病。每 个主题包括一个具体疾病从基础 理论到预防、诊断、鉴别诊断、 检查、治疗方案、随访、疾病预 后等各环节的临床信息。通过标 准导航菜单,您可直接点击所需 内容,一键直达相关章节。

主题显著位置还标注了内容审核 及更新日期、重要更新及专家点 评和指南,便于您即时获得最新、 最权威 的临床支持。

## 疾病类主题 – 小结

## Summary

The cornerstone of therapy for all patients with diabetes is a personalised self-management programme, usually developed with the patient by a diabetes education nurse or nutritionist.

Lifestyle changes plus metformin are initial antihyperglycaemic therapy for most patients. Glycaemic goals and treatment choices are individualised

Selected glucose-lowering drugs reduce all-cause and cardiovascular mortality. Addition of a sodium-glucose co-transporter 2 (SGLT2) inhibitor or glucagon-like peptide-1 (GLP-1) agonist is recommended in patients with long-standing suboptimal glycaemic control plus established cardiovascular and/or renal disease.

Blood pressure control, lipid management, smoking cessation, and glycaemic management reduce the risk of macrovascular complications such as heart attack and stroke. Glycaemic control and blood pressure management reduce the risk of microvascular complications (neuropathy, nephropathy, retinopathy).

#### History and exam?

#### Key diagnostic factors

- · presence of risk factors
- asymptomatic
- · candidal infections
- · skin infections Full details

#### Other diagnostic factors

- fatigue
- · blurred vision
- polydipsia
- polyphagia Full details

#### Risk factors

- · older age
- overweight/obesity
- · gestational diabetes
- pre-diabetes Full details

#### Diagnostic investigations 3

## 1st investigations to order

#### HbA1c

#### fasting plasma glucose

- · random plasma glucose

#### - 2 hour post load alugged after 75 a gral

#### Investigations to consider

- · fasting lipid profile
- urine ketones
- · random C-peptide
- urinary albumin averation

## Treatment algorithm 4

#### INITIAL

at initial diagnosis

#### ACUTE

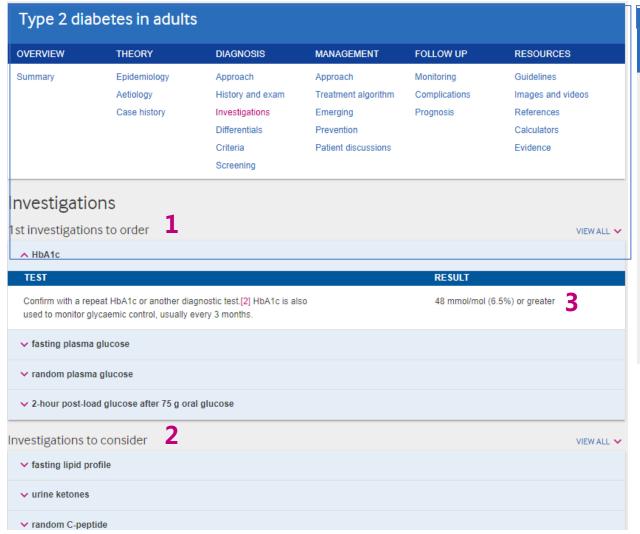
marked hyperglycaemia non-pregnant: serum glucose ≥16.6 mmol/L (≥300 mg/dL) or HbA1c ≥86 mmol/mol (≥10%) or symptomatic

without marked hyperglycaemia non-pregnant asymptomatic: serum glucose <16.6 mmol/L (<300 mg/dL) or HbA1c <86 mmol/mol (<10%)

pregnant

【小结】章节涵盖本主题疾病的精粹临床诊疗信息,为 您高度概括**病史和查体¹、诊断性检查²**及**诊疗流程³**等核 心诊疗环节。主题摘要栏4还提供了与本主题疾病相关的 鉴别诊断、指南及视频和 医学计算器等资源的链接。

# 疾病类主题 - 检查及鉴别诊断





【检查】章节涵盖与诊断相关的首要检查<sup>1</sup>和其它需要考虑的检查<sup>2</sup>,及检测结果的参考区间和说明<sup>3</sup>。

【**鉴别诊断**】章节提供简明的鉴别诊断信息,便于您通过鉴别依据快速甄别诊断的准确性,避免误诊漏诊4。

# 类主题 — 治疗步

#### Type 2 diabetes in adults **OVERVIEW THEORY** DIAGNOSIS MANAGEMENT **FOLLOW UP** RESOURCES Summary Epidemiology Approach Approach Monitorina Guidelines History and exam Treatment algorithm Images and videos Aetiology Complications Case history Investigations Emerging Prognosis References Prevention Differentials Calculators Criteria Patient discussions Evidence Screening

## Approach

The cornerstone of therapy for all patients with type 2 diabetes is a personalised management programme that includes pharmacotherapy and ongoing self-management education by a diabetes education nurse or nutritionist,[61][62][63] Diabetes self-management education promotes diabetes self-care and supports beneficial lifestyle changes on an ongoing basis.[2] This requires general nutrition and health lifestyle knowledge and an individualised nutrition and exetty reduced cardiovascular mortality and all-cause mortality in those with diabetes and enhance self-management cal scular disease or high CVD risk in one randomised trial.[129] Dulaglutide and semaglutide hav 21 Exenatide and lixisenatide har

About 80% of adults with type a MHRA warns of cases of diat or obese, and around 15% are 1 receptor agonist and insulin

likely to die of stroke or myoca, hibitors (sitagliptin, saxagliptin 40 times more likely to die of mity benefit. [ (1) Cochrane Clinical Answers ] data indicate that adults with tyreas (glipizide, glimepiride, gly cular complications, but confe and weight have a risk of majo aemia.[103] Along with metfor matched non-diabetes peers. [(rglycaemic medications.[135]

**Clinical Answers** Do dipeptidyl peptidase-4 (DPP-4) inhibitors improve outcomes in people with type 2 diabetes mellitus? SHOW ME THE ANSWER闷

Cochrane

nibitor, an angiotens Evidence Score e) diuretic is preferre cer.[79] ACE inhibito Reducing cardiovascular risk: there is good-quality or antagonists.[70] ( evidence that intensive BP lowering (targeting a -channel blocker, thi systolic pressure <120 mmHg over 4.7 years, as an ACE inhibitor and compared with targeting <140 mmHg) does not k of adverse events lessen risk (composite outcome: non-fatal MI, nonn ACE inhibitor or ar fatal stroke, or death from cardiovascular cause) in [79][ Evidence A ] C people with type 2 diabetes. Intensive BP lowering ninute/1.73 m<sup>2</sup>, or (b increased the risk of adverse events.[81] preferred antihyperte Evidence A increase risk for Systematic reviews (SRs) or randomized sulfonylurea or meg controlled trials (RCTs) of >200 participants. minimise interfering ate for secondary ca n of a mineralocortic

**【治疗步骤**】章节提供详细的逐步诊疗方案,并利用 CCA或证据标识显示治疗方法的证据来源与等级。点击 【CCA标识】可查看以问答形式表现的相关Cochrane系 统评价<sup>1</sup>,而点击【证据等级】则可查看BP收录的 证据等级和摘要2。

ed out. The Systolic Blood

## 疾病类主题 - 治疗流程

#### Type 2 diabetes in adults **OVERVIEW** THEORY DIAGNOSIS MANAGEMENT **FOLLOW UP** RESOURCES Summary Epidemiology Approach Approach Monitoring Guidelines Images and videos Aetiology History and exam Treatment algorithm Complications Case history Investigations Emerging Prognosis References Differentials Prevention Calculators Criteria Patient discussions Evidence Screening

#### Treatment algorithm

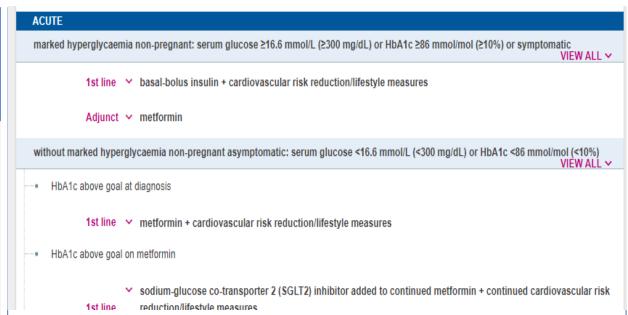
Plus

lipid management

Please note that formulations/routes and doses may differ between drug names and brands, drug formularies, or locations. Treatment recommendations are specific to patient groups: see disclaimer

Treatment recommended for ALL patients in selected patient group

locations. Treatment recor	mmendations are specific to patient groups: see disciaimer	
INITIAL		
at initial diagnosis	H	DE ALL ^
1st line	e ∨ lifestyle changes	
Plus	<ul> <li>glycaemic management</li> </ul>	
	Treatment recommended for ALL patients in selected patient group	
3	All patients should receive stratified glycaemic management upon diagnosis.	
	HbA1c goals should be individualised,[93] and if HbA1c is above goal, pharmacotherapy recommended.	
	Choice of agents should be individualised, taking into account patient values and preferences, likelihood that an age all-cause or cardiovascular mortality, adverse effect profiles, costs, and other factors. For most patients, metformin values therapy, but insulin may be required for marked hyperglycaemia.	
	Consult a specialist for guidance on treating pregnant women.	
Plus	blood pressure management	



【治疗流程】章节按就诊患者情况、疾病诊断组别<sup>1</sup>和疾病的进展程度<sup>2</sup>对治疗要点进行排列,并对药物用法、手术方案及辅助诊疗手段进行详细介绍<sup>3</sup>,便于您针对患者的病情获取最相关的逐步治疗信息和详细用药方案。

# 疾病类主题 - 案例及指南

Type 2 diabetes in adults								
OVERVIEW	THEORY	DIAGNOSIS	MANAGEMENT	FOLLOW UP	RESOURCES			
Summary	Epidemiology	Approach	Approach	Monitoring	Guidelines			
	Aetiology	History and exam	Treatment algorithm	Complications	Images and videos			
	Case history	Investigations	Emerging	Prognosis	References			
		Differentials	Prevention		Calculators			
		Criteria	Patient discussions		Evidence			
		Screening						

Type 2 diabe	e 2 diabetes in adults						
OVERVIEW	THEORY	DIAGNOSIS	MANAGEMENT	FOLLOW UP	RESOURCES		
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		Differentials	Prevention		Calculators		
		Criteria	Patient discussions		Evidence		
		Screening					

#### Case history

#### Case history

An overweight 55-year-old woman presents for preventative care. She notes that her mother died of diabetes, but reports no polyuria, polydipsia, or weight loss. BP is 144/92 mmHg, fasting blood sugar 8.2 mmol/L (148 mg/dL), HbA1c 65 mmol/mol (8.1%), LDL-cholesterol 5.18 mmol/L (200 mg/dL), HDL-cholesterol 0.8 mmol/L (30 mg/dL), and triglycerides 6.53 mmol/L (252 mg/dL).

#### Other presentations

Patients with type 2 diabetes can also present with symptoms such as blurred vision; fatigue; erectile dysfunction; urinary tract or candidal infections; dry itchy skin; paresthaesias; increased urination, thirst, and appetite; or unexplained weight loss.

【案例】章节涵盖与此疾病相关的典型和非典型真实患者案例<sup>1</sup>,可用于PBL和CPL教学。

【**指南**】章节涵盖国际权威医疗机构制定的最新诊断<sup>2</sup>和治疗指南<sup>3</sup>。

#### Diagnostic guidelines

#### EUROPE

Guidelines on diabetes, pre-diabetes, and cardiovascular diseases ₪

Published by: European Society of Cardiology (ESC); European Association for the Study of Diabetes (EASD)

Last published: 2019

Type 2 diabetes in adults: management №

Published by: National Institute for Health and Care Excellence

Last published: 2019

Type 2 diabetes: prevention in people at high risk  $\ensuremath{\mathbb{Z}}$ 

Published by: National Institute for Health and Care Excellence

Last published: 2017

Diabetes in pregnancy: management from preconception to the postnatal period &

# 疾病类主题 - 图片和视频及参考证据

#### Type 2 diabetes in adults **OVERVIEW THEORY** DIAGNOSIS MANAGEMENT **FOLLOW UP** RESOURCES Summary Monitoring Guidelines Epidemiology Approach Approach Images and videos Aetiology History and exam Treatment algorithm Complications Case history Investigations Emerging Prognosis References Differentials Prevention Calculators Criteria Patient discussions Evidence Screening

## Images and videos

#### Images



#### Type 2 diabetes in adults

OVERVIEW	THEORY	DIAGNOSIS	MANAGEMENT	FOLLOW UP	RESOURCES
Summary	Epidemiology	Approach	Approach	Monitoring	Guidelines
	Aetiology	History and exam	Treatment algorithm	Complications	Images and videos
	Case history	Investigations	Emerging	Prognosis	References
		Differentials	Prevention		Calculators
		Criteria	Patient discussions		Evidence
		Screening			

#### References

#### Key articles

American Diabetes Association. Standards of medical care in diabetes - 2019. Diabetes Care. 2019;42(Suppl 1):S1-193.

#### ull text 굗

Evert AB, Dennison M, Gardner CD, et al. Nutrition therapy for adults with diabetes or prediabetes: a consensus report. Diabetes Care. 2019 May;42(5):731-54.

#### Full text 굗 Abstract 굗

Rawshani A, Rawshani A, Franzén S, et al. Risk factors, mortality, and cardiovascular outcomes in patients with type 2 diabetes. N Engl J Med. 2018 Aug 16;379(7):633-44.

#### Full text ₁忍 Abstract ₁忍

Zelniker TA, Wiviott SD, Raz I, et al. Comparison of the effects of glucagon-like peptide receptor agonists and sodium-glucose cotransporter 2 inhibitors for prevention of major adverse cardiovascular and renal outcomes in type 2 diabetes mellitus. Circulation. 2019 Apr 23;139(17):2022-31.

#### Abstract 丞

Cushman WC, Evans GW, Byington RP, et al; ACCORD Study Group. Effects of intensive blood-pressure control in type 2 diabetes mellitus. N Engl J Med. 2010 Apr 29;362(17):1575-85.

您可在【**图片和视频**】章节浏览与本主题疾病相关的视频和高质量医学图片<sup>1</sup>,并可将图片下载到本地使用。 【**参考文献**】章节涵盖本主题引用的重要文献及文献摘要的链接,并提供开放性获取文献的免费全文链接<sup>2</sup>。

# 症状评估类主题

#### Assessment of hypertension Assessment of hypertension THEORY RESOURCES **OVERVIEW EMERGENCIES DIAGNOSIS OVERVIEW** THEORY **EMERGENCIES** DIAGNOSIS RESOURCES Summary Aetiology Urgent considerations Approach Guidelines Guidelines Summary Aetiology Urgent considerations Approach Differentials Images and videos Differentials Images and videos References References Differentials Urgent considerations Common VIEW ALL V See Differentials for more details Essential hypertension FXAM **1ST INVESTIGATION** OTHER INVESTIGATIONS Severe elevations in blood pressure are classified as either emergencies or urgencies. [29] In hypertensive HISTORY emergencies there is severe hypertension (>180/120 mmHq) with evidence of new or worsening end organ . ECG:normal, evidence of previous often asymptomatic; headaches. may have signs of end organ damage.[2] This is an immediate threat to the cardiovascular system and the patient. In hypertensive urgencies, damage: heave due to left MI or left axis deviation with left visual disturbance, nosebleeds, there is severe hypertension but the patient is otherwise stable with no evidence of acute or impending change or neurological symptoms ventricular hypertrophy. ventricular hypertrophy in end organ damage or dysfunction.[2] possible retinopathy, functional deficit · urea/creatinine:normal, or following stroke; lack of signs to elevated with renal impairment True hypertensive emergencies include hypertensive encephalopathy, hypertensive left ventricular failure, and suggest a secondary cause serum cholesterol:variable acute aortic dissection. The management of these conditions includes immediate treatment in an intensive care setting with controlled gradual reduction in blood pressure. Initial laboratory tests should include a full blood · random blood glucose:>8 mmol/L on non-fasting sample suggestive profile and urine analysis to search for an underlying cause. Tests such as cardiac enzymes, thyroid function of comorbid diabetes and fasting tests, urinary catecholamines, and vanillylmandelic acid may also be required. Elevations in urea and creatinine. blood sugar advised raised sodium and phosphate levels, high or low potassium levels (particularly in hyperaldosteronism, as a result · urinalysis:may be normal of renal potassium wasting), and acidosis are some of the common findings. More Imaging studies such as a chest x-ray and renal ultrasound scan can also help to rule out underlying aetiology. Computerised tomography of the head to assess for intracranial haemorrhage or infarction or space-occupying Essential hypertensionlesions may also be indicated. A 12-lead ECG is useful to assess for cardiac ischaemia or infarct, presence of left ventricular hypertrophy, and evidence of electrolyte disturbance or effects of drug overdose. If left untreated, Renal artery stenosis these conditions are associated with a high mortality and morbidity. Fortunately, with the widespread use of antihypertensive agents, they are less commonly seen overall.[29][30][31] Chronic kidney disease Specific hypertensive emergencies Hypertensive encephalonathy

BP包含129个症状评估类主题。每个主题为一类常见临床症状或表现提供了详细的评估和诊断指导。【应急考虑】章节提醒您接诊患者时需优先考虑的诊疗信息<sup>1</sup>,以避免疾病恶化或严重并发症的发生。【鉴别诊断】章节内容简明,且按相关疾病的发病率或类别进行排列<sup>2</sup>,便于您对疾病做出快速的诊断。

## 概述类主题

# Overview of diabetes OVERVIEW RESOURCES Summary References Last reviewed: October 2019 Last updated: May 2019 Introduction Diabetes is a general term for disorders characterised by polyuria. It usually refers to diabetes

Diabetes is a general term for disorders characterised by polyuria. It usually refers to diabetes mellitus, a common chronic syndrome of impaired carbohydrate, protein, and fat metabolism owing to insufficient secretion of insulin and/or target-tissue insulin resistance. Complications of diabetes mellitus include both macrovascular (cardiovascular) and microvascular (retinopathy, nephropathy, or neuropathy) sequelae...

READ MORE +

#### Related conditions

CONDITION	DESCRIPTION		
Type 2 diabetes mellitus in adults	Common disorder characterised by insulin resistance and relative insulin deficiency. Most patients are asymptomatic and are diagnosed through screening (abnormal fasting plasma glucose, haemoglobin A1c, and/or oral glucose tolerance test). [1] Strong risk factors include older age, overweight/obesity, physical inactivity, prior gestational diabetes, pre-diabetes, non-white ancestry, family history of diabetes, or polycystic ovary syndrome. Modification of cardiovascular risk factors (e.g., hypertension and dyslipidaemia) are important treatment considerations, along with glycaemic control to prevent microvascular complications.		
Type 1 diabetes mellitus	Characterised by absolute insulin deficiency. Most cases result from autoimmune pancreatic beta-cell destruction in genetically		

BP包含26个概述类主题。每个主题涵盖针 对一类疾病的综合介绍<sup>1</sup>,并可通过链接关联到相 关的疾病类或症状评估类主题<sup>2</sup>。

27

## 案例背景

李先生,46岁,头昏, 头部胀痛3天。

XX医院首诊处方单 血压

: 146/92 mmHg 诊断

: 高血压病 处方: 苯磺

酸氨氯地平片

李先生又来我院询问: 可以诊断为高血压吗? 还需要做其他的检查吗? 需要服用降压药吗? 在检索框中输入"高血压"并进入《高血压的评估》主题。

# Assessment of hypertension OVERVIEW THEORY EMERGENCIES DIAGNOSIS Summary Aetiology Urgent considerations Approach Differentials

Last reviewed: October 2019

Last updated:February 2019

#### Summary

Hypertension is a common disorder that affects a large proportion of the community. It is usually asymptomatic and is detected on routine examination or after the occurrence of a complication such as a heart attack or stroke.[1]

Hypertension has been defined in joint guidelines by American learned bodies (American College of Cardiology [ACC] and American Heart Association [AHA] among others)[2] and also by the British Society of Hypertension[3] and the European Society of Hypertension.[4] There are differences in the definition of hypertension between guidelines.

The 2017 ACC/AHA guidelines for the prevention, detection, evaluation, and management of high blood pressure in adults defines hypertension as any systolic blood pressure measurement of ≥130 mmHg or any diastolic blood pressure measurement of ≥80 mmHg.[2] ACC/AHA blood pressure categories are defined as follows:

- Elevated blood pressure: systolic blood pressure of 120-129 mmHg and diastolic blood pressure of <80 mmHg</li>
- Stage 1 hypertension: systolic blood pressure of 130-139 mmHg and/or diastolic blood pressure of 80-89 mmHg
- Stage 2 hypertension: systolic blood pressure of ≥140 mmHg and/or diastolic blood pressure of ≥90 mmHg.

首先考虑李先生的情况是否需要紧急处理。进入【**应急考虑**】章节,李先生目前尚无高血压急症表现,因此暂时无需紧急处理。

#### Urgent considerations

#### See Differentials for more details

Severe elevations in blood pressure are classified as either emergencies or urgencies.[29] In hypertensive emergencies there is severe hypertension (>180/120 mmHg) with evidence of new or worsening end organ damage.[2] This is an immediate threat to the cardiovascular system and the patient. In hypertensive urgencies, there is severe hypertension but the patient is otherwise stable with no evidence of acute or impending change in end organ damage or dvsfunction.[2]

True hypertensive emergencies include hypertensive encephalopathy, hypertensive left ventricular failure, and acute aortic dissection. The management of these conditions includes immediate treatment in an intensive care setting with controlled gradual reduction in blood pressure. Initial laboratory tests should include a full blood profile and urine analysis to search for an underlying cause. Tests such as cardiac enzymes, thyroid function tests, urinary catecholamines, and vanillyImandelic acid may also be required. Elevations in urea and creatinine, raised sodium and phosphate levels, high or low potassium levels (particularly in hyperaldosteronism, as a result of renal potassium wasting), and acidosis are some of the common findings.

Imaging studies such as a chest x-ray and renal ultrasound scan can also help to rule out underlying aetiology. Computerised tomography of the head to assess for intracranial haemorrhage or infarction or space-occupying lesions may also be indicated. A 12-lead ECG is useful to assess for cardiac ischaemia or infarct, presence of left ventricular hypertrophy, and evidence of electrolyte disturbance or effects of drug overdose. If left untreated, these conditions are associated with a high mortality and morbidity. Fortunately, with the widespread use of antihypertensive agents, they are less commonly seen overall.[29][30][31]

#### Specific hypertensive emergencies

Hypertensive encephalopathy

第2步要考虑李先生是否可以被诊断为高血压。根据【**诊断步骤**】章节的描述,明确诊断高血压需要正确地测量3次血压。本主题【小结】章节还对国内外血压分期差异进行了针对性说明。

# Assessment of hypertension OVERVIEW THEORY EMERGENCIES DIAGNOSIS RESOURCES Summary Aetiology Urgent considerations Approach Differentials Images and vid References

#### Approach

Hypertension is usually asymptomatic, but patients may present with headaches, nosebleeds, visual symptoms, or neurological symptoms. The main aims of history-taking are to identify symptoms suggestive of a secondary cause, to establish concomitant risk factors for cardiovascular disease, and to seek any symptoms suggestive of target organ damage.[4][5][9] Often there are no physical signs. However, a full examination for any signs of an underlying condition or target organ damage is recommended. This should include height, weight, waist circumference, palpation and auscultation of the heart and carotid arteries, palpation of peripheral pulses, neurological examination, and fundoscopy. An absence of symptoms or end organ damage with a history of normal blood pressure readings outside the clinical environment may occur with pseudo-hypertension.

Baseline screening tests are useful in all patients to look for complications of hypertension. Specific tests are only recommended if the clinical suspicion of an underlying secondary cause is high, as the majority of patients will have essential (primary) hypertension.

#### Blood pressure measurement

Before a diagnosis of hypertension can be confirmed, it is essential that the blood pressure is checked correctly.

[4][5][9] The patient should sit quietly for at least 5 minutes with the arm exposed and supported at the level of the heart, and the back resting against a chair. Ideally they should not have consumed caffeine or smoked tobacco within 30 minutes before testing. Canadian guidelines recommend use of electronic (oscillometric) upper arm devices instead of using auscultation to measure blood pressure in the clinic setting 1331 if an automatic.

The 2017 ACC/AHA guidelines for the prevention, detection, evaluation, and management of high blood pressure in adults defines hypertension as any systolic blood pressure measurement of ≥130 mmHg or any diastolic blood pressure measurement of ≥80 mmHg.[2] ACC/AHA blood pressure categories are defined as follows:

- Elevated blood pressure: systolic blood pressure of 120-129 mmHg and diastolic blood pressure of <80 mmHg</li>
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- Stage 2 hypertension: systolic blood pressure of ≥140 mmHg and/or diastolic blood pressure of ≥90 mmHg.

The 2017 ACC/AHA guidelines definition represents a more aggressive approach to diagnosis and treatment of hypertension compared with Joint National Committee (JNC) 7 and JNC 8 recommendations, where blood pressure in the range of 120-139 mmHg/80-89 mmHg is considered pre-hypertension and blood pressure >140/90 mmHg is considered elevated.[51][6]

Publication of the 2017 ACC/AHA guidelines has prompted widespread debate, and there are calls for the recommendations to be revisited. Implementing the guidelines would increase the prevalence of hypertension by 26.8% in the US. Critics are concerned that labelling more patients as hypertensive could increase psychological morbidity, as well as exposing lower-risk patients to the potential harm of antihypertensive medications.[7]

The 2017 ACC/AHA guidelines were mainly based on the results of the SPRINT trial, which investigated intensive or standard hypertension treatment in people with a systolic blood pressure of ≥130 mmHg with an increased cardiovascular risk (but without diabetes).[8] Listen to our podcast for more on the controversy. BMJ Best Practice Podcast: hypertension 

☐

European guidelines categorise hypertension as follows:[4][9]

- . High-normal: systolic 130-139 mmHg and/or diastolic 85-89 mmHg
- Grade 1: systolic 140-159 mmHg and/or diastolic 90-99 mmHg
- Grade 2: systolic 160-179 mmHq and/or diastolic 100-109 mmHq
- Grade 3: systolic ≥180 mmHg and/or diastolic ≥110 mmHg.

<u>The National Institute for Health and Care Excellence quidelines use a definition of hypertensis</u>

## 患者病情

李先生在第2周和第3 周分别测量的血压为:

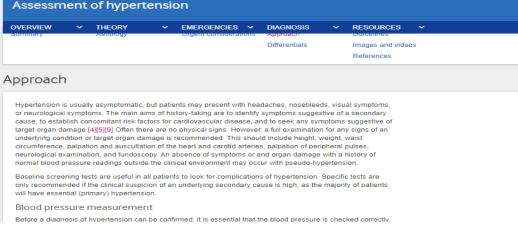
192/94 mmHg

138/92 mmHg

符合高血压诊断标注,可以确诊为高血压。建议李先生做一次系统性的检查。

第3步要通过采集病史来判断李先生是患有原发性还是继发性高血压。根据【诊断步骤】章节描述,通过采集病史

来寻找继发病因、靶器官损伤情况及心血管疾病危险因素。



#### Concomitant cardiovascular risk factors

Establishing concomitant cardiovascular risk factors is essential to define overall cardiovascular risk.

- Smoking: enquiries should include type of cigarette or tobacco, quantity, and duration of habit. Patients
  have a tendency to under-report, and non-smokers may be exposed to passive cigarette smoking in the
  home if a partner is a heavy smoker.
- Diabetes mellitus: this is a strong risk factor for cardiovascular disease. The target blood pressure for a diabetic hypertensive patient is 130/80 mmHg.
- Known ischaemic heart disease or previous myocardial infarction.
- Previous cerebrovascular accident or transient ischaemic attack.
- Elevation of cholesterol or triglycerides: patients may be unaware of such elevation if they have never been tested.
- · Family history of hypertension, cardiovascular disease, cerebrovascular disease, or renal disease.

#### Identification of a secondary cause

Although in the majority of patients hypertension is primary/essential, there are certain features that may lead to a suspicion of an underlying cause (secondary hypertension):

4

第4步要考虑李先生需要做什么检查。根据【诊断步骤】章节描述,必要常规检查包括血尿常规、空腹血糖、血脂、血电解质、ECG和心脏超声。后续检查仅限于高度怀疑继发性高血压的患者。

#### Initial investigations

Baseline screening tests are useful in all patients to look for complications of hypertension.

- An ECG can be easily performed and is useful to seek signs of previous myocardial infarction or left ventricular hypertrophy (a key prognostic factor). Echocardiography may be reserved for patients with clinical suspicion of cardiac failure or left ventricular hypertrophy.
- A chest x-ray is helpful to look for evidence of cardiomegaly, widening of the left subclavian border, and a
  double bulge at the site of the aortic knuckle. This may be seen in coarctation of the aorta, along with
  notching of the ribs due to large collateral circulation.
- Initial blood tests should include urea, electrolytes, and creatinine, with random blood sugar and serum
  cholesterol (as part of overall cardiovascular risk assessment). If diabetes is suspected, a fasting blood
  sugar test is required. Potassium levels may be low in hyperaldosteronism, but are usually normal.
- A urine dip test is performed to look for glycosuria and proteinuria, and the presence of casts may help to determine an underlying renal cause, such as glomerulonephritis or nephrotic syndrome.

#### Subsequent investigations

Specific tests are only recommended if the clinical suspicion of an underlying secondary cause is high, as the majority of patients will have essential hypertension. These include:

#### Blood tests

- Plasma renin and aldosterone levels if hyperaldosteronism suspected. Adrenal vein sampling to compare
  the ratio of renin to aldosterone in each kidney. A ratio >2 suggests an aldosterone-secreting tumour.[42]
  [43]
- Plasma renin activity is elevated in most patients with renal artery stenosis and is a good screening test.
   [44] A renal angiogram is the most specific and sensitive test.
- Late-night salivary cortisol will be elevated in Cushing's disease, and this can be confirmed with the
  overnight dexamethasone suppression test.
- Liver function tests may be a useful screening tool if chronic alcohol excess and liver dysfunction are suspected.
- Thyroid function tests, if clinical history leads to suspicion of hyper- or hypothyroidism.
- · Serum calcium levels can be measured if hyperparathyroidism is a possibility.

## 患者确诊

至此,通过综合病史、体格检查和实验室检查资料, 我们诊断李先生患:

原发性高血压1期并 伴有1个危险因素。 确诊后,第5步要考虑李先生是否需要服用降压药。从【鉴别诊断】章节进入《原发性高血压》主题。根据主题中【治疗流程】章节的描述,1期高血压无心血管相关共病、慢性肾病或糖尿病的患者,首选治疗方案为单药治疗加改变生活方式。

Treatment algorithm

locations. Treatment recommendations are specific to patient groups: see disclaimer

Please note that formulations/routes and doses may differ between drug names and brands, drug formularies, or

## Assessment of hypertens

OVERVIEW THEORY
Summary Aetiology

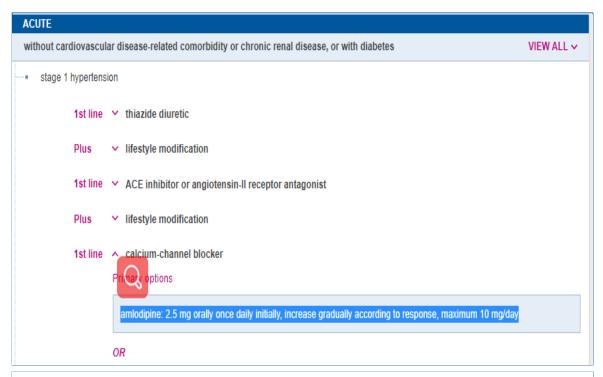
#### Differentials

Common

Essential hypertension



6



我们的治疗方案为 继续服用氨氯地平 片并增加体育活动。 **治疗效果** 一个月后,李先生的 血压稳定在 132/82 mmHg左右

#### lifestyle modification

Treatment recommended for ALL patients in selected patient group

All patients should be given a thorough explanation of the risks associated with hypertension and the need for adequate control and adherence to therapy.

Lifestyle modifications should be lifelong and should include:[2][5][8][41][73][74] sodium reduction (≤1.5 g/day);

[ Cochrane | Octavian | Octavian

最后要考虑如何对李先生进行随访。高血压的管理是一个长期的过程,在【**随访**】章节可以查询到对于高血压患者的长期随访方案,包括建议、并发症和预后等。

Essential hypertension							
OVERVIEW	THEORY	DIAGNOSIS	MANAGEMENT	FOLLOW UP	RESOURCES		
Summary	Epidemiology	Approach	Approach	Monitoring	Guidelines		
	Aetiology	History and exam	Treatment algorithm	Complications	Images and videos		
	Case history	Investigations	Emerging	Prognosis	References		
		Differentials	Prevention		Calculators		
		Criteria	Patient discussions		Evidence		
		Screening					

#### Monitoring

While adjusting medication dosage, blood pressure (BP) should be monitored every 2 to 4 weeks. Once stabilised, BP should be checked and medications reviewed every 6 to 12 months. Serum potassium and creating should be checked yearly.

#### Prognosis

Several trials have shown that uncontrolled hypertension is a major risk factor for the development of cardiac, vascular, renal, and cerebrovascular disease, morbidity, and mortality. However, even modest reductions in blood pressure (BP) decrease morbidity and mortality.[5] Further studies are needed to confirm optimal BP targets in diabetes.

In one randomised clinical trial (ACCORD) a more stringent blood pressure goal for patients with type 2 diabetes did not significantly reduce the primary cardiovascular outcome or most secondary outcomes compared with standard blood pressure goals. In this study, the number of total and non-fatal strokes was lower in the intensive therapy group, although the clinical benefit was limited (number needed to treat = 89 for 5 years to prevent one stroke).[71]

In patients with diabetes, the decrease in asleep blood pressure - a novel therapeutic target requiring evaluation by ambulatory monitoring - has been shown to be the most significant independent predictor of event-free survival in some studies.[140][141][142][143][144]

