Increasing our potassium intake at the same time as lowering sodium intake will have a greater effect on our sodium to potassium ratio, and an even more positive effect on our health. In the past potassium has been thought to play a more minor role in the development of high blood pressure and CVD. However, potassium’s importance in vascular health has become more recognised. A 2009 study from the Trials of Hypertension Prevention Collaborative Group also found the sodium to potassium ratio was more strongly associated with CVD risk than sodium or potassium by themselves. The ideal ratio of sodium to potassium intake is roughly 1:3—that is, potassium intake would ideally be around three times our sodium intake. PDF | Sodium and potassium are essential for human health. They are important ions in the body and are associated with many physiological functions. Potassium is essential for regular contracting heart and a healthy nervous system, it is essential to strive for. The renin-angiotensin-aldosterone system and vasopressin levels play an important role. One of the major roles of potassium/sodium balance in the body is that of the nerve impulse. A differential in sodium and potassium concentration forms a polarity across the nerve membrane that when stimulated (electrical, chemical, mechanical, or thermal) leads to depolarization and propagation of the nerve impulse along the cell. The sodium-potassium pump carries out a form of active transport—that is, its pumping of ions against their gradients requires the addition of energy from an outside source. That source is adenosine triphosphate (ATP), the principal energy-carrying molecule of the cell. The patch-clamp technique electrically isolates a small patch of neuron or muscle cell membrane by applying the tip of a micropipette filled with conducting solution to the membrane and forming a tight seal with it. As single channels in the patch undergo various transitional states between fully open and fully closed, the times of opening and closing are recorded and the amplitudes and duration of the currents are measured. The forum for professionals working in the field of hypertension and cardiovascular disease in the UK and Ireland. The Society comprises doctors, nurses and other healthcare workers specialising in the delivery of care in hypertension and allied fields, together with clinicians and scientists in the forefront of cardiovascular research. read more. The BIHS Information Service aims to provide educational resources on hypertension and cardiovascular disease. view resources. Hypertension Expert Views.