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## Healthy Ageing Seminar

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# Complementary & alternative medicine for wellbeing and diabetes

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# Overview

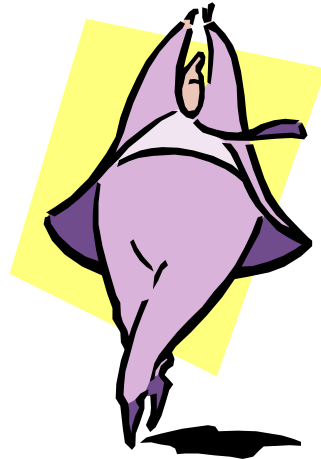
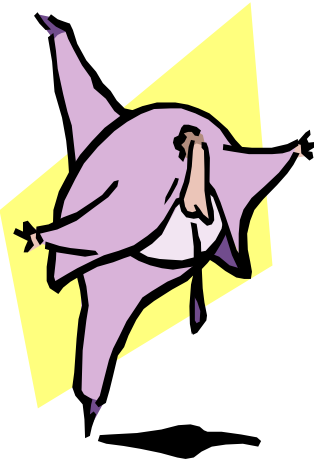
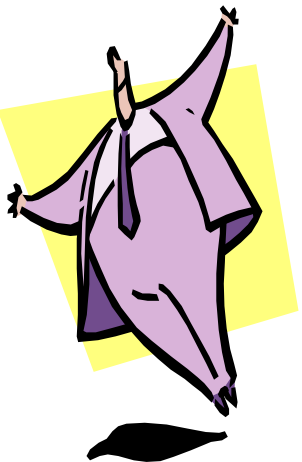
- What is well-being?
- Factors affecting health & well-being
- Strategies to improve health & well-being



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# What is wellbeing?

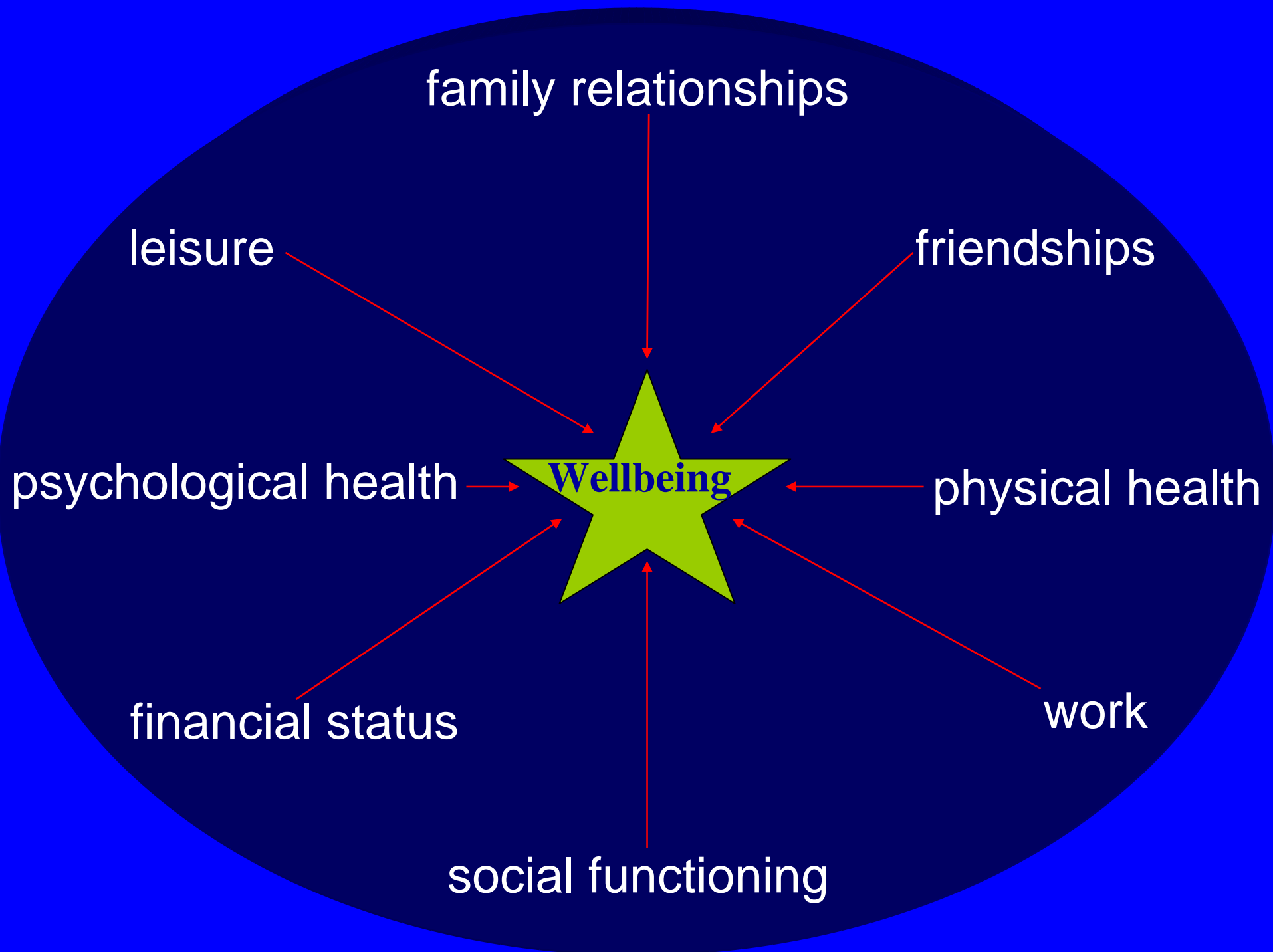
- Wellbeing is a state of being happy, healthy, prosperous and free from disease





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What factors affect our wellbeing?



family relationships

leisure

friendships

psychological health

Wellbeing

physical health

financial status

work

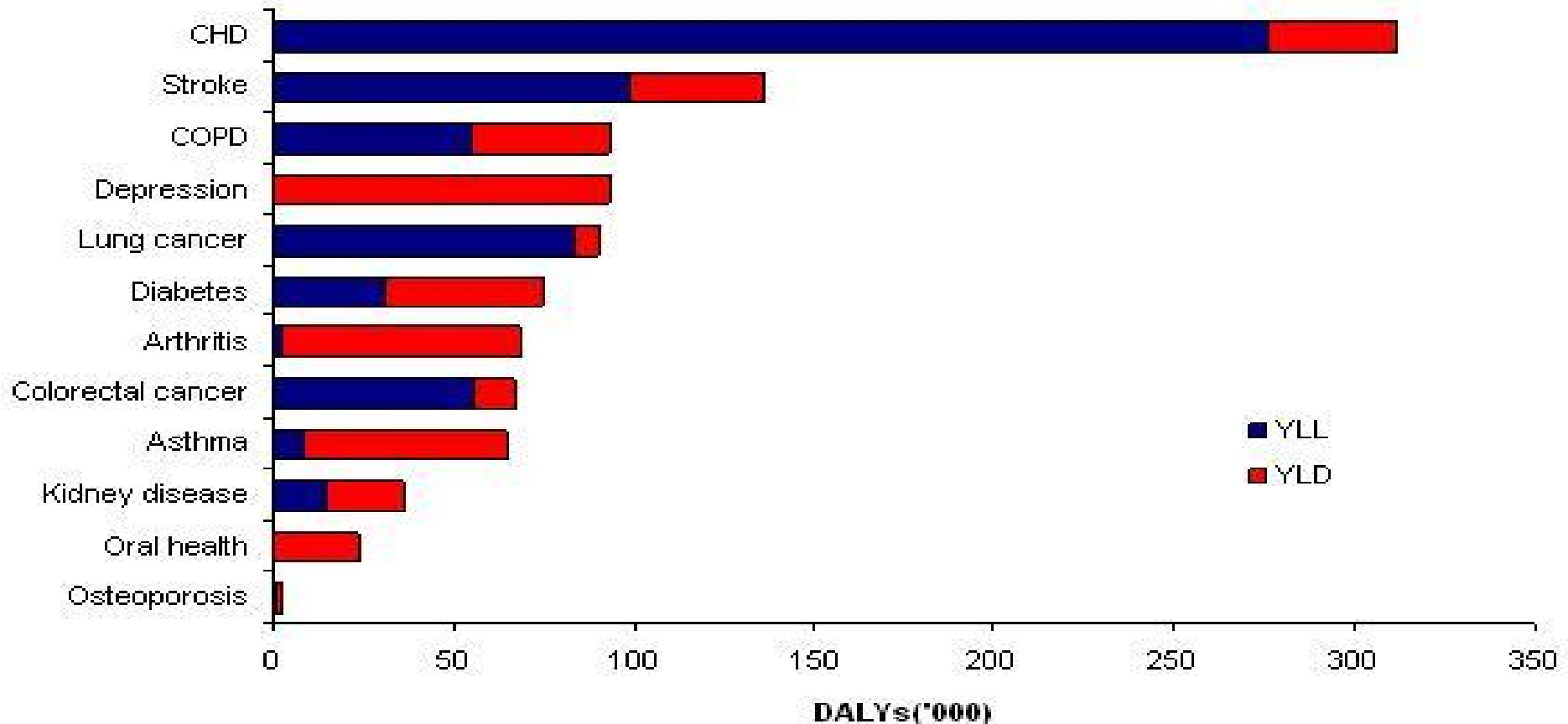
social functioning



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# Disability-adjusted life years attributed to various chronic diseases and conditions in Australia, 1996

Disease/condition



# Chronic diseases mortality in Australia, 2003

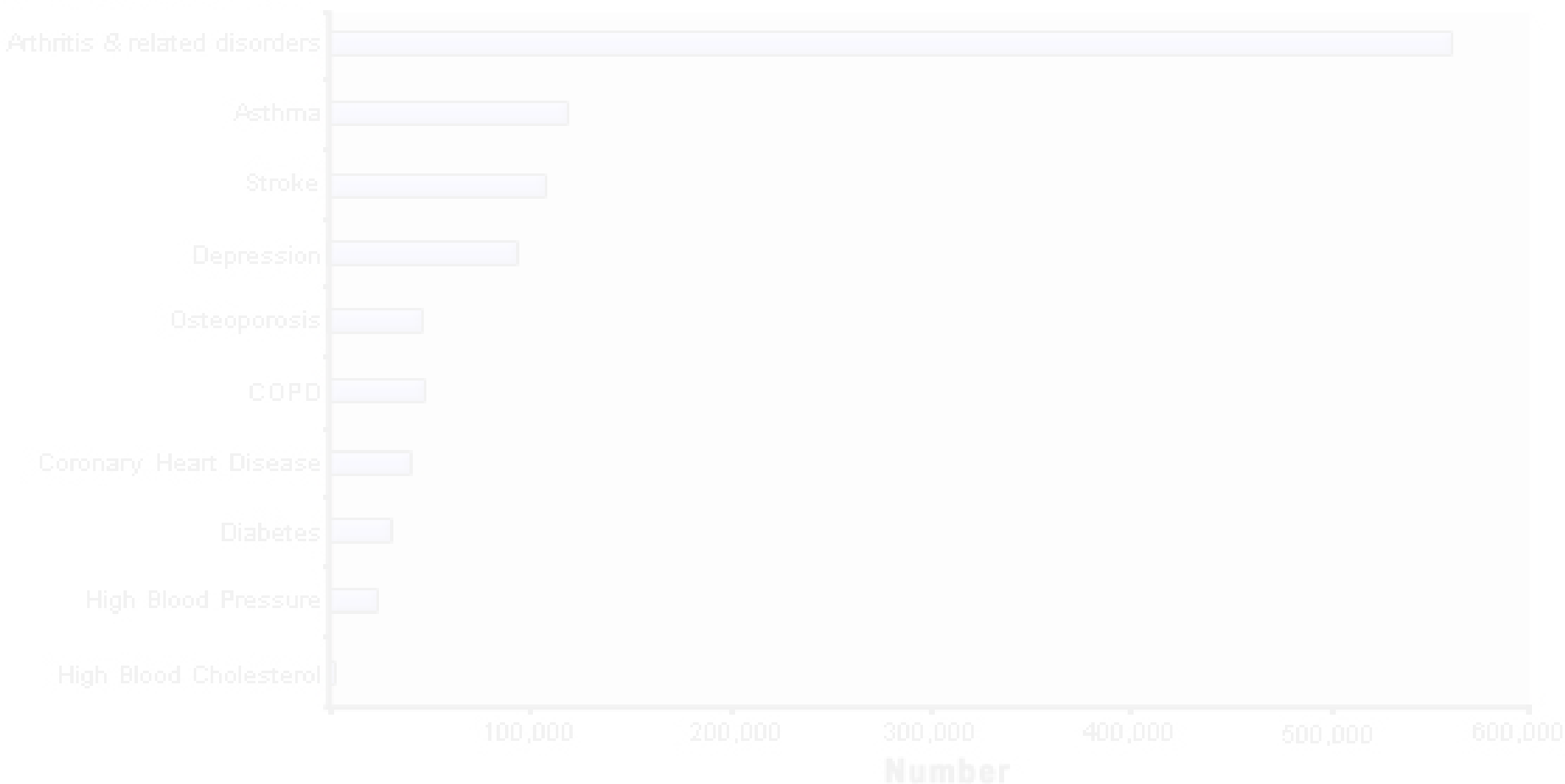
Disease	Number of deaths		PYLL (year)
	Underlying cause	Associated cause	
<a href="#">CHD</a>	25,439	20,816	79,323
<a href="#">Stroke</a>	12,240	10,386	24,073
<a href="#">Lung cancer</a>	6,976	550	43,290
<a href="#">COPD</a>	5,378	7,208	13,010
<a href="#">Colorectal cancer</a>	4,447	666	27,698
<a href="#">Diabetes</a>	3,389	8,016	13,188
<a href="#">Suicide</a>	2,213	86	71,300
<a href="#">Chronic kidney disease</a>	1,986	11,940	3,598
<a href="#">Oral cancer</a>	693	128	6,743
<a href="#">Asthma</a>	314	934	3,635
<a href="#">Arthritis</a>	259	1,417	593
<a href="#">Osteoporosis</a>	181	1,317	100
<b>Total</b>	<b>51,275</b>	<b>63,464</b>	<b>286,551</b>



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# Number of people with a disability associated with chronic diseases and conditions in Australia, 2003

Disease/condition

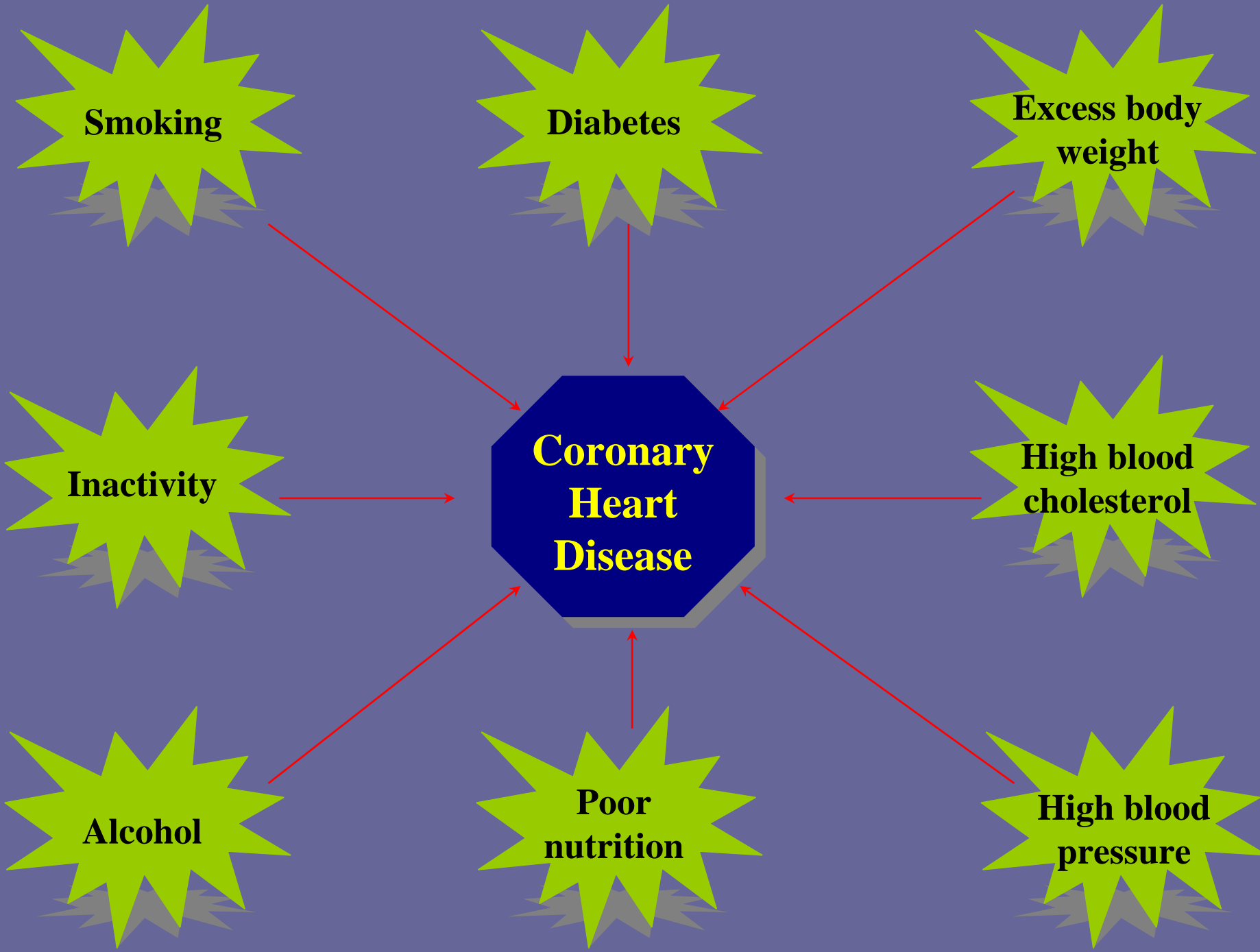


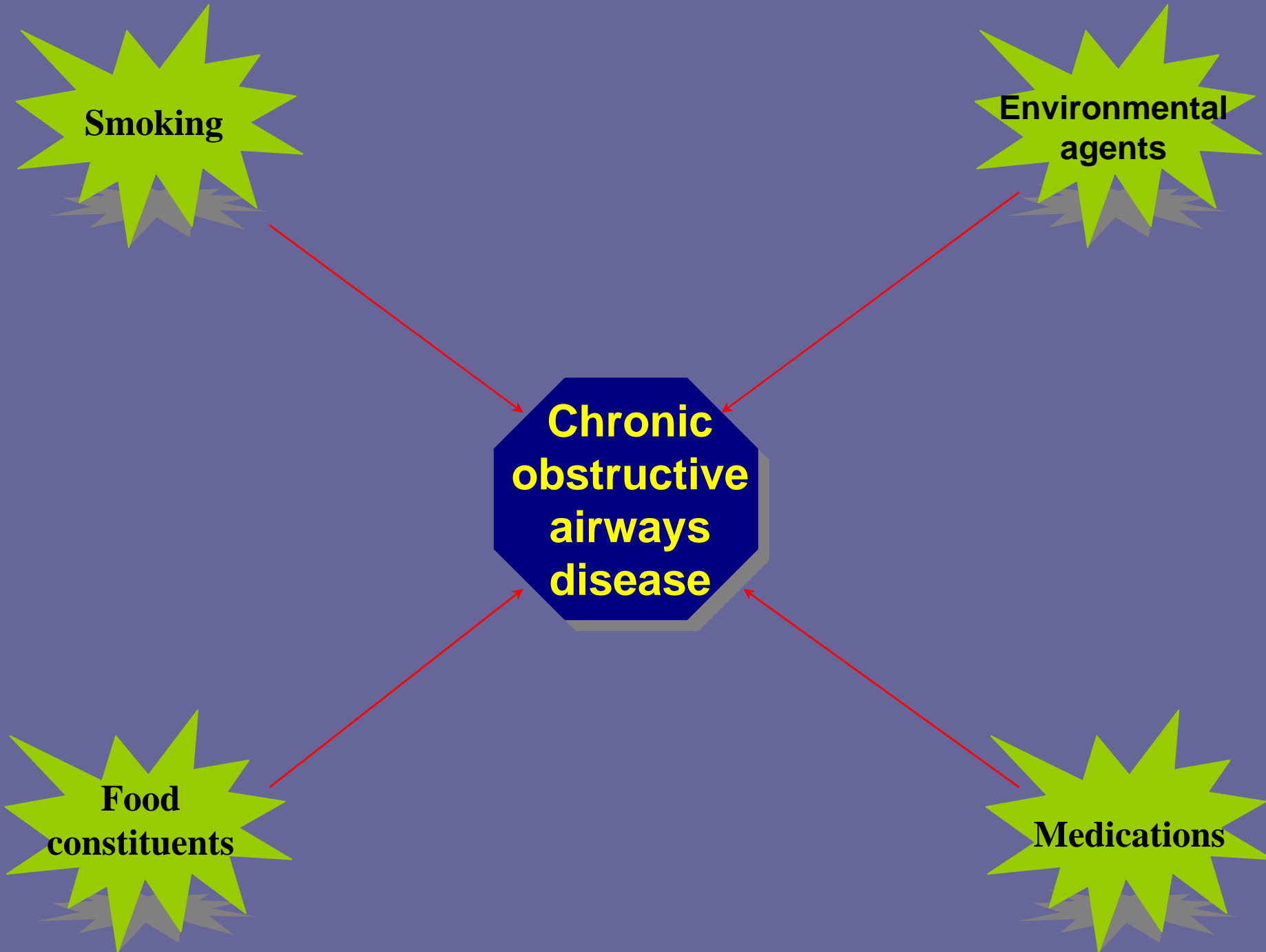
Source: The AIHW analysis of the 2003 ABS National Survey of Disability, Ageing and Carers confidentialised unit record file. (AIHW 2007)



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# Modifiable risk factors for common causes of death and disability





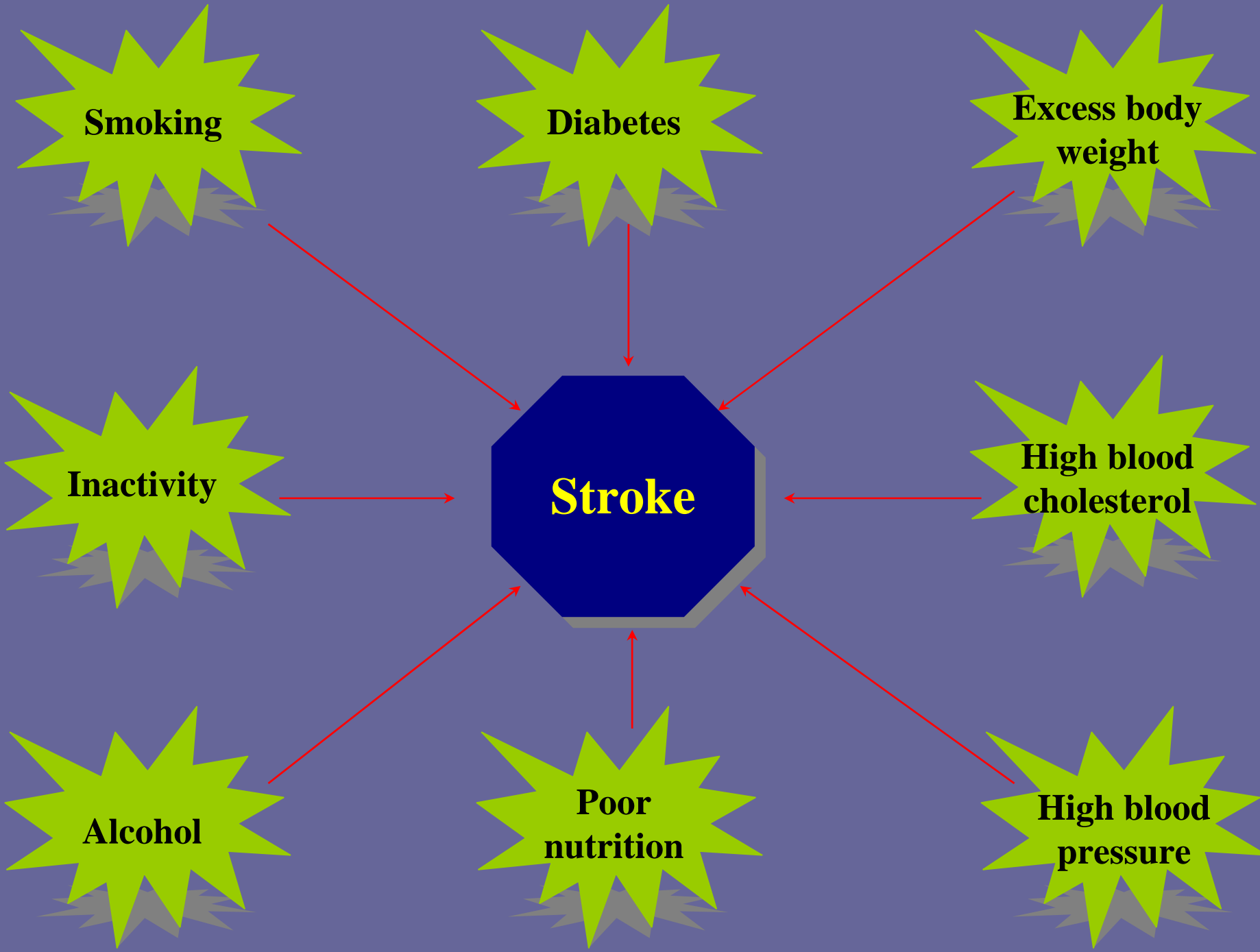
**Smoking**

**Environmental agents**

**Chronic obstructive airways disease**

**Food constituents**

**Medications**



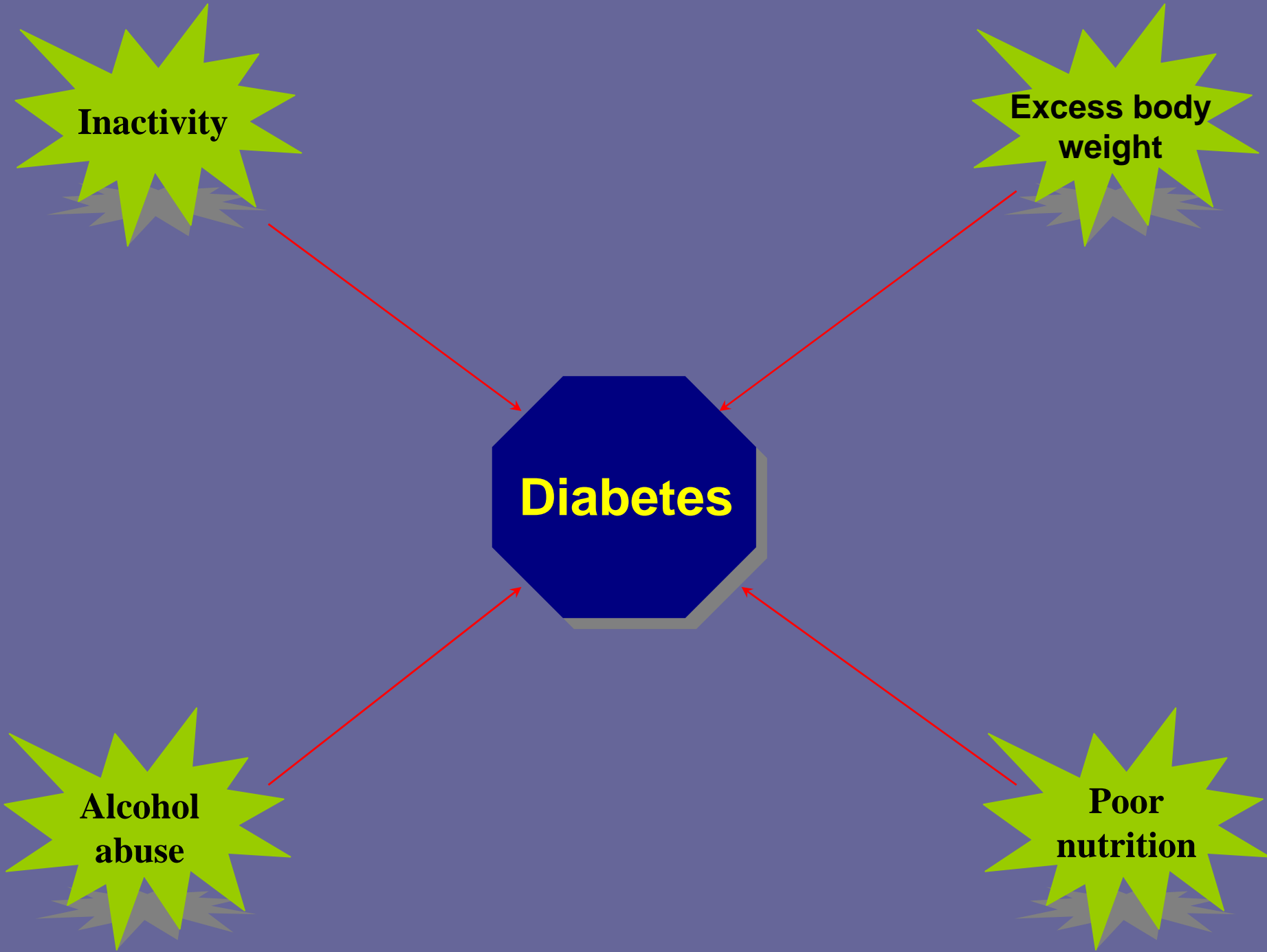
**Inactivity**

**Excess body weight**

**Diabetes**

**Alcohol abuse**

**Poor nutrition**



# Managing the modifiable risk factors

# Physical inactivity

- **Exercise:**

- improves muscle strength & flexibility
- strengthens bones
- improves posture
- decreases resting heart rate & strengthens heart contractions
- decreases blood pressure
- lowers blood cholesterol & triglycerides, and increases HDL (good fats)
- improves immune function
- aids digestion and elimination
- promotes lean body mass
- reduces stress, anxiety, depression and tension
- improves self-esteem, mental function
- improves sleep and longevity





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# Tobacco smoking



- **Massage:** a study of 20 adult smokers found massage alleviated smoking-related anxiety, and reduced cigarette cravings and withdrawal symptoms (Hernandez-Reif et al 1999)
- **Guided imagery:** two trials have found that guided imagery significantly improves the smoking quit and abstinence rate (Wynd 1992; Wynd 2005)



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# Alcohol Abuse

- **Exercise:** in a study of 90 alcohol dependent patients, a physical fitness program was significantly superior to standard treatment at reducing alcohol cravings and improving internal locus of control (Ermalinski et al 1997)




# Low fruit & vegetable intake



- **Education:** Motivational interviewing, counselling and lifestyle modification in smokers significantly increased fruit and vegetable consumption (Ahluwalia et al 2007)
- **Cooking classes:** a series of fruit and vegetable preparation, cooking and food safety classes significantly increased fruit and vegetable consumption amongst 229 youth and 373 adult participants (Brown et al 2005)

# High blood pressure

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- **Fruit & Vegetables:** increased fruit and vegetable consumption is inversely related to systolic blood pressure in woman but not in men (Beitz et al 2003)
  - **Sodium:** an analysis of salt restriction studies of one month or more found a 6 g/day reduction in salt intake significantly reduces systolic blood pressure by 7 mmHg in those with hypertension, and 4 mmHg in those with normal blood pressure (Macgregor & Kaplan 2006)
  - **Olive oil:** a study of 772 elderly subjects found a Mediterranean diet with 1L virgin olive oil/week and a Mediterranean diet with 30g/d of nuts for 3 months both decreased blood pressure when compared to a standard low fat diet (Estruch et al 2006)

# High blood pressure



- **Dark chocolate:** a trial of 17 elderly subjects demonstrated that when compared to 90g white chocolate, 100 gm dark chocolate significantly reduced systolic & diastolic blood pressure after 14 days (Taubert et al 2003)
- **Tomatoes:** a study of 31 subjects found 8 weeks of tomato extract significantly reduced systolic and diastolic blood pressure (Engelhard et al 2006)



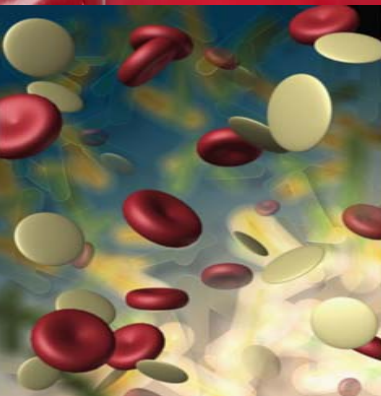
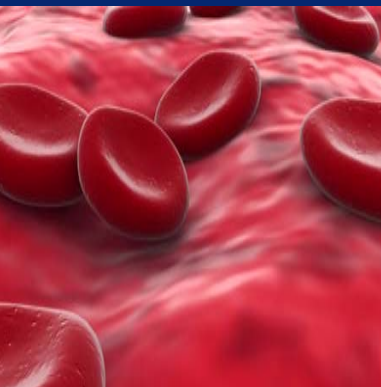
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# Overweight / obesity

- **Fish oil:** fish oil when taken alongside exercise, may enhance weight loss
- **Brindleberry:** a study of 60 obese adults has shown that a compound in Brindleberry was significantly more effective than placebo at reducing body weight, body mass and food intake when compared to placebo (Preuss et al 2004)
- **Fibre:** several studies have shown that fibre supplements, in addition to a calorie-modified diet, are more effective than a diet without added fibre at promoting weight loss
- **Thermogenic compounds**



# High blood cholesterol

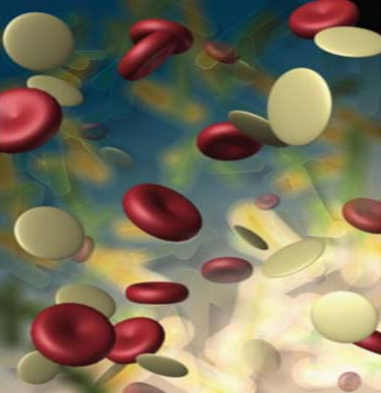
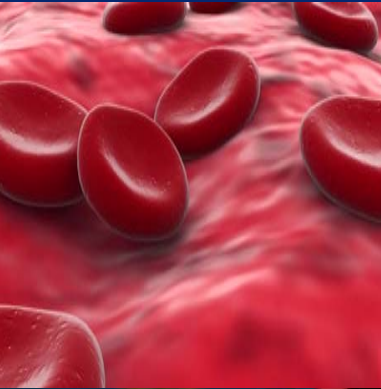


- **Oats:** an analysis of 8 trials found oatmeal consumption for at least 4 weeks was associated with lower total cholesterol and LDL cholesterol (Kelly et al 2007)
- **Psyllium:** an analysis of 8 trials found daily Psyllium for at least 6 weeks lowered total cholesterol and LDL cholesterol compared to placebo (Anderson et al 2000)
- **Garlic:** an analysis of 10 trials found garlic to be effective at reducing total cholesterol, LDL, and triglycerides (Alder et al 2003)
- **Phytosterols:** a trial of 63 subjects found phytosterol ester-enriched margarine for 3 weeks significantly changed total cholesterol, LDL, and HDL cholesterol compared with a control margarine (Mussner et al 2002)



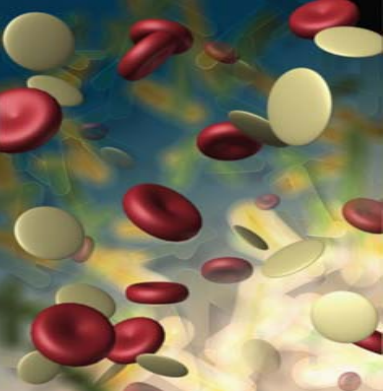
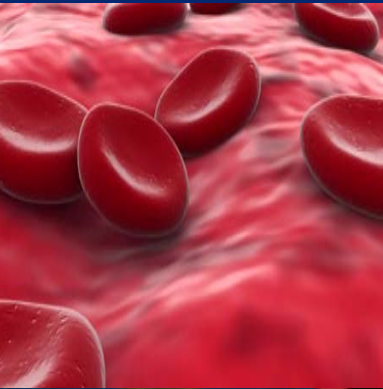
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# High blood cholesterol



- **CoQ10:** a study of 144 patients showed CoQ10 significantly increased HDL and significantly reduced cardiac events and death when compared to vitamin B (Singh et al 2003)
- **Yoga:** a trial of 93 patients reported a significant change in total cholesterol after 4 weeks of yoga group compared to usual care (Mahajan et al 1999)
- **Soy:** an analysis of 41 trials found Soy protein significantly reduced total and LDL cholesterol, and increased HDL cholesterol (Reynolds et al 2006)

# High blood cholesterol



- **Chick peas:** a trial of 47 adults found a 5 week chick pea-supplemented diet significantly reduced total cholesterol and LDL cholesterol compared to a wheat-supplemented diet (Pittaway et al 2006)
- **Probiotics:** an analysis of six studies showed that a fermented probiotic milk product consumed for 4-6 weeks duration decreased total cholesterol and LDL-cholesterol (Agerholm-Larsen et al 2000)
- **Fish oil:** an analysis of 18 trials found fish oil supplementation in type 2 diabetes lowers triglycerides raises LDL cholesterol (Farmer et al 2001)



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# Diabetes

- **Dark chocolate:** a trial of 15 healthy subjects, demonstrated that when compared to 90g white chocolate, 100 gm dark chocolate significantly reduced insulin resistance and increased insulin sensitivity (Grassi et al 2004)
- **Alcohol/red wine:** an analysis of 15 studies suggests that there is an average 30% reduced risk of type 2 diabetes in moderate alcohol consumers (Koppes et al 2005)
- **Berries:** Experimental studies indicate that the anthocyanins in berries increase insulin release from pancreatic cells, improve insulin sensitivity and reduce food intake (Jayaprakasam et al 2005; Tsuda 2004)





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# Diabetes

- **Gymnema:** 2 open-label trials have found when compared to conventional therapy, Gymnema extract and conventional therapy significantly reduced blood glucose & glycated haemoglobin over the 18-20 month treatment period in both type 1 and 2 diabetes (Baskaran *et al* 1990; Shanmugasundaram *et al* 1990)
- **Fenugreek:** 3 small trials have found 100g/day of defatted fenugreek seed powder for 10-20 days can significantly decrease fasting blood glucose, insulin and urine glucose (Yeh *et al* 2003)
- **Fibre:** a review of the evidence shows that a moderate carbohydrate diet with high-fibre is associated with lower post-meal glucose and total and LDL cholesterol than a low-fibre diet (Anderson *et al* 2004)





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# Diabetes

- **Chromium:** there have been mixed results in studies to date, with Chromium decreasing glycated haemoglobin, fasting glucose, post-meal glucose and insulin in some trials, but not others (Yeh et al 2003)
- **Magnesium:** there have been mixed results to date, with Mg decreasing glycated haemoglobin and fasting glucose in some trials, but not others (Yeh et al 2003)
- **Vitamin E:** there have been mixed results to date, with vitamin E decreasing glycated haemoglobin, fasting glucose and post-meal glucose in some trials, but not others (Yeh et al 2003)





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# Summary



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Questions

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