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DISEASE SUSCEPTIBILITY DNA TEST REPORT

Code number: SM4321

Sex: Male

Country: USA

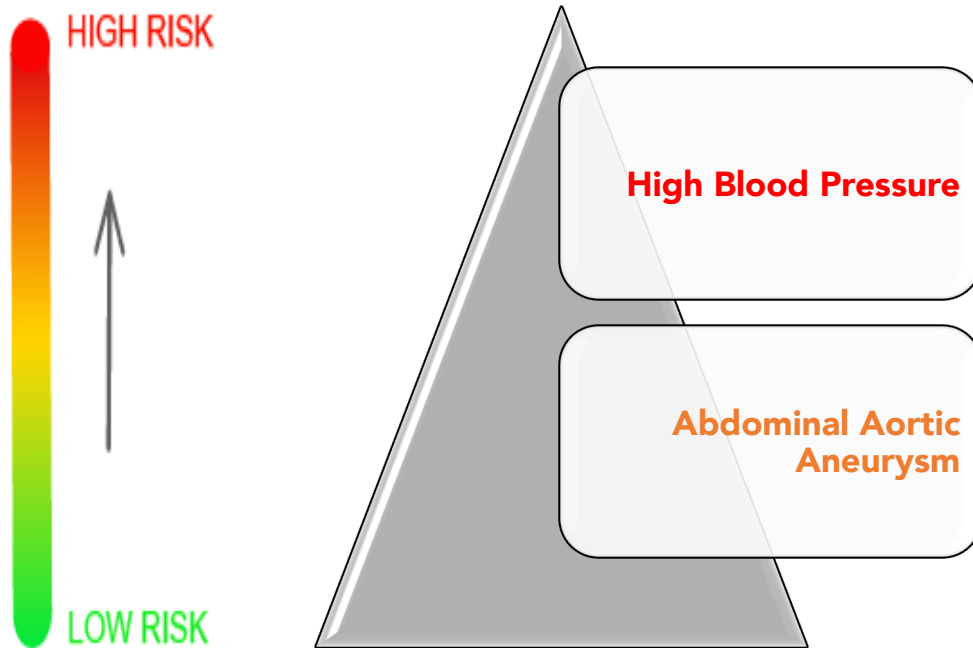


Map My Gene LLC

Prediction - Prevention - Personalization

Health Risk Report

Genetic Risks Ranging From Medium-High to High			
Disease	Risk Index	Risk Level	Degree of risk
High Blood Pressure	1.25	9	High
Abdominal Aortic Aneurysm	1.37	7	Medium-High



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Disease Risk Assessment

Cardiovascular Disorders				
No.	Disease	Risk	Risk	Degree of risk
1	Thromboembolism	0	0	Low
2	Intracranial Aneurysm	1.1	6	Medium
3	Peripheral Arterial Disease	0	0	Low
4	Atherosclerosis	0	0	Low
5	Atrial Fibrillation	0.57	1	Low
6	Hypertrophic Cardiomyopathy	0.75	4	Medium
7	Rheumatic Heart Disease	0.92	4	Medium
8	Abdominal Aortic Aneurysm	1.37	7	Medium-High
9	High Blood Pressure	1.25	9	High
10	Cardiovascular Disease	0.68	3	Low
11	Dilated Cardiomyopathy	0	0	Low
12	Myocardial infarction	0.43	2	Low
13	Heart Failure	1.38	0	Low
14	Vascular Dementia	0.35	1	Low
15	Stroke	0.3	1	Low

Respiratory Disorders				
No.	Disease	Risk Index	Risk Level	Degree of risk
16	Tuberculosis (TB)	0.75	3	Low
17	Pulmonary Fibrosis	0	0	Low
18	Chronic sinusitis	0	0	Low
19	Chronic Obstructive Pulmonary Disease (COPD)	0.42	2	Low
20	Infections Of The Upper Respiratory Tract	0	0	Low
21	Asthma	0	0	Low
22	Lung Cancer	0.18	0	Low

Biliary Disorders

No.	Disease	Risk Index	Risk Level	Degree of risk
23	Non-alcoholic Fatty Liver	1.45	4	Medium
24	Liver Fibrosis	1.25	4	Medium
25	Cirrhosis	1.25	4	Medium
26	Alcoholic Hepatitis	2.25	6	Medium
27	Primary Biliary Cirrhosis	0.77	3	Low
28	Cancer Of Biliary Duct	0.62	1	Low
29	Chronic Pancreatitis	2	5	Medium
30	Pancreatic Cancer	0	0	Low
31	Liver Cancer	0	0	Low
32	Gallbladder Cancer	0.81	2	Low
33	Gallstones	0	0	Low

Digestive Disorders

No.	Disease	Risk Index	Risk Level	Degree of risk
34	Crohn's Disease	0	0	Low
35	Ulcerative Colitis (UC)	0.6	3	Low
36	Chylous Diarrhoea	0	0	Low
37	Chronic Gastritis	0	1	Low
38	Gastric Ulcer	0	1	Low
39	Gastric Cancer	0.85	3	Low
40	Colon Rectal Cancer	0.8	3	Low

Cerebral/ Neurological Disorders

No.	Disease	Risk Index	Risk Level	Degree of risk
41	Cerebral Cancer	0	0	Low
42	Schizophrenia	0.92	3	Low

43	Alzheimer's Disease (AD)	0.74	1	Low
44	Parkinson	0.5	2	Low
45	Obsessive Compulsive Disorder (OCD)	0	0	Low
46	Social Phobia	0.62	3	Low
47	Diabetic Neuropathy	2.43	6	Medium
48	Neuroblastoma	0.96	3	Low
49	Multiple Sclerosis	0	0	Low
50	Sciatica	0	0	Low

Eye/Skin/Mouth/Nose/Ear Disorders

No.	Disease	Risk Index	Risk Level	Degree of risk
51	Age-related Macular Degeneration	1	0	Low
52	Glaucoma	0.5	2	Low
53	Diabetic Retinopathy	1.43	1	Low
54	Hearing Loss	0	0	Low
55	Otitis	0.75	3	Low
56	Skin Cancer	2.04	5	Medium
57	Malignant Melanoma	0	0	Low
58	Psoriasis	0	0	Low
59	Oral Cancer	0	0	Low
60	Periodontitis	0	0	Low
61	Laryngeal Cancer	1.1	4	Medium
62	Nasopharyngeal Cancer	0.5	1	Low
63	Esophageal Cancer	0.67	2	Low

Endocrine Disorders

No.	Disease	Risk Index	Risk Level	Degree of risk
64	Type-2 Diabetes	0.65	3	Low
65	Type-1 Diabetes	0.32	1	Low
66	Hypercholesterolemia	1	4	Medium

67	Hyperlipidemia	1.3	3	Low
68	Thyroid Cancer	0	0	Low
69	Hypothyroidism	0.5	3	Low
70	Hyperparathyroidism	0.5	3	Low
71	Goiter	0.5	3	Low
72	Graves' Disease	0.45	1	Low

Urinary Disorders

No.	Disease	Risk Index	Risk Level	Degree of risk
73	IgA Nephropathy	0	0	Low
74	Chronic Kidney Disease	0.83	2	Low
75	Kidney Stones	1.32	6	Medium
76	Diabetic Nephropathy	0	0	Low
77	Bladder Cancer	1.13	5	Medium
78	Renal Carcinoma	1.07	4	Medium

Musculo-Skeletal Disorders

No.	Disease	Risk Index	Risk Level	Degree of risk
79	Rheumatoid Arthritis	0.57	2	Low
80	Ankylosing Spondylitis	0.75	1	Low
81	Osteoarthritis	0	0	Low
82	Osteoporosis	0.36	1	Low
83	Gout	1.7	4	Medium
84	Amyotrophic Lateral Sclerosis	0	0	Low
85	Myasthenia Gravis (MG)	0	0	Low

Male-Related Disorders

No.	Disease	Risk Index	Risk Level	Degree of risk
86	Prostate Cancer	0	0	Low

87	Testicular Cancer	0.5	1	Low
88	Male Pattern Hair Loss	1	4	Medium
89	Benign Prostatic Hyperplasia (BPH)	2	5	Medium

Others

No.	Disease	Risk Index	Risk Level	Degree of risk
90	Lymphoma Cancer	0	0	Low
91	Hodgkin's Lymphoma	0.62	3	Low
92	Non-Hodgkin's Lymphoma	0	0	Low
93	Leukemia	0.5	2	Low
94	Aplastic Anemia	0	0	Low
95	Sjögren's Syndrome	1.1	4	Medium
96	Systemic Lupus Erythematosus	0.4	1	Low
97	Chronic Hepatitis B	0.79	2	Low
98	Myeloma Multiplex	1.45	3	Low
99	Resistance to HIV & AIDS	0	0	Low
100	Hemochromatosis	0	0	Low

High Blood Pressure (Hypertension)

The force that your heart produces in your arteries when it pumps is called your blood pressure. Normal blood pressure for an adult is 130/85 mmHg. If you have a blood pressure measurement that is consistently more than 140/90mmHg, you have a high blood pressure. High blood pressure can also be called hypertension, both words mean the same thing.

Patient may feel headache, faint, tinnitus, palpitation and so on in earlier time. The symptoms don't always parallel with the blood pressure. Consistently high blood pressure causes the heart to work harder than it should and can damage the coronary arteries, the brain, the kidneys, and the eyes.

Hypertension is commonly treated with medication, and a combination of two or more drugs is common. Drugs used to control hypertension include diuretic, beta-blockers, calcium channel blockers, ACEI and so on.

Signs and Symptoms

1. Progressive Hypertension

- a) Cerebral symptoms: headache, dizziness and cranial distention are common neurologic symptoms of hypertension. It may be accompanied by heaviness in the head or stiffness in neck. Classical complication of hypertension is stroke or Cerebral Infraction, which can be classified into Ischemic stroke and Hemorrhagic stroke.
- b) Cardiac symptoms: Prolonged hypertension increase the burden of left atrium, leading to hypertrophy and dilatation of left atrium, give rise to hypertensive heart disease. As hypertension is closely associated with arteriosclerosis, some patients may have compounded symptoms from the underlying arteriosclerosis and presented with symptoms of angina and myocardial infraction.
- c) Renal Symptoms.

2. Aggressive hypertension

Basic clinical symptoms are similar to progressive hypertension, but are characterized as much more prominent headache and other symptoms at much greater severity, rapid onset, rapid degeneration of retina and renal functions...etc.

3. Critical Hypertension

- a) Hypertensive crisis: during the progression of disease, patients may have severe headache, dizziness, vertigo, or accompanied by nausea, vomiting, chest depression, palpitation, short breath, blur vision, stomachache, hyperuria, hypo-uria or dysuria...etc.
- b) Hypertensive encephalopathy: patients with aggressive or severe progressive hypertension are usually presented as sudden increase of blood pressure during the attack, at systolic and diastolic level. This is especially prominent in diastolic pressure. Patients will have severe headache, dizziness, nausea, vomit, anxiety, slow and weak pulsation. These may be accompanied by dyspnea, visual disturbances, amaurosis, spasm, mastiness or even coma. Some may experience transient unilateral paralysis, aphasia or sensational disorders of

unilateral body.

Prevention

1. Stay relaxed and optimistic with good balance of work and rest. Avoid getting yourself too much stress.
2. Actively take part in recreational and physical activities. Mental laborers should emphasize in scheduled physical activities to maintain the normal functions of central nervous system.
3. **Quit smoking and avoid being obese** are significant to the prevention of hypertension.
4. **Exercise moderately and regularly** and **limit alcohol and Sodium** intake.
5. Monitor the blood pressure regularly.

Nutritional Recommendations

1. **Reduce sodium** (salt) intake and emphasize in insipidity in daily meals.
2. Moderate increase in the intake of **Potassium and Calcium**. Foods that are rich in potassium are banana and spinach. Tofu, sardines and seaweed are rich in calcium.
3. Eat a high-fiber diet and take supplemental fiber. Oatmeal or oat bran is a good source of fiber.
4. Eat plenty of fruits and vegetables such as apples, asparagus, bananas, broccoli, cabbage, cantaloupe, eggplant, garlic, grapefruit, green leafy vegetables, melons, peas, prunes, raisins, squash, and sweet potatoes.
5. Include fresh "live" juices in the diet. The following juices are healthful and can help lower the blood pressure: beet, carrot, celery, currant, cranberry, citrus fruit, parsley, spinach, and watermelon.
6. Eat grains like brown rice, buckwheat, millet, and oats instead of white rice.
7. Take 2 tablespoons of flaxseed oil daily.
8. Avoid all animal fats. Bacon, beef, bouillons, animal liver/internal organs, corned beef, dairy products, gravies, pork, sausage, smoked or processed meats and fried foods are to be limited.
9. Limit foods that are high in cholesterol.
10. Limit alcohol, caffeine, and tobacco.
11. Avoid pickled and smoked foods which are high in sodium.
12. Fast for two to five days each month. Periodic cleansing fasts help to detoxify the body and lower the blood pressure.
13. **Get regular moderate exercises**. Take care not to overexert yourself, especially in hot or humid weather.
14. Do not take supplements containing the amino acids phenylalanine or tyrosine which can raise the blood pressure.
15. Supplement **Calcium & Magnesium, Zinc, Salmon Omega 3/Krill oil/Flaxseed oil, Baby Bitter gourd, Vitamin C & B Complex, Resveratrol and Garlic**.

Abdominal Aortic Aneurysm

Abdominal aortic aneurysm (also known as AAA, pronounced "triple-a") is a localized dilatation (ballooning) of the abdominal aorta exceeding the normal diameter by more than 50 percent, and is the most common form of aortic aneurysm. Approximately 90 percent of abdominal aortic aneurysms occur infrarenally (below the kidneys), but they can also occur pararenally (at the level of the kidneys) or suprarenally (above the kidneys). Such aneurysms can extend to include one or both of the iliac arteries in the pelvis.

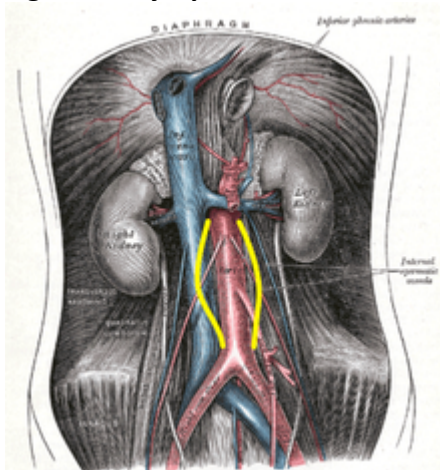
Abdominal aortic aneurysms occur most commonly in individuals between 65 and 75 years old and are more common among men and smokers. They tend to cause no symptoms, although occasionally they cause pain in the abdomen and back (due to pressure on surrounding tissues) or in the legs (due to disturbed blood flow). The major complication of abdominal aortic aneurysms is rupture, which can be life-threatening, as large amounts of blood spill into the abdominal cavity, and can lead to death within minutes.

Symptomatic and large aneurysms (i.e., those greater than 5.5 cm in diameter) are considered for repair by one of several surgical methods. There is moderate evidence to support screening in individuals with risk factors for abdominal aortic aneurysms.

Classification

Abdominal aortic aneurysms are commonly divided according to their size and symptomatology. An aneurysm is usually defined as an outer aortic diameter over 3 cm (normal diameter of the aorta is around 2 cm). If the outer diameter exceeds 5.5 cm, the aneurysm is considered to be large. A ruptured AAA is a clinical diagnosis involving the presence of the triad of abdominal pain, shock and a pulsatile abdominal mass. If these conditions are present, indicating AAA rupture, no further clinical investigations are needed before surgery.

Signs and symptoms



A plate from Gray's Anatomy with yellow lines depicting the most common infrarenal location of the AAA.

The vast majority of aneurysms are asymptomatic. However, as abdominal aortic aneurysms expand, they may become painful and lead to pulsating sensations in the abdomen or pain in the chest, lower

back, or scrotum. The risk of rupture is high in a symptomatic aneurysm, which is therefore considered an indication for surgery. The complications include rupture, peripheral embolization, acute aortic occlusion, and aortocaval (between the aorta and inferior vena cava) or aortoduodenal (between the aorta and the duodenum) fistulae. On physical examination, a palpable abdominal mass can be noted. Bruits can be present in case of renal or visceral arterial stenosis.

The clinical manifestation of ruptured AAA usually includes excruciating pain of the lower back, flank, abdomen and groin. The bleeding usually leads to a hypovolemic shock with hypotension, tachycardia, cyanosis, and altered mental status. The mortality of AAA rupture is up to 90%. 65–75% of patients die before they arrive at hospital and up to 90% die before they reach the operating room. The bleeding can be retroperitoneal or intraperitoneal, or the rupture can create an aortocaval or aortointestinal (between the aorta and intestine) fistula. Flank ecchymosis (appearance of a bruise) is a sign of retroperitoneal hemorrhage, and is also called Grey Turner's sign.

Causes

The exact causes of the degenerative process remain unclear. There are, however, some theories and well defined risk factors.

- **Tobacco smoking:** Greater than 90% of people who develop an AAA have smoked at some point in their life.
- **Genetic influences:** The influence of genetic factors is highly probable. The high familial prevalence rate is most notable in male individuals. There are many theories about the exact genetic disorder that could cause higher incidence of AAA among male members of the affected families. Some presumed that the influence of alpha 1-antitrypsin deficiency could be crucial, some experimental works favored the theory of X-linked mutation, which would explain the lower incidence in heterozygous females. Other theories of genetic etiology have also been formulated. Connective tissue disorders, such as Marfan syndrome and Ehlers-Danlos syndrome, have also been strongly associated with AAA. Both relapsing polychondritis and pseudoxanthoma elasticum may cause abdominal aortic aneurysm.
- **Atherosclerosis:** The AAA was long considered to be caused by atherosclerosis, because the walls of the AAA are frequently affected heavily. However, this theory cannot be used to explain the initial defect and the development of occlusion, which is observed in the process.
- **Other causes:** Other causes of the development of AAA include: infection, trauma, arteritis, cystic medial necrosis (m. Erdheim).

Diagnosis

An abdominal aortic aneurysm is usually diagnosed by physical exam, ultrasound, or CT. Plain abdominal radiographs may show the outline of an aneurysm when its walls are calcified. However, this is the case in less than half of all aneurysms. Ultrasonography is used to screen for aneurysms and to determine the size of any present. Additionally, free peritoneal fluid can be detected. It is noninvasive and sensitive, but the presence of bowel gas or obesity may limit its usefulness. CT scan has a nearly 100% sensitivity for aneurysm and is also useful in preoperative planning, detailing the anatomy and possibility for endovascular repair. In the case of suspected rupture, it can also reliably detect retroperitoneal fluid. Alternative less often used methods for visualization of the aneurysm include MRI and angiography.

An aneurysm ruptures if the mechanical stress (tension per area) exceeds the local wall strength; consequently, peak wall stress (PWS) and peak wall rupture risk (PWRR) have been found to be more reliable parameters than diameter to assess AAA rupture risk. Medical software allows computing

these rupture risk indices from standard clinical CT data and provides a patient-specific AAA rupture risk diagnosis.

Medication

No medical therapy has been found to be effective at decreasing the growth rate or rupture rate of asymptomatic AAAs. Blood pressure and lipids should however be treated like in any atherosclerotic condition. Studies have suggested possible protective effects of therapy with angiotensin converting enzyme inhibitors, beta-blockers, and statins.

Surgery

Surgery for an abdominal aortic aneurysm is known as AAA surgery or AAA repair. The threshold for repair varies slightly from individual to individual, depending on the balance of risks and benefits when considering repair versus ongoing surveillance. The size of an individual's native aorta may influence this, along with the presence of comorbidities that increase operative risk or decrease life expectancy.

Prevention and Nutritional Recommendation:

To reduce the risk of developing aneurysms:

- Eat a heart-healthy diet, exercise, stop smoking (if you smoke), and reduce stress to help lower your chances of having a blocked artery.
- Your health care provider may give you medicine to help lower your cholesterol.
- If you were given medicines for blood pressure or diabetes, take them as your doctor has asked you to.
- Supplement with **Omega 3 oil, Nattokinase, Green Tea and fiber.**