

PREVENTING STROKE

WHAT CAN WE CONTROL?

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“

I'm scared of having another stroke...what can I do to stop this from happening?

- *All of my patients!*

THINGS I CAN'T
CONTROL
=
NON-MODIFIABLE

➤ Age (older)

➤ Gender



➤ Ethnicity

➤ Genes/family history



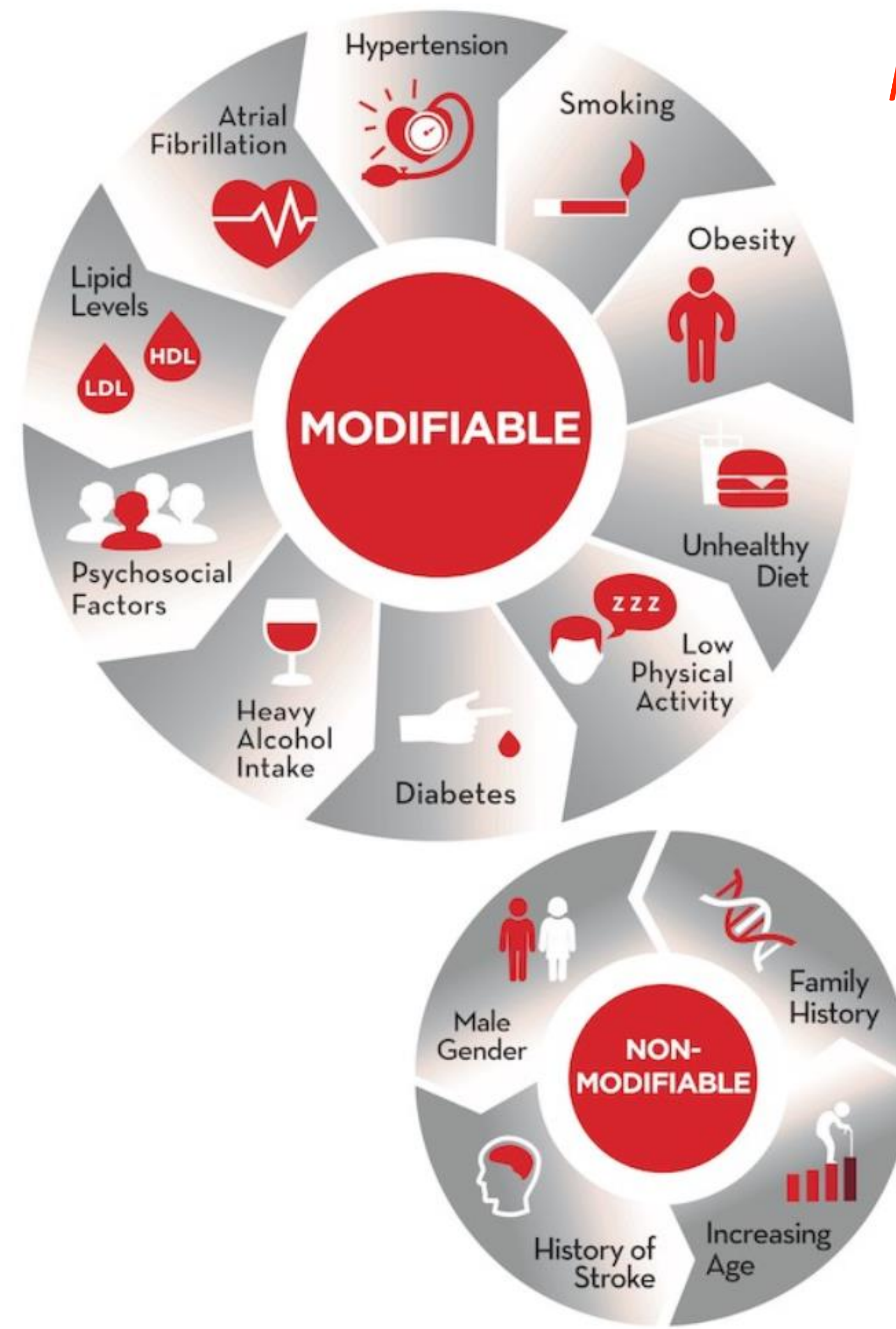
➤ Having had a stroke/TIA



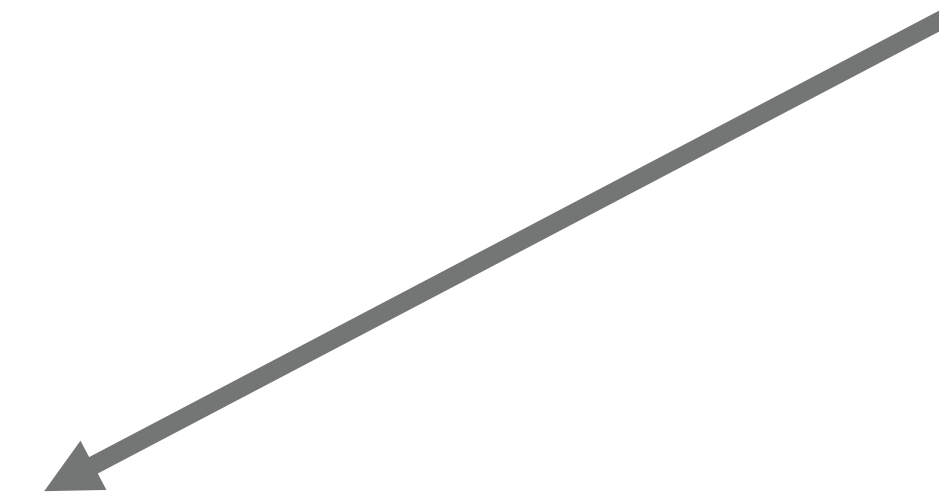


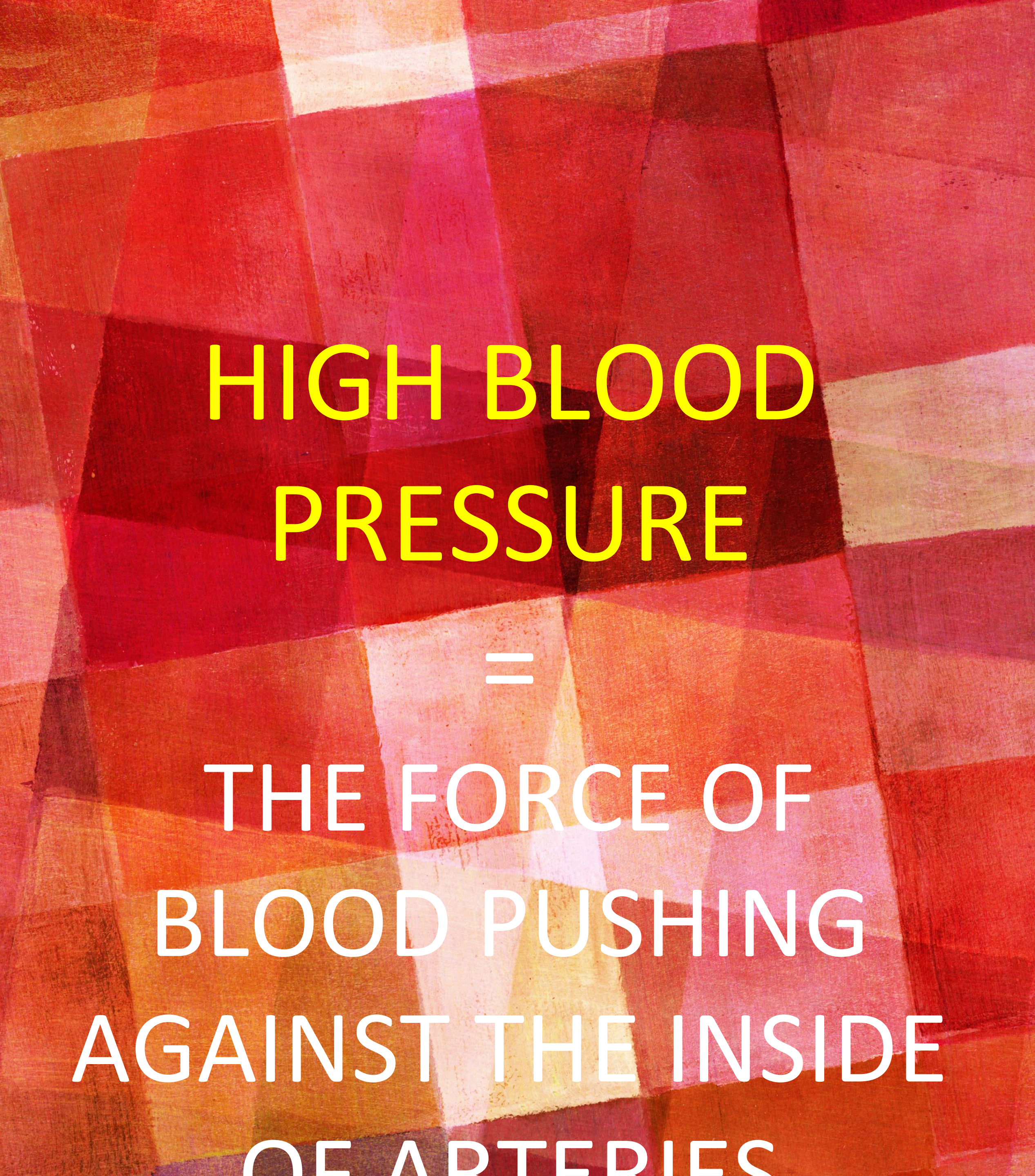
THINGS I CAN
CONTROL
=
MODIFIABLE

-
- Blood pressure
 - Cholesterol/lipids
 - Blood sugars (if diabetic)
 - Weight
 - Diet
 - Exercise
 - Smoking
 - Alcohol
 - Sleep apnea treatment
 - Atrial fibrillation
 - **Taking your medications**
 - (Stress management)



Important for general good health





HIGH BLOOD
PRESSURE

=

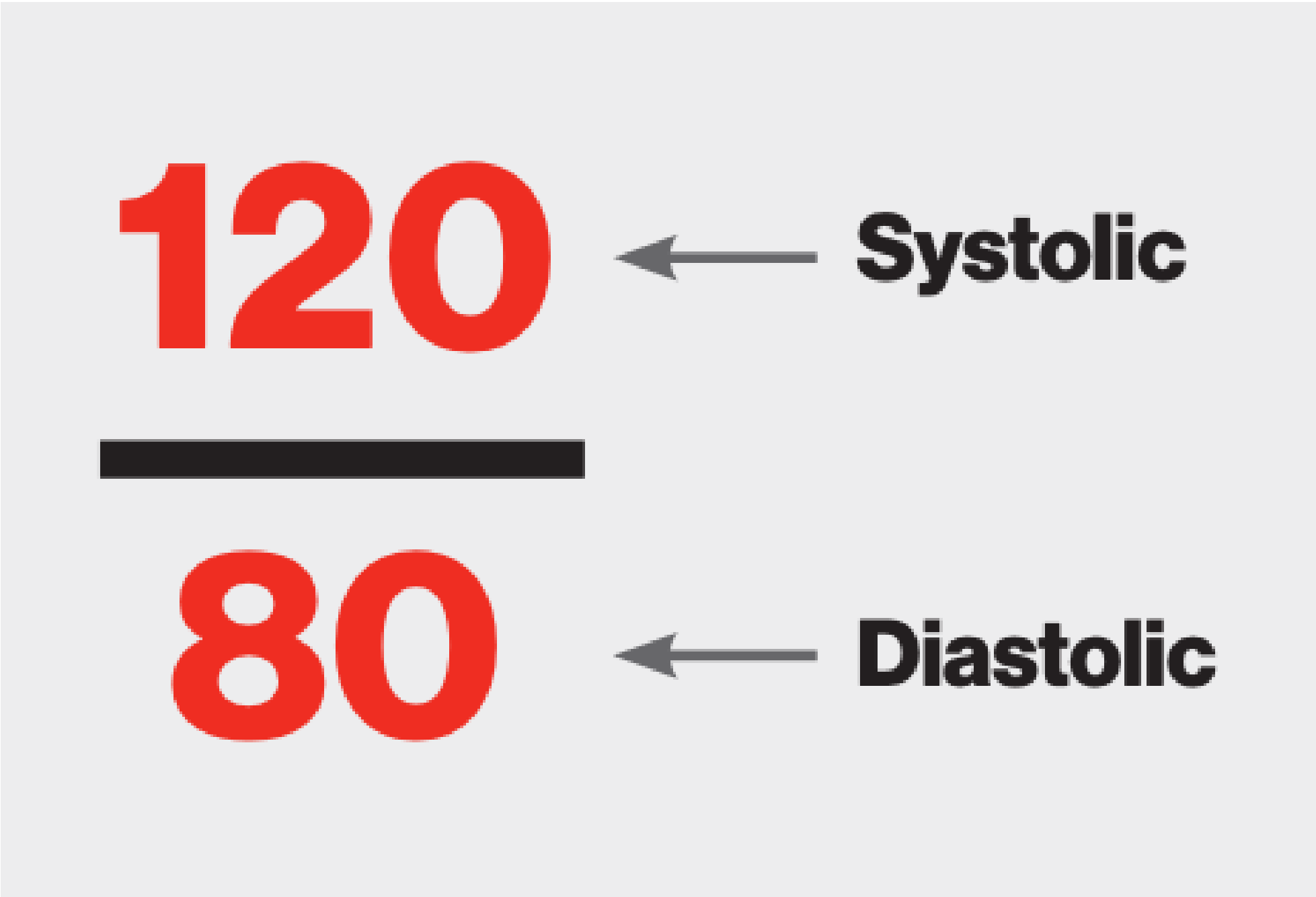
THE FORCE OF
BLOOD PUSHING
AGAINST THE INSIDE
OF ARTERIES

High blood pressure:

- The #1 risk factor for **stroke**
- A major risk factor for **heart disease**

HIGH BLOOD PRESSURE

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The diagram shows a blood pressure reading of 120/80. The number 120 is in large red font, with a horizontal line below it. To the right of 120 is a grey arrow pointing left towards the number, followed by the word 'Systolic' in bold black font. Below the line is the number 80 in large red font. To the right of 80 is a grey arrow pointing left towards the number, followed by the word 'Diastolic' in bold black font. The entire diagram is enclosed in a light grey rectangular box.

120 ← **Systolic**

80 ← **Diastolic**

Goal = less than **140/90**

If diabetic = less than **130/80**

HIGH BLOOD PRESSURE

► Treatments:

► Medications

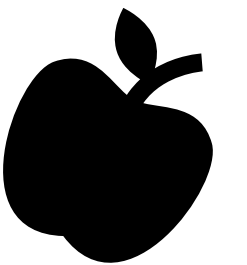


- MUST TAKE AS PRESCRIBED!!!
- We can't usually feel when our blood pressure is high
- Examples: Ramipril and amlodipine

HIGH BLOOD PRESSURE

► Treatments

- Exercise
- Diet
- Weight loss
- CPAP
- Quitting smoking
- Little/no alcohol





HIGH CHOLESTEROL

What is blood cholesterol?

Cholesterol is a fat found in the blood. There are two main types of blood cholesterol: high density or HDL cholesterol and low density or LDL cholesterol.

HIGH CHOLESTEROL

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* Cholesterol is naturally made by your body but is increased through diet



LDL = **BAD** cholesterol that can form fatty deposits and block blood flow

* We want this as **low** as possible (less than **2**)

HDL = **GOOD** cholesterol as it helps to remove excess cholesterol from the body

* We want this as **high** as possible

HIGH CHOLESTEROL

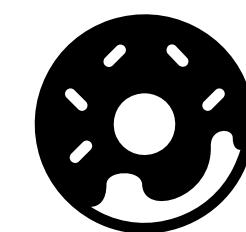
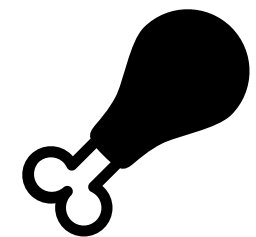
-
- **Dietary cholesterol** — found in meat, poultry, eggs and dairy products — has less impact on blood cholesterol than foods with saturated and trans fat.



- MYTH!

HIGH CHOLESTEROL

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- Foods containing **saturated fat**:
processed foods, fatty meats, full-fat milk products, butter and lard.
 - Foods containing **trans fat**:
margarines, deep-fried foods and many packaged crackers, cookies and commercially baked products.



HIGH CHOLESTEROL

► Treatments:

► Medications



► MUST TAKE AS PRESCRIBED!!!

► We can't feel when our cholesterol is high

► Examples: Crestor or Lipitor

HIGH CHOLESTEROL



1. Eat a healthy balanced diet

- Choose a variety of whole and minimally processed foods at every meal. This means foods that are either not packaged or have few ingredients.

HIGH CHOLESTEROL



2. Cook and eat more meals at home

Cooking at home allows you to select whole and minimally processed foods.



3. Make eating out a special occasion

Eating out usually results in you consuming large amounts of food, more fat, salt and sugar.

HIGH CHOLESTEROL



4. Achieve and maintain a health weight

Being overweight or obese increases your LDL or bad cholesterol level, lowers your HDL or good cholesterol level and raises your triglyceride levels. Reducing your weight is a positive way to reduce your blood cholesterol levels.

HIGH CHOLESTEROL



5. Physical activity

Being physically active will help improve your cholesterol levels and general heart health. Aim for 150 minutes a week. That is less than 25 minutes per day! Choose activities you like. Cycling, swimming, gardening and walking are great ways to keep active.



6. Be smoke-free

Smoking is a risk factor for heart disease. It reduces the level of your HDL 'good' cholesterol. Once you quit, within a few weeks your HDL levels will start to rise.

DIET



- ▶ **Choose a variety of natural/whole foods at each meal**
- ▶ **Fewer highly processed foods** → sweets, sugary drinks, processed meats, and snack foods (sugar <10% calories)
- ▶ **Lots of vegetables and fruit**
 - ▶ Choose fresh or frozen unsweetened fruit, or fruit canned in water without added sugars/sweeteners
 - ▶ Fresh or frozen vegetables without added sauce, or canned vegetables with no added salt

DIET



- **Fat-free or skim milk** and alternatives
- Dietary and soluble **fibre** → whole grains, cereals, seeds
- **Lean meats and protein from plant sources** which are low in saturated and trans fats, low in cholesterol (< 200 mg/day)
- **Low sodium** (max 2000 mg/day)

DIET



Canada's Food Guide



DIET

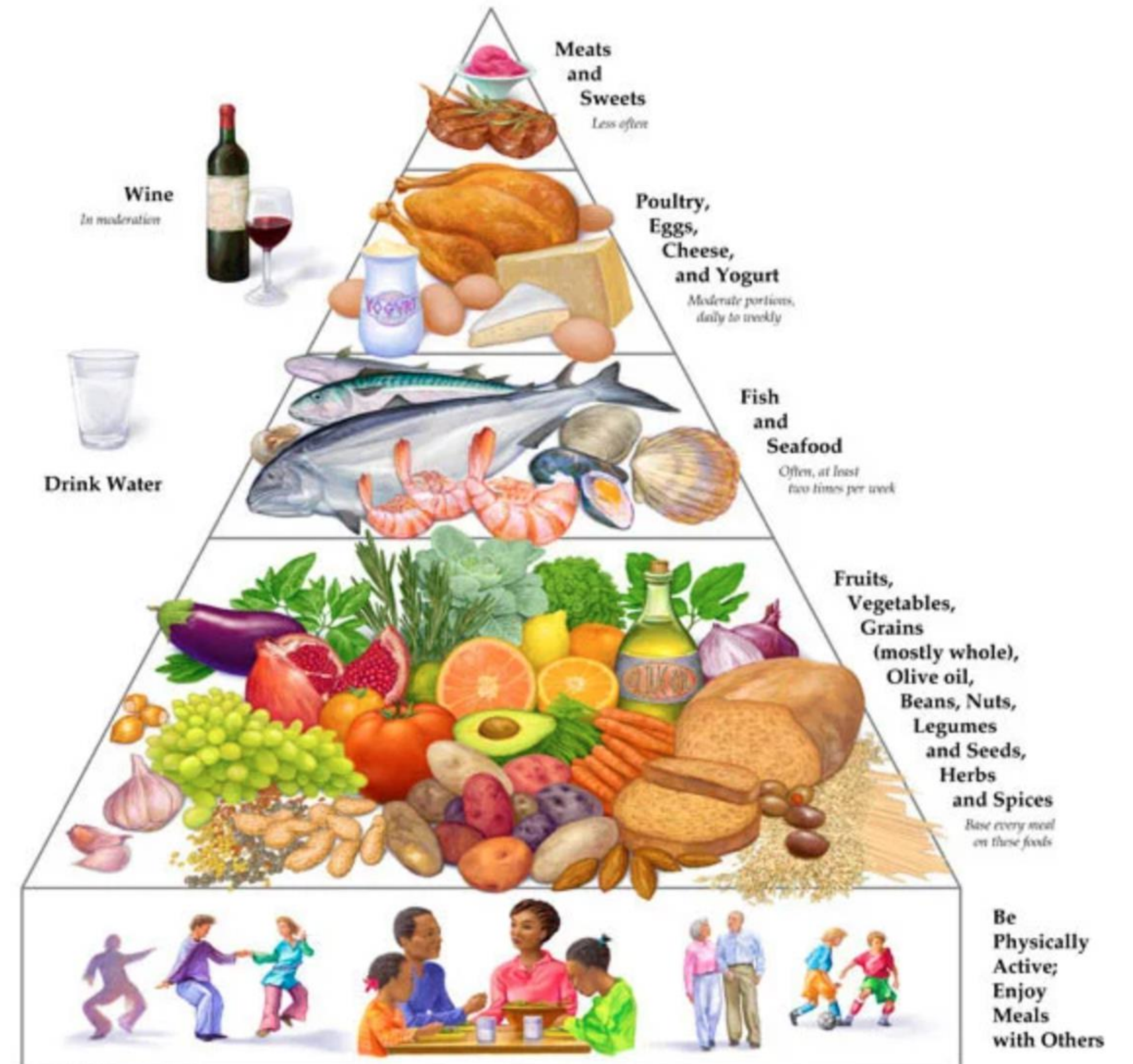


Illustration by George Middleton

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DIABETES

-
- HbA1c should be less than **7%**
 - **Monitor blood sugars** as directed
 - Take prescribed **medications**
 - Ex. Metformin
 - Make **dietary** changes, **exercise** regularly, lose **weight**

SMOKING



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- Increases blood pressure
 - Increases development of atherosclerosis
 - Decreases good cholesterol

SMOKING



-
- Quitting is hard!
 - There is assistance available
 - Medications like Champix and Wellbutrin
 - Nicotine replacement → gum, lozenges, inhalers, patches
 - 811/local pharmacy → free supplies
 - Ask your doctor for help!

EXERCISE



-
- Two parts:
 - Decrease time spent **sedentary**
 - Increase formal **exercise**
 - Look for opportunities to be active every day:
 - Playing outside with kids, raking leaves, taking the stairs

EXERCISE



-
- Whole body exercise
 - Moderate intensity:
 - Brisk walking
 - Jogging
 - Swimming
 - Cycling
 - 4 to 7 days/week
 - Accumulate 150+ mins/week
 - Episodes of 10 mins+

WEIGHT



-
- “If you are overweight, **losing even 5% to 10% of your weight** can help to reduce your blood pressure as well as dramatically decrease your chances of having a stroke or heart attack”

WEIGHT



-
- Goal is:
 - Body mass index (BMI) of 18.5 to 24.9 kg/m²
 - Waist circumference of <88 cm for women and <102 cm for men
 - Set healthy weight loss goals and develop individualized plans to achieve goals

WEIGHT



-
- Start with **small changes** that you can maintain
 - This is better than making lots of changes at once, and not being able to keep them up

MEDICATIONS



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1. **Baby Aspirin** (81 mg)- most strokes
 2. **Blood thinner** if atrial fibrillation or clot
 3. **Blood pressure** meds (if high)
 4. **Cholesterol** meds (if high)
 5. **Diabetes** meds (if diabetic)

YOUR DOCTOR'S JOB



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- Order **imaging** tests:
 - CT scan of brain
 - MRI of brain
 - Ultrasound of neck vessels

YOUR DOCTOR'S JOB



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- Order **blood** tests:
 - Lipid blood test
 - Diabetes blood test
 - Other

YOUR DOCTOR'S JOB



➤ Other things:

- Measuring blood pressure
- Echocardiogram (ultrasound of heart)
- Holter monitor (heart monitor)
- Sleep apnea screen

YOUR DOCTOR'S JOB



➤ Prescribe medications:

- Explain reason for medication, side effects and interactions
- Answer your questions
- Provide resources

YOUR JOB



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- Listen and ask questions
 - Patients who **understand** their health **do better!**
 - Monitor your blood pressure (if this is asked of you)
 - Know your numbers!
 - Know your medications!
 - Stay in touch with your healthcare team

YOUR JOB



- 1** Place your medication out in the open where you can see it – that might be next to where you eat or next to your toothbrush (but away from children and pets).
- 2** Use a pill organizer. They have a separate spot for you to put your pills for each day. Some have spots for different times of the day. A quick look can tell you if you have forgotten a pill or need to take one.
- 3** Ask your pharmacist if you can get your medication in blister packs, also called bubble packs. Some pharmacies will make these for you with enough medication for a week or more.
- 4** Take your medication at the same time every day. Ask your healthcare provider what time is best.
- 5** Put a daily reminder alarm on your watch, cellphone, tablet or computer.

YOUR JOB



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- **Make lifestyle changes**
 - This can be **hard**, ask for help!
 - Physiotherapist, kinesiologist or trainer
 - Nutritionist/Dietician
 - Counsellor
 - Nurse
 - Friends and Family!

RESOURCES



Exercise/Activity:

1. GRASP for hand exercises:
<https://neurorehab.med.ubc.ca/grasp>, also offered by the Stroke Recovery Association of B.C. Email about the next program:
office@strokerecoverybc.ca
2. TIME (Together In Movement and Exercise):
<https://www.uhn.ca/TorontoRehab/Clinics/TIME/Documents/TIME-Exercise-Wellness-Videos-for-People-with-Mobility-Challenges.pdf>
3. FAME (Fitness and Mobility Exercise):
<https://fameexercise.com/>
4. SAIL (balance):
<https://findingbalancebc.ca/exercise/sail-home-activity-program>

RESOURCES



Exercise/Activity:

5. Gentle Movement at Home:
<https://www.painbc.ca/gentle-movement-at-home>
6. Stroke Recovery Association of BC:
<https://strokerecoverybc.ca/virtual-programs/>
 - Chair exercises, twice a week
 - Exercise program on demand (lower and upper body)
<https://youtu.be/NyVD-St1S8E> and
https://youtu.be/9Ap7_wG38dM

RESOURCES



Spasticity:

1. <http://www.beyondstroke.ca/light-exercises/>

RESOURCES



Blood Pressure:

1. <https://www.heartandstroke.ca/-/media/1-stroke-best-practices/resources/patient-resources/hif20-blood-pressure-booklet-en-v3.ashx?rev=d55b361c52bd4bd7ab87341d9bf47424>
2. <https://www.heartandstroke.ca/-/media/1-stroke-best-practices/resources/patient-resources/en-blood-pressure-wallet-card-v3-web.ashx?rev=52205f606568440ab096b17381ae73c1>

RESOURCES



Cholesterol:

1. <https://www.heartandstroke.ca/-/media/1-stroke-best-practices/resources/patient-resources/hs-f20-cholesterol-brochure-en-v3.ashx?rev=159c7c368b5e43799dc8454519a934fc>

RESOURCES



Diet:

1. <https://www.heartandstroke.ca/articles/6-things-you-can-learn-from-the-new-food-guide>

RESOURCES



Stop Smoking:

1. <https://www.healthlinkbc.ca/health-feature/bc-smoking-cessation-program>

RESOURCES



General Stroke Prevention:

1. https://www.heartandstroke.ca/-/media/1-stroke-best-practices/resources/patient-resources/002-17_csbp_post_stroke_checklist_85x11_en_v1.ashx?rev=748ae8f5d51743fa8c7628b773f0f36b
2. <https://www.heartandstroke.ca/stroke/recovery-and-support/work-with-your-healthcare-team>
3. <https://www.stroke.org/en/about-stroke/stroke-risk-factors>

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- The doctor to be referred to regarding cholesterol medications is an **endocrinologist** at a **Lipid Clinic**