Benefits of Lifestyle Change in CVD Risk; Promotion of shared-decision-making and patient-centeredness in CV Care; 2014 AHA Nutritional Guidelines?

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Conflict of Interest (COI) - Disclosure

None

Benefits of Lifestyle Change in CVD Risk;

Life Style Interventions


NO SMOKING
NO SMOKING

Recommendations on lifestyle changes

Are recommended	Class	LoE[a]	LoE[b]
Salt restriction to 5-6 g per day.	I	A	B
Moderation of alcohol consumption to no more than 20-30 g of ethanol per day in men and 10-20 g of ethanol per day in women.	I	A	B
Increased consumption of vegetables, fruits, and low-fat dairy products.	I	A	B
Reduction of weight to BMI of 25 kg/m^2 and of waist circumference to <102 cm in men and <88 cm in women, unless contraindicated.	I	A	B
Regular exercise, i.e. at least 30 min of moderate dynamic exercise on 5 to 7 days per week.	I	A	B
Advice to quit smoking and to offer assistance to all smokers.	I	A	B

[a] LoE: based on the effect on BP and/or CV risk profile
[b] LoE: based on outcome studies

www.escardio.org/guidelines

Eur Heart J, 2013; 34: 2159-2219
J Hypertens, 2013; 31: 1281-1357
Blood Pressure, 2013: 193-278

ESH European Society of Hypertension

EUROPEAN SOCIETY OF CARDIOLOGY®

2013 AHA/ACC Guideline on Lifestyle Management to Reduce Cardiovascular Risk

A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines

LDL-C: Advise adults who would benefit from LDL-C lowering* to:				
1. Consume a dietary pattern that emphasizes intake of vegetables, fruits, and whole grains; includes low-fat dairy products, poultry, fish, legumes, nontropical vegetable oils, and nuts; and limits intake of sweets, sugar-sweetened beverages, and red meats. a. Adapt this dietary pattern to appropriate calorie requirements, personal and cultural food preferences, and nutrition therapy for other medical conditions (including diabetes). b. Achieve this pattern by following plans such as the DASH dietary pattern, the USDA Food Pattern, or the AHA Diet.	A (Strong)	CQ1: ES4 (high), ES6 (low), ES8 (moderate), ES9 (moderate)	I	A
2. Aim for a dietary pattern that achieves 5%–6% of calories from saturated fat.	A (Strong)	CQ1: ES11 (high)	I	A
3. Reduce percent of calories from saturated fat.	A (Strong)	CQ1: ES11 (high), ES12 (moderate), ES13 (moderate)	I	A
4. Reduce percent of calories from *trans* fat.	A (Strong)	CQ1: ES14 (moderate), ES15 (moderate)	I	A

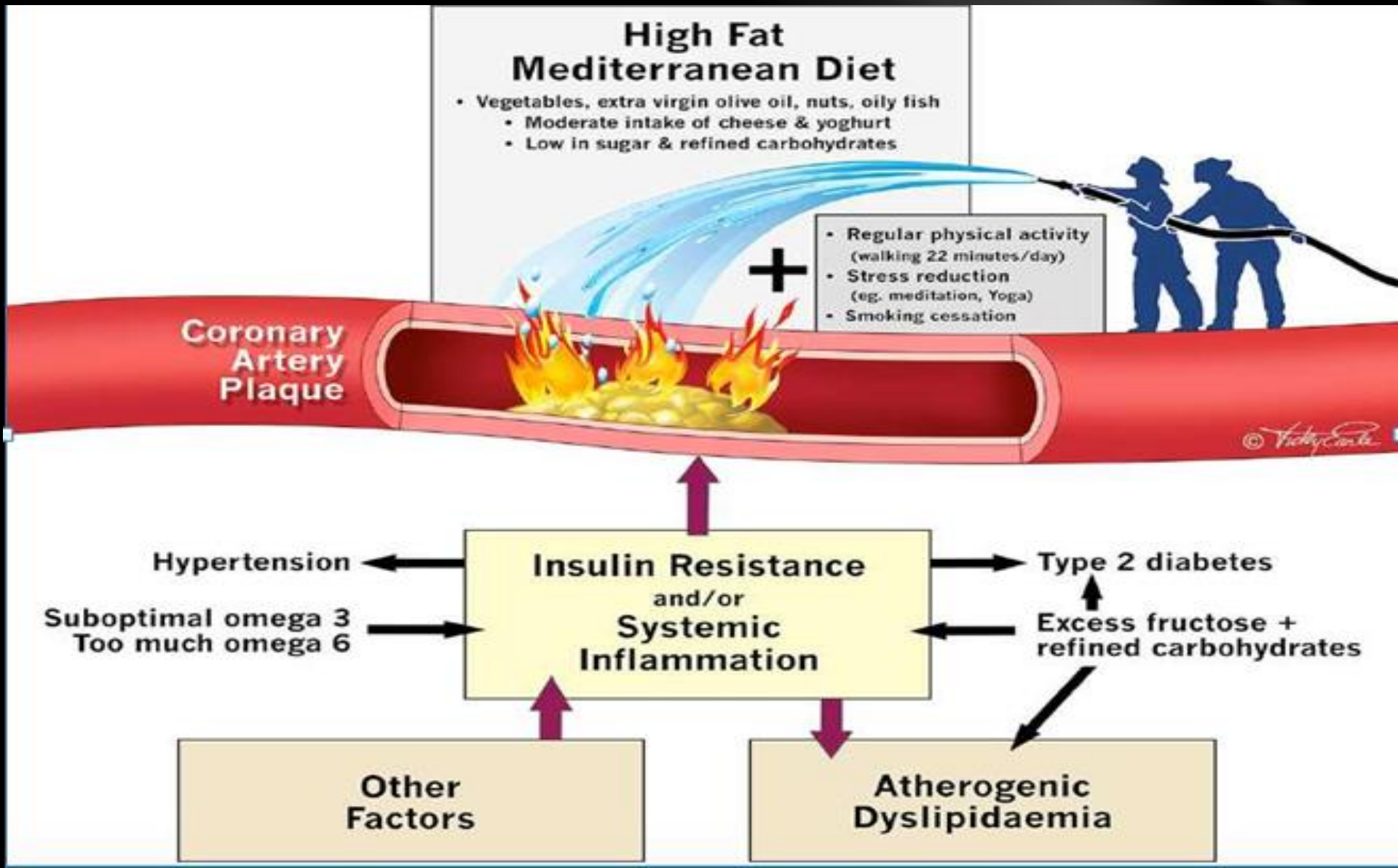
BP: Advise adults who would benefit from BP lowering to:				
1. Consume a dietary pattern that emphasizes intake of vegetables, fruits, and whole grains; includes low-fat dairy products, poultry, fish, legumes, nontropical vegetable oils, and nuts; and limits intake of sweets, sugar-sweetened beverages, and red meats. a. Adapt this dietary pattern to appropriate calorie requirements, personal and cultural food preferences, and nutrition therapy for other medical conditions (including diabetes). b. Achieve this pattern by following plans such as the DASH dietary pattern, the USDA Food Pattern, or the AHA Diet.	A (Strong)	**CQ1:** ES1 (low) ES3 (high), ES5 (high), ES6 (low), ES7 (low), ES8 (moderate)	I	A
2. Lower sodium intake.	A (Strong)	**CQ2:** ES1 (high), ES2 (moderate), ES3 (high), ES4 (high), ES5 (high), ES8 (low), ES9 (low)	I	A
3. a. Consume no more than 2,400 mg of sodium/d; b. Further reduction of sodium intake to 1,500 mg/d can result in even greater reduction in BP; and c. Even without achieving these goals, reducing sodium intake by at least 1,000 mg/d lowers BP.	B (Moderate)	**CQ2:** ES2 (moderate), ES3 (high)	IIa	B
4. Combine the DASH dietary pattern with lower sodium intake.	A (Strong)	**CQ1:** ES3 (high), ES5 (high), ES8 (moderate)	I	A

Associations of fats and carbohydrate intake with cardiovascular disease and mortality in 18 countries from five continents (PURE): a prospective cohort study

Interpretation

1) High carbohydrate intake was associated with higher risk of total mortality,
2) Total fat and individual types of fat were related to lower total mortality. Total fat and types of fat were not associated with cardiovascular disease, myocardial infarction, or cardiovascular disease mortality, Whereas saturated fat had an inverse association with stroke.
3) Global dietary guidelines should be reconsidered in light of these findings.

Saturated Fat Does Not Clog the Arteries- CHD Is a Chronic Inflammatory Condition, the Risk of Which Can Be Effectively Reduced From Healthy Lifestyle Interventions, Br J Sports Med. 2017;51(15):1111-1112.



Dietary Fats and Cardiovascular Disease

A Presidential Advisory From the American Heart Association

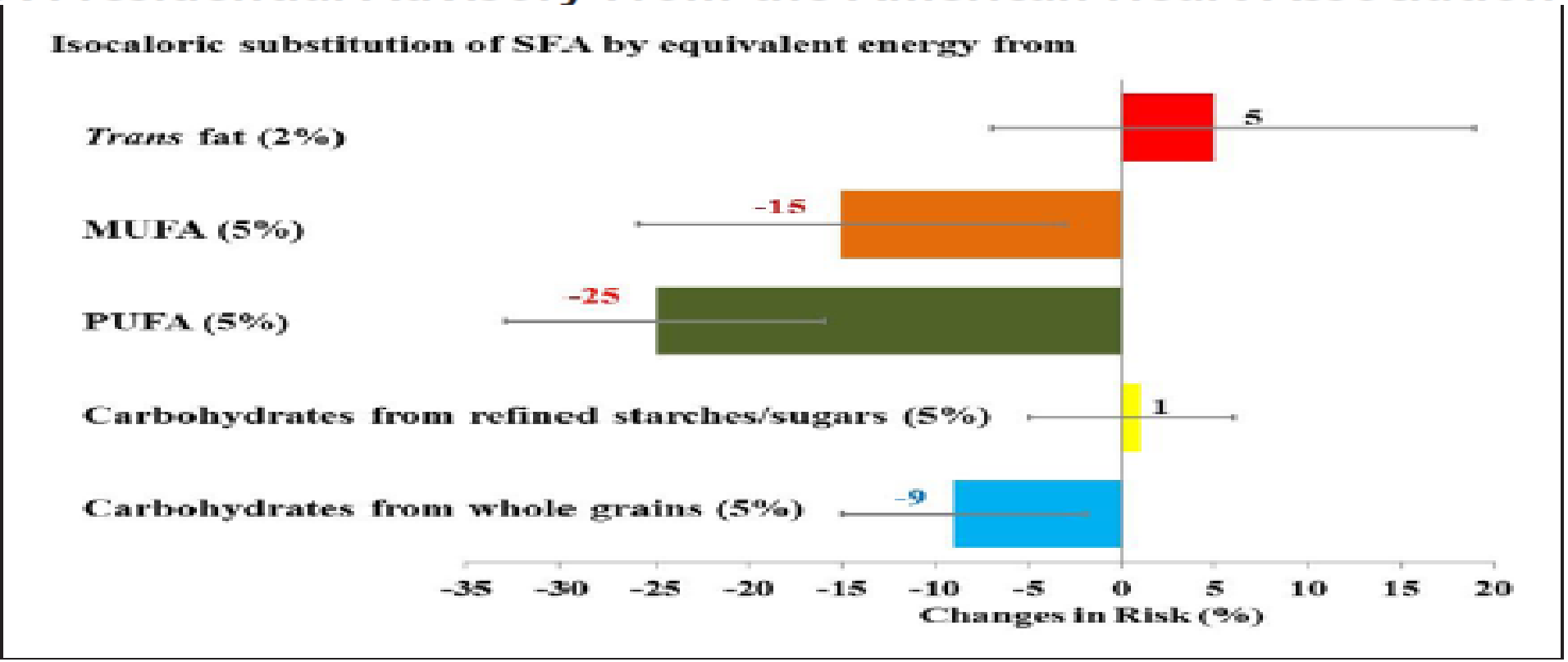


Figure 3. Replacement of saturated fat with other types of fat or carbohydrates.

we conclude strongly that lowering intake of saturated fat and replacing it with unsaturated fats, especially polyunsaturated fats, will lower the incidence of CVD.

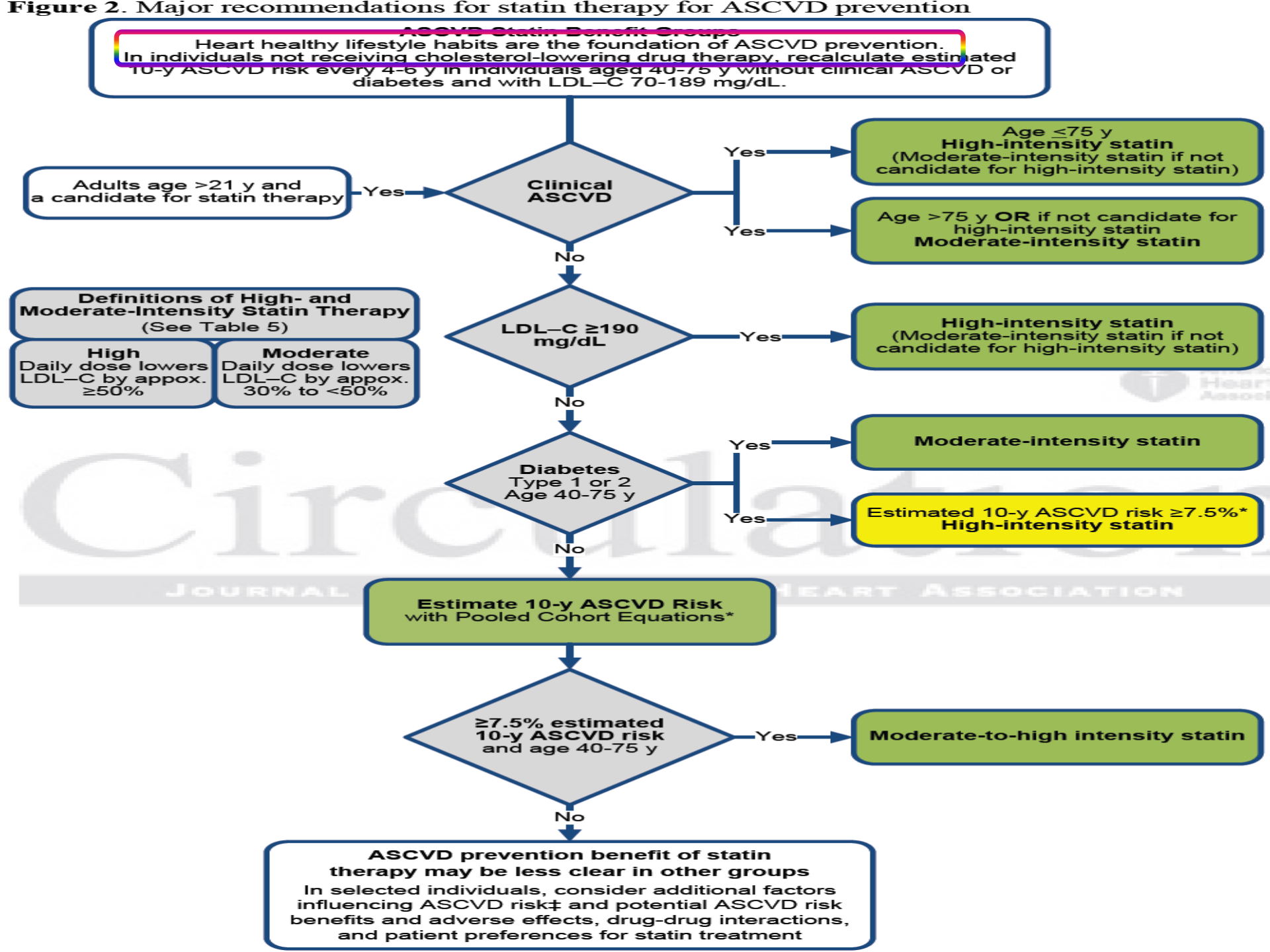
Debate

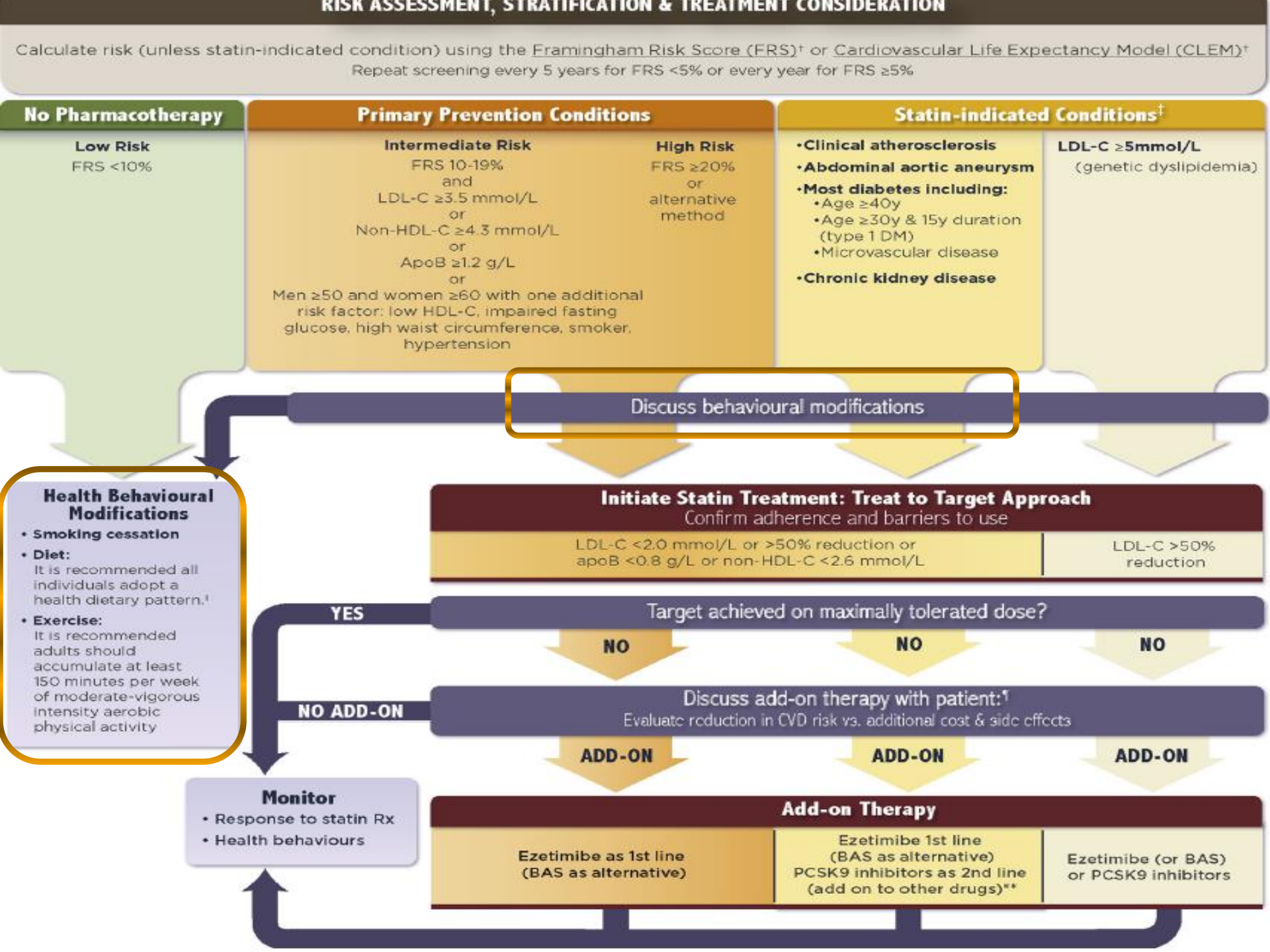
PURE

FAT / SALT

AHA /ACC

Figure 2. Major recommendations for statin therapy for ASCVD prevention




RISK ASSESSMENT, STRATIFICATION & TREATMENT CONSIDERATION
Calculate risk (unless statin-indicated condition) using the Framingham Risk Score (FRS)† or Cardiovascular Life Expectancy Model (CLEM)†
Repeat screening every 5 years for FRS <5% or every year for FRS ≥5%
No Pharmacotherapy
Low Risk
FRS <10%
Primary Prevention Conditions
Intermediate Risk
FRS 10-19%
and
LDL-C ≥3.5 mmol/L
or
Non-HDL-C ≥4.3 mmol/L
or
ApoB ≥1.2 g/L
or
Men ≥50 and women ≥60 with one additional risk factor: low HDL-C, impaired fasting glucose, high waist circumference, smoker, hypertension
High Risk
FRS ≥20%
or
alternative method
Statin-indicated Conditions‡
•Clinical atherosclerosis
•Abdominal aortic aneurysm
•Most diabetes including:
•Age ≥40y
•Age ≥30y & 15y duration (type 1 DM)
•Microvascular disease
•Chronic kidney disease
LDL-C ≥5mmol/L
(genetic dyslipidemia)
Discuss behavioural modifications
Health Behavioural Modifications
• Smoking cessation
• Diet:
It is recommended all individuals adopt a health dietary pattern.¶
• Exercise:
It is recommended adults should accumulate at least 150 minutes per week of moderate-vigorous intensity aerobic physical activity
Initiate Statin Treatment: Treat to Target Approach
Confirm adherence and barriers to use
LDL-C <2.0 mmol/L or >50% reduction or apoB <0.8 g/L or non-HDL-C <2.6 mmol/L
LDL-C >50% reduction
YES
Target achieved on maximally tolerated dose?
NO
NO
NO
NO ADD-ON
Discuss add-on therapy with patient:¶
Evaluate reduction in CVD risk vs. additional cost & side effects
ADD-ON
ADD-ON
ADD-ON
Add-on Therapy
Ezetimibe as 1st line (BAS as alternative)
Ezetimibe 1st line (BAS as alternative) PCSK9 inhibitors as 2nd line (add on to other drugs)**
Ezetimibe (or BAS) or PCSK9 inhibitors
Monitor
• Response to statin Rx
• Health behaviours

AHA SCIENTIFIC STATEMENT

American Heart Association | American Stroke Association

Meditation and Cardiovascular Risk Reduction
A Scientific Statement From the American Heart Association

Glenn N. Levine, MD, FAHA, Chair; Richard A. Lange, MD, MBA, FAHA, Vice Chair; C. Noel Bairey-Merz, MD, FAHA; Richard J. Davidson, PhD; Kenneth Jamerson, MD, FAHA; Puja K. Mehta, MD, FAHA; Erin D. Michos, MD, MHS, FAHA; Keith Norris, MD; Indranill Basu Ray, MD; Karen L. Saban, PhD, RN, APRN, CNRN, FAHA; Tina Shah, MD; Richard Stein, MD; Sidney C. Smith, Jr, MD, FAHA; on behalf of the American Heart Association Council on Clinical Cardiology; Council on Cardiovascular and Stroke Nursing; and Council on Hypertension

Summary

Currently, the mainstay for primary and secondary prevention of CVD is ACC/AHA guideline-directed interventions. However, considering the generally low costs and risks associated with meditation, meditation may be considered as a reasonable adjunct to guideline-directed cardiovascular risk reduction by those so interested in this lifestyle modification, with the understanding that the benefits of such intervention remain to be better established

Sleep Duration and Quality: Impact on Lifestyle Behaviors and Cardiometabolic Health

A Scientific Statement From the American Heart Association

Associations Between Sleep Duration and Disorders and Incident CVD: Summary of Recent Meta-Analyses

Disorder	Short Sleep	Long Sleep	Insomnia	SDB
Diabetes mellitus	+	+	+	+
Hypertension	+	X	NA	NA
CHD	+	+	NA	X
Stroke	+	+	NA	+
Total CVD	X	+	+	+

The American Academy of Sleep Medicine recently released a statement in favor of-

≥7 hours of sleep per night for adults "to promote optimal health

Promotion of shared-decision-making and patient-centeredness in CV Care;

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doi:10.1016/j.jacc.2012.03.016

HEALTH POLICY STATEMENT

ACCF 2012 Health Policy Statement on Patient-Centered Care in Cardiovascular Medicine

A Report of the American College of Cardiology Foundation Clinical Quality Committee

Elements of Patient-Centered Care

1) Enhanced clinician–patient communication
2) Health literacy
3) Clinician-directed patient education
4) Assessment of patient-centered outcomes
5) Shared decision-making
6) Collaborative care planning
7) Collaborative goal setting
8) Patient empowerment and self-management

Barriers to Patient-Centered Care

1) **Lack of clinician time** or financial reimbursement and/or financial incentive that accommodate for additional clinician time to provide PCC needs to be developed and implemented.
2) **Non physician members of the care team should be empowered** to provide PCC to help manage the increasing demands of patients with chronic heart disease
3) Health illiteracy , social & cultural differences

Shared Decision Making: A Model for Clinical Practice

Sharing decisions, as opposed to clinicians making decisions on behalf of patients, is gaining increasing prominence in health care policy

SDM is defined as a framework in which 'clinicians and patients collaborate to select tests, treatments and management plans, based on clinical evidence and patients' informed choices.

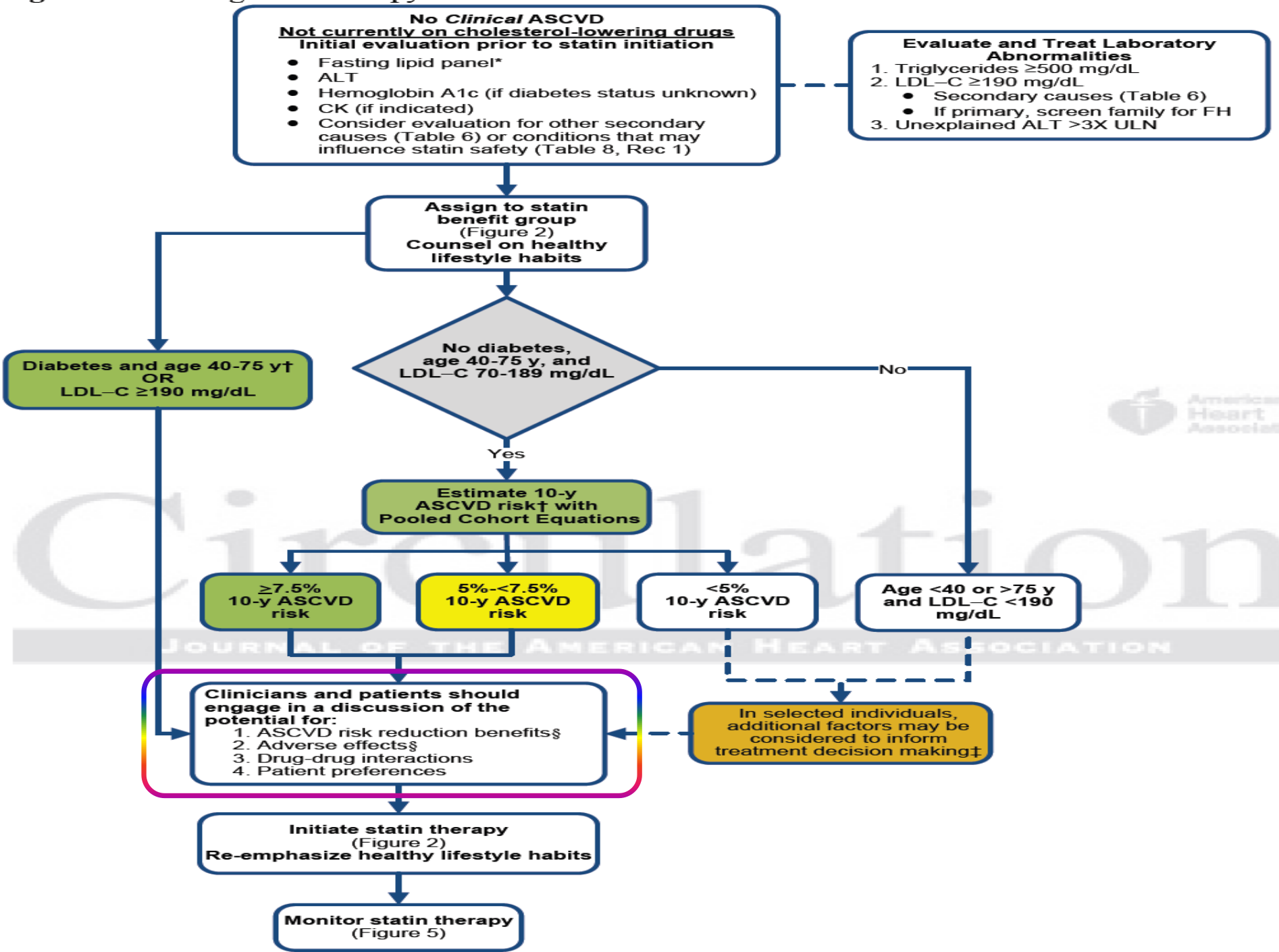
- It changes the role of the healthcare professional from paternalistic care to a coaching role, one responsible for the provision of evidence-based information about health problems, options for treatment and self-management, benefits and risk, together with decision-based counselling, in terms of goal setting and action planning.
- SDM recognizes patients' rights to make decisions about their care and are responsible for their own decisions and priorities in how they manage their condition, while being supported and coached
- personalized care plans that reflect their individual preferences should be written & implemented

The government and NHS commissioners :

1) Shared decision making will save money by encouraging and supporting patients to take more responsibility for their health and wellbeing, improving understanding of long-term conditions and reducing the need for recurrent crisis management.

2) Better adherence to LTI & Drugs will lead to less complications/admissions translating in to less cost

Figure 4. Initiating statin therapy in individuals ***without*** *clinical* ASCVD



NICE lipid recommendations

- The decision to commence statin therapy for CV risk reduction and the prevention of CV disease should follow an informed discussion between the patient and the physician
- Treatment of CV comorbidities should be commenced prior to commencement of statin therapy
- Determination of statin dose in settings where lipid modification therapy is indicated is based on dose-related LDL-cholesterol reduction
  - High-intensity (e.g. atorvastatin 20, 40 or 80 mg/day) reduces LDL-C by ≥40%
  - Medium-intensity (e.g. atorvastatin 10 mg/day) reduces LDL-C by 31–40%
- Secondary prevention: start 80 mg atorvastatin (high intensity therapy)
- Type 1 diabetes: offer 20 mg atorvastatin (high intensity therapy)
- Type 2 diabetes: offer 20 mg atorvastatin if 10 year CV risk ≥10% (QRISK2)
- Primary prevention (no diabetes): offer 20 mg atorvastatin if 10 year CV risk ≥10%
- Chronic kidney disease: offer 20 mg atorvastatin
- Non-statins not recommended for primary or secondary prevention

National Institute for Health and Care Excellence
Lipid modification July 2014 http://www.nice.org.uk/Guidance/CG181

DIETARY GUIDELINES FOR AMERICANS 2015-2020

EIGHTH EDITION

USDA

DietaryGuidelines.gov

2015-2020 Dietary Guidelines for Americans at a Glance

The *2015-2020 Dietary Guidelines* focuses on the big picture with recommendations to help Americans make choices that add up to an overall healthy eating pattern. To build a healthy eating pattern, combine healthy choices from across all food groups—while paying attention to calorie limits, too. Check out the 5 Guidelines that encourage healthy eating patterns:

1

Follow a healthy eating pattern across the lifespan. All food and beverage choices matter. Choose a healthy eating pattern at an appropriate calorie level to help achieve and maintain a healthy body weight, support nutrient adequacy, and reduce the risk of chronic disease.

Follow a healthy eating pattern over time to help support a healthy body weight and reduce the risk of chronic disease.

A Healthy Eating Pattern Includes:

A Healthy Eating Pattern Limits:

2

Focus on variety, nutrient density, and amount. To meet nutrient needs within calorie limits, choose a variety of nutrient-dense foods across and within all food groups in recommended amounts.

Choose a variety of nutrient-dense foods from each food group in recommended amounts.

Example Meal:

Lettuce & Celery — Vegetables — Grains — Whole-Grain Bread

Apples & Grapes — Fruits — Dairy — Fat-Free Milk

Chicken Breast & Unsalted Walnuts — Protein — Oils — Mayonnaise

3

Limit calories from added sugars and saturated fats and reduce sodium intake.

Consume an eating pattern low in added sugars, saturated fats, and sodium. Cut back on foods and beverages higher in these components to amounts that fit within healthy eating patterns.

Consume an eating pattern low in added sugars, saturated fats, and sodium.

Example Sources of:

4

Shift to healthier food and beverage choices. Choose nutrient-dense foods and beverages across and within all food groups in place of less healthy choices. Consider cultural and personal preferences to make these shifts easier to accomplish and maintain.

Replace typical food and beverages choices with more nutrient-dense options. Be sure to consider personal preferences to maintain shifts over time.

Example:

Meal A

Shift

Meal B

Figure 1-1.
Cup- & Ounce-Equivalents

Within a food group, foods can come in many forms and are not created equal in terms of what counts as a cup or an ounce. Some foods are more concentrated, and some are more airy or contain more water. Cup- and ounce-equivalents identify the amounts of foods from each food group with similar nutritional content. In addition, portion sizes do not always align with one cup-equivalent or one ounce-equivalent. See examples below for variability.

Vegetables

1/2 cup portion of green beans is equal to 1/2 cup-equivalent vegetables

1 cup portion of raw spinach is equal to 1/2 cup-equivalent vegetables

Fruits

1/2 cup portion of strawberries is equal to 1/2 cup-equivalent fruit

3/4 cup portion of 100% orange juice is equal to 3/4 cup-equivalent fruit

1/4 cup portion of raisins is equal to 1/2 cup-equivalent fruit

Grains

1 slice of bread is equal to 1 ounce-equivalent grains

1/2 cup portion of cooked brown rice is equal to 1 ounce-equivalent grains

Dairy

6 ounce portion of fat-free yogurt is equal to 3/4 cup-equivalent dairy

1 1/2 ounces portion of cheddar cheese is equal to 1 cup-equivalent dairy

Protein

1 large egg is equal to 1 ounce-equivalent protein foods

2 tablespoons of peanut butter is equal to 2 ounce-equivalents protein foods

1 ounce portion of walnuts is equal to 2 ounce-equivalents protein foods

1/2 cup portion of black beans is equal to 2 ounce-equivalents protein foods

4 ounce portion of pork is equal to 4 ounce-equivalents protein foods

Everyone has a role in helping to create and support healthy eating patterns in places where we learn, work, live, and play.

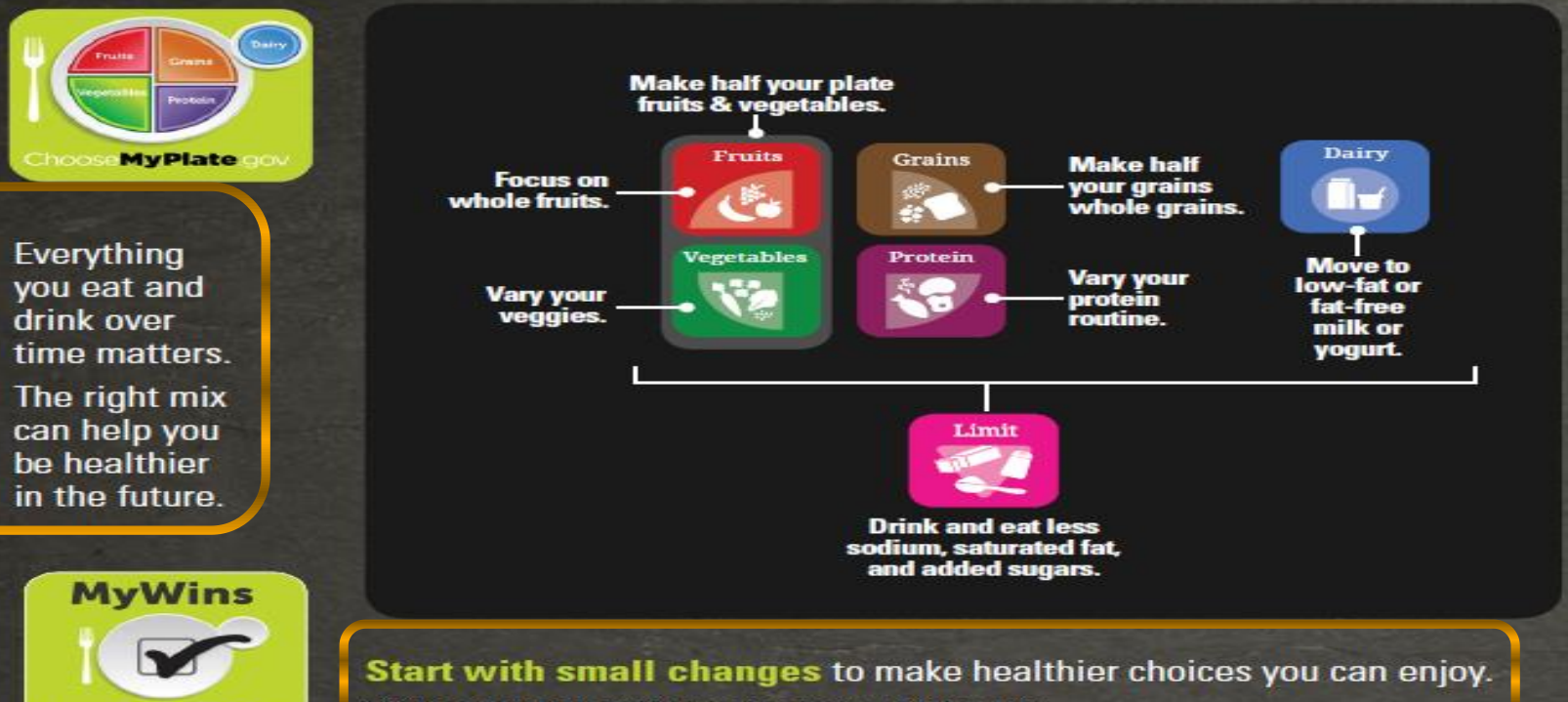
5

Support healthy eating patterns for all. Everyone has a role in helping to create and support healthy eating patterns in multiple settings nationwide, from home to school to work to communities.

Using MyPlate as a Guide To Support Healthy Eating Patterns

The *Dietary Guidelines* is developed and written for a professional audience. Therefore, its translation into actionable consumer messages and resources is crucial to help individuals, families, and communities achieve healthy eating patterns. MyPlate is one such example (Figure 3-2). MyPlate is used by professionals across multiple sectors to help individuals become more aware of and educated about making healthy food and beverage choices over time. Created to be used in various settings and to be adaptable to the needs of specific population groups, the MyPlate symbol and its supporting consumer resources at ChooseMyPlate.gov bring together the key elements of healthy eating patterns, translating the *Dietary Guidelines* into key consumer messages that are used in educational materials and tools for the public.

Figure 3-2.
Implementation of the *Dietary Guidelines* Through MyPlate



TAKE HOME MESSAGE

1) Life style interventions are beneficial in improving Cv risk and should be implemented as per guidelines
2) PCC & SDM should be widely implemented to improve adherence and decrease cost to provide optimal health & improve pt. satisfaction.
3) Choose a healthy dietary pattern over life span to maintain normal wt. and follow PA recommendations
4) Have 7 hours of sleep & relaxation which might help in maintaining optimal health

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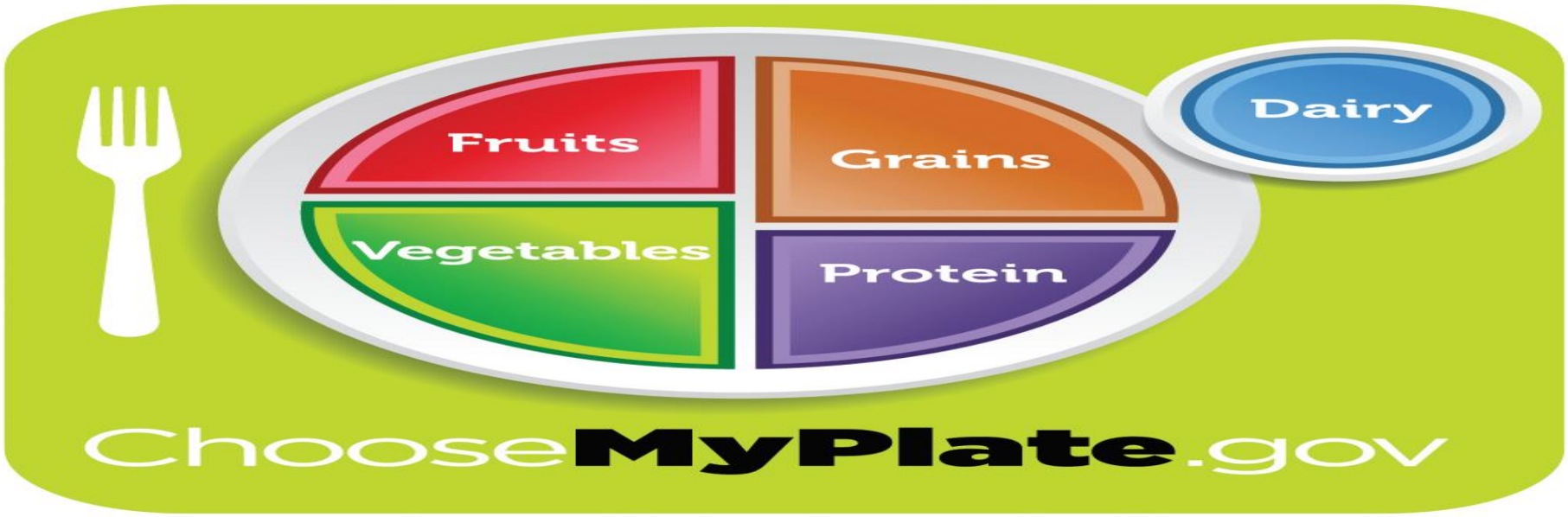
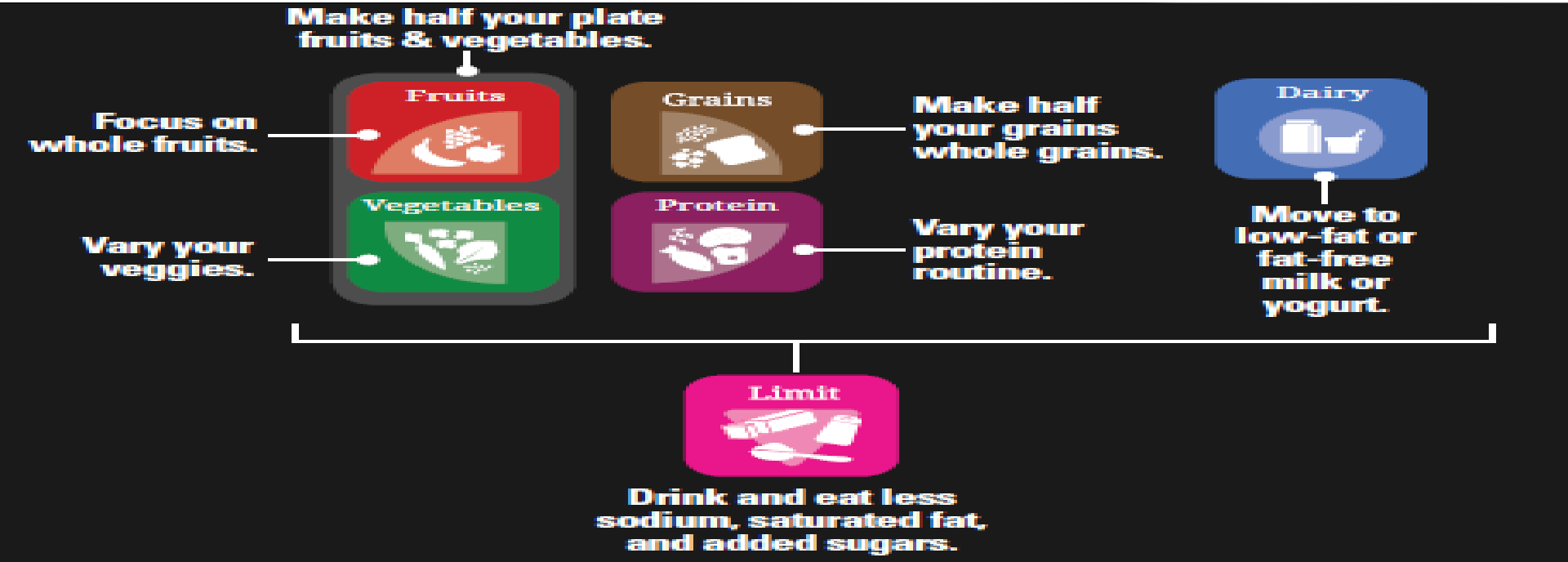
THANK YOU

Implementation of the Dietary Guidelines Through My Plate





Key to the figure

Deliberation	A process where patients become aware of choice, understand their options and have the time and support to consider 'what matters most to them': may require more than one clinical contact not necessarily face-to-face and may include the use of decision support and discussions with others.
Choice talk	Conveys awareness that a choice exists – initiated by either a patient or a clinician. This may occur before the clinical encounter.
Option talk	Patients are informed about treatment options in more detail.
Decision talk	Patients are supported to explore 'what matters most to them', having become informed.
Decision Support	Decision support as designed in two formats: 1) brief enough to be used by clinician and patient together and 2) more extensive, designed to be used by patients either before or after clinical encounters (paper, DVD, web).
Initial Preferences	Awareness of options leads to the development of initial preferences, based on existing knowledge. The goal is to arrive at informed preferences.
Informed Preferences	Personal preferences based on 'what matters most to patients', predicated on an understanding of the most relevant benefits and harms.

Figure 1. A shared decision making model.

Key Recommendations:

Consume a healthy eating pattern that accounts for all foods and beverages within an appropriate calorie level.

A healthy eating pattern includes:[1]

- A variety of vegetables from all of the subgroups—dark green, red and orange, legumes (beans and peas), starchy, and other
- Fruits, especially whole fruits
- Grains, at least half of which are whole grains
- Fat-free or low-fat dairy, including milk, yogurt, cheese, and/or fortified soy beverages
- A variety of protein foods, including seafood, lean meats and poultry, eggs, legumes (beans and peas), and nuts, seeds, and soy products
- Oils

Effect of lifestyle interventions on cardiovascular risk factors among adults without impaired glucose tolerance or diabetes: A systematic review and meta-analysis

Xuanping Zhang[1]*, Heather M. Devlin[1☯], Bryce Smith[1☯], Giuseppina Imperatore[1☯], William Thomas[2☯], Felipe Lobelo[3☯], Mohammed K. Ali[3☯], Keri Norris[4☯], Stephanie Gruss[1☯], Barbara Bardenheier[1☯], Pyone Cho[1☯], Isabel Garcia de Quevedo[5☯], Uma Mudaliar[3☯], Christopher D. Jones[6☯], Jeffrey M. Durthaler[6☯], Jinan Saaddine[1☯], Linda S. Geiss[1☯], Edward W. Gregg[1☯]

Conclusions:

1) Our findings demonstrated that among adults without IGT or diabetes, PA and D interventions, especially combined
2) Can significantly improve SBP, DBP,
3) TC, LDL-C, HDL-C, and TG,
4) Glucose regulation and weight loss,
5) These risk reductions may further prevent CVD events