



PREMATURE INFANTS' FOLLOW UP PROGRAMME

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We are writing now to let you know the results of our research into the long term outcomes of very tiny babies (birth weight less than 1000g) born at the Royal Women's Hospital during 1977-1980, the study that you have participated in since birth.

You will remember coming to see us a couple of years ago either at the Royal Children's Hospital or in Brisbane at the Mater Hospital. Brenda and Kate enjoyed meeting you all again and we would like to thank you all for being a part of this special research study.

When we last caught up with you a few years ago we were particularly interested in growth, blood pressure, and breathing ability. Some of these results from the study will be appearing in scientific journals over the next few months, and may appear in the general press as well.

The results are summarized here by [Prof. Lex Doyle, Paediatrician](#).

Growth

Despite their tiny size at birth, most young adults who weighed less than 1000g have grown normally and reached expected heights and weights. This was not always the case, however. Most of you started on average with weights only $\frac{1}{4}$ the size of the non-prem children. By 8-9 years of age you were mostly indistinguishable in height and weight, with only a few cms or a few kilograms difference on average. As you reached the teenage years, weight had caught up to average and height was consistent with your genetic potential (that is, height expectation knowing the height of your parents).

By around 20 years of age there has been little relative change; weight is again average and height is consistent with parents height, which in this group is a little below average for all people in the community. Most have stopped growing but weight may well continue to increase. As is common in all people in the community, there is a tendency to being slightly over weight for height.

Blood pressure

You will all remember wearing the blood pressure machine for a day. I hope it was not too much of a bother.

Most of you had blood pressure readings in the normal range. There were a few individuals where blood pressure is starting to rise at an earlier age than is normally expected. It is possible that the blood pressure of people born prematurely may be higher later in adulthood and so we need to keep monitoring this.

Breathing ability

Most of you needed help with breathing after birth, either from ventilators or with oxygen, sometimes for many weeks.

Most now have breathing test results in the normal range in early adulthood, but as a group some do have trouble getting air in and out of the lungs. Breathing ability peaks in early adulthood and deteriorates over the rest of life - in smokers it deteriorates even faster. In those who were born very prematurely and who smoke, it is deteriorating at an even faster rate. The good news is that most of the deterioration seems to be reversible at this stage, so if smokers are able to give up there should be some recovery of their breathing ability. However, if they continue to smoke the changes will become irreversible over time.

We have really enjoyed getting to know you all over the years and would like to thank you and your families for your previous involvement in this study. We hope to be able to see you again in a few years time to repeat some of these tests. So keep in touch! We love to hear any news from you, feel free to call in if ever you are around Carlton, maybe we can take you on a tour of the Nursery, it certainly is fantastic for the parents of sick babies to see such grown up ex-prems.

As it is likely that many of you will move house over the next couple of years we would be grateful if you could fill in the enclosed change of address slip and send it back to us in the Reply Paid envelope.

If you have any questions or we can help you in any way please don't hesitate to let us know. You can contact us on the above numbers or by email.

Best wishes

Kate Callanan
Research Coordinator
Premature Infant Follow up Programme

Professor Lex Doyle
Paediatrician

Brenda Faber
Research Nurse

News from the Prem Baby Nursery

Did you know that Victoria has the world's best survival rate for premature babies?

Last year 445 babies were admitted to NICU at RWH and a further 651 were admitted directly to Special Care. In the 1990's, 75 percent of babies born weighing less than 1000g survived. Three decades ago only 5 percent would have lived.

A baby born 24 weeks after conception and weighing around 500g now has a 64 percent chance of survival.

At the Royal Women's Hospital we have followed the progress of premature babies over two decades.

The survival rate of babies of birth weight 500-999 grams born in Victoria has improved from one in four to three in four in less than 18 years.

One of the major reasons for the increased survival is that most of these tiny babies are now born in one of the three major maternity hospitals in the State.

When Professor Doyle started working with premature babies in 1975 there were few specialised intensive care beds and ventilators were not suitable for tiny babies.

Since that time, the ability to support babies with breathing difficulties has improved dramatically, medication (corticosteroids) given to the mother before birth has reduced the rate and severity of breathing problems and we are now able to give babies who lack the lining substance in the lung (surfactant) a replacement form of this substance.
