

KIDNEY & URINARY FAST FACTS



WHO IS AT MORE RISK OF CHRONIC KIDNEY DISEASE?

- 1 in 3 Australians are at an increased risk of developing chronic kidney disease (CKD)¹.
- Adult Australians are at increased risk of CKD if they:
 - Have high blood pressure (hypertension)
 - Have diabetes
 - Smoke cigarettes
 - Are obese
 - Have a family history of chronic kidney disease
 - Are over 50 years of age
 - Are of Aboriginal and Torres Strait Islander descent
- High blood pressure affects 1 in 4 Australians² (50% do not have blood pressure managed to target levels²).
- Diabetes affects 7.6% of Australians aged over 25 years (50% of whom are undiagnosed)³.
- 19.5% of Australians aged over 14 years smoke daily⁴.
- 2.6 million adult Australians aged over 25 years are obese⁴.
- Greater prevalence of CKD in some Indigenous Australian communities is due to the high incidence of traditional risk factors including diabetes, high blood pressure and smoking⁵.
- The prevalence of CKD in some Aboriginal and Torres Strait Island communities is also higher due to increased levels of⁶:
 - poor nutrition
 - high alcohol use
 - streptococcal throat and skin infection
 - socioeconomic disadvantage resulting in low levels education, high unemployment, low income, crowded living conditions and low birth weight babies

HOW MANY PEOPLE HAVE CHRONIC KIDNEY DISEASE?

- 1 in 7 Australians over age 25 years have at least one clinical sign of existing CKD, such as reduced kidney function and the presence of proteinuria (protein in the urine) or haematuria (blood in the urine)¹.
- Proteinuria is found in 2.4% of the total Australian population. It is four times higher in people with diabetes and five times higher in those with high blood pressure¹.
- The incidence of kidney failure is increasing in the Aboriginal population at a faster rate than in non-Aboriginal Australians⁷.
- The overall death rates from CKD are up to ten times higher in the Aboriginal and Torres Strait Islander communities compared to the rest of the Australian population⁵.

WHAT CAUSES CHRONIC KIDNEY DISEASE?

- The three top causes of CKD in Australia are⁸:
 - Diabetes, 34% of new cases.
 - Nephritis or inflammation of the kidney, 22% of new patients.
 - High blood pressure (hypertension), 14% of new cases.

HOW MANY AUSTRALIANS HAVE TREATMENT FOR KIDNEY FAILURE?

The most recent data from the Australia and New Zealand Dialysis and Transplant (ANZDATA) Registry (available at www.anzdata.org.au) show:

- 2,476 people started kidney replacement therapy (dialysis or transplant) in 2008.
- The number of people on dialysis increased by 5% from 2007 to 2008, and has averaged a 6% growth rate per year over the past decade.
- Although Indigenous Australians represent less than 2.5% of the national population, they account for approximately 10% of people commencing kidney replacement therapy.
- 22% of people diagnosed with CKD are referred 'late' to a nephrologist i.e. less than 3 months before first treatment for kidney failure.
- In Australia late referral is more common among people of Pacific Island (33%), Indigenous Australian (32%), Maori (30%), or Asian (25%) heritage compared with the Caucasoid population (23%).

Dialysis

- A total of 10,062 people were receiving dialysis treatment at the end of 2008.
- 23% were receiving dialysis at a hospital, 31% were dialysing at home and 45% in satellite centres.
- Home dialysis includes:
 - continuous ambulatory peritoneal dialysis (9% of all dialysis)
 - automated peritoneal dialysis (12% of all dialysis)
 - home haemodialysis (9% of all dialysis)
- Rates of home haemodialysis range from 14% in NSW to 1% in SA.

Transplantation

- As at 31 December 2007, 13% (1,264) of the 9,642 people receiving dialysis were on the transplant waiting list.
- The majority of people on the waiting list are aged less than 55 years and 82% are waiting for their first transplant.
- In 2008, only 6% of the people on dialysis received a transplant, an increase from 5% in 2007 and 6.0% in 2006.
- The average waiting time for a transplant is about 4 years but waits of up to 7 years are not uncommon.
- On average one Australian dies each week while waiting for a transplant.
- The survival rate following a kidney transplant is high - 98% of recipients are alive at 1 year, and 88% are alive at 5 years.
- In 2009, Australia had a deceased organ donation rate of 11 donors per million population (pmp).
- There were 247 organ donors in Australia in 2009 compared with 257 in 2008 and 198 in 2007.
- Live kidney donations represented 44% of all kidney transplants in 2008, which is the same as for 2007.

HOW MUCH DOES KIDNEY FAILURE COST THE AUSTRALIAN HEALTH SYSTEM?

- The best available evidence⁹ we have on cost per person per year on dialysis is:
 - hospital Haemodialysis - \$82,764
 - satellite Haemodialysis - \$48,631
 - home Haemodialysis - \$44,739
 - peritoneal dialysis (CAPD) - \$56,828
- The cost of dialysis in 2006 is estimated to be \$646.6 million
- On 2005 figures the cumulative cost of dialysis from 2004 to 2010 is expected to be \$4.5 billion
- The cost of a transplant for a kidney recipient in the first year is \$65,375 – \$70,553.
- The cost for a transplant recipient in subsequent years is \$10,749 per annum
- The cost of a live kidney donation in relation to the donor is \$8,178
- The cost of a deceased kidney donation in relation to the donor is \$3,000
- These costs demonstrate that for every kidney donation, there is a substantial saving to government in relation to the health expenditure. The direct costs savings after the first year post transplant, would be around \$60,000 to \$70,000 per annum for each patient receiving a kidney donation.

HOW MANY AUSTRALIANS DIE FROM KIDNEY FAILURE?

The most recent data from the Australian Bureau of Statistics¹⁰ show

- Kidney failure is rising as a significant cause of death
- In 2007, diseases of the kidney and urinary tract have jumped to 10th on the leading cause of death list with 3230 deaths
- In the last 10 years, this number has risen by 123%
- Most of this rise appears to be due to an increase of deaths from chronic kidney failure. This number has risen by 148% in the last decade, with the most striking rise (133%) in the last 3 years.

HOW MANY AUSTRALIANS GET KIDNEY STONES?

- About 4-8% of Australians suffer from kidney stones at some time
- The lifetime risk of developing kidney stones is approx 1 in 10 for Australian men and 1 in 35 for women
- The chance of developing a stone increases if you have a family history of stones and as you age
- Urinary tract stones are more common in children in developing countries and amongst Indigenous Australians
- After having one kidney stone, the chance of getting a second stone is about 5-10% each year
- About 30-50% of people with a first kidney stone will get a second one within five years and then the risk declines. However, some people keep getting stones their whole lives.
- People with type 2 diabetes (non-insulin dependent) are at more risk of developing kidney stones in general, particularly uric-acid stones

URINARY HEALTH

- 1 in 20 Australians regularly suffer from urinary incontinence¹¹
- During childhood 8% girls and 1% boys have a urinary tract infection (UTI)
- Acute, uncomplicated UTIs are a common problem in women
- There is a high incidence of UTIs in females aged 20 to 40 years who are young and sexually active as well as those who are post-menopausal
- Women with a UTI tendency may have initially experienced UTIs as girls
- 27% to 48% of healthy women with one UTI will experience recurrent infection
- There is some evidence that use of cranberry juice may decrease the number of symptomatic UTIs over a 12 month period for women

For more information about healthy kidneys or this topic, please contact Kidney Health Australia:

Kidney Information Line (free call) on 1800 682 531 or visit website www.kidney.org.au

Reference List

- (1) Chadban SJ, Briganti EM, Kerr PG et al. Prevalence of kidney damage in Australian adults: The AusDiab kidney study. *Journal of the American Society of Nephrology* 2003 July;14(7 Suppl 2):S131-S138.
- (2) Briganti EM, Shaw JE, Chadban SJ et al. Untreated hypertension among Australian adults: the 1999-2000 Australian Diabetes, Obesity and Lifestyle Study (AusDiab). *Medical Journal of Australia* 2003 August 4;179(3):135-9.
- (3) Dunstan DW, Zimmet PZ, Welborn TA et al. The rising prevalence of diabetes and impaired glucose tolerance: the Australian Diabetes, Obesity and Lifestyle Study. *Diabetes Care* 2002;25(829):834.
- (4) Australian Institute of Health and Welfare. Heart, Stroke, and Vascular Diseases: Australian Facts 2004. AIHW Cat. No. CVD 27. Canberra: AIHW and National Heart Foundation of Australia (Cardiovascular Disease Series No. 22); 2004.
- (5) Australian Bureau of Statistics, Australian Institute of Health and Welfare. The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples. ABS Catalogue No. 4704.0, AIHW Catalogue No. IHW14, Canberra; 2005.
- (6) Cass A, Cunningham J, Hoy W. The relationship between the incidence of end-stage renal disease and markers of socioeconomic disadvantage. *New South Wales Public Health Bulletin* 2002 July;13(7):147-51.
- (7) Australian Institute of Health and Welfare. Chronic kidney disease in Australia. AIHW Cat. No. PHE 68. Canberra: AIHW; 2005.
- (8) McDonald S, Chang S, Excell L. The Thirtieth ANZDATA Registry Report. Australia and New Zealand Dialysis and Transplant Registry, Adelaide, South Australia; 2007.
- (9) Cass A, Chadban S, Craig J et al. Economic Impact of End-Stage Kidney Disease in Australia. *Kidney Health Australia*; 2006.
- (10) Australian Bureau of Statistics. Causes of death, Australia, 2007. ABS Publications 3303.0; 2009.
- (11) Australian Kidney Foundation. The Australian Kidney: National Epidemiological Survey of Diseases of the Kidney and Urinary Tract. 1999.

Other useful references include:

- Publications for Health Professionals available on the Kidney Health Australia website at <http://www.kidney.org.au/>
- HealthInfoNet <http://www.healthinfonet.ecu.edu.au>
- Australian Bureau of Statistics <http://www.abs.gov.au>
- Australian Institute for Health and Welfare <http://www.aihw.gov.au/>
- Continence Foundation <http://www.contfound.org.au/>
- AusDiab 2005 - The Australian Diabetes, Obesity and Lifestyle Study, International Diabetes Institute, 2006

This is intended as a general introduction to this topic and is not meant to substitute for your doctor's or Health Professional's advice. All care is taken to ensure that the information is relevant to the reader and applicable to each state in Australia. It should be noted that Kidney Health Australia recognises that each person's experience is individual and that variations do occur in treatment and management due to personal circumstances, the health professional and the state one lives in. Should you require further information always consult your doctor or health professional.