Page 4 Figures – Draft Tiered Captions

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| **Pic** | **Minimal** | **Modest** | **Extended** |
| 4:1 | Collip in lab | Collip in the laboratory | Although Collip, on a visiting scholarship from Alberta, did not formally join the insulin team until December he quickly made some major contributions without which the Toronto insulin venture may never have succeeded. He developed a rabbit model for testing the potency of serial batches of extract. He performed the study that showed the extract could restore glycogen deposition in the liver thus showing it corrected more of the abnormalities of diabetes than just lower blood glucose. However, his single main success was in using serial alcohol extractions of pancreatic extract as advised by Macleod. Painstakingly working through varying concentrations of alcohol to remove impurities, he eventually succeeded in producing the purest form yet when using 95% alcohol. It was Collip’s preparation that was used in the first successful trial of Toronto extract on 23rd January, 1922. |
| 4:2 | 1st presentation | The first presentation | The picture shows the outline of the first presentation made by the Toronto group at the American Physiological Society meeting held at Yale University in New Haven, Connecticut on the 2nd last day of 1921. Most of the important people in diabetes research in North America were present and Macleod, who at the time was President of the Society, chaired the session. Banting was an unaccomplished public speaker and by his own admission did not present the results well. As was typical of such scientific meetings, his claims attracted some robust questioning from highly experienced members of the audience who had clearly not been fully convinced of their significance. Macleod, who knew the science far better than Banting, came to his aid and dealt with most of the questions and criticisms. Banting felt rather inadequate and humiliated afterwards and his paranoia grew about Macleod’s interventions being motivated by a desire to steal Banting’s glory – rather than an erudite attempt to promote the potential importance of this latest work, and protect his hapless and inexperienced colleague. |
| 4:3a | Early patient | Before and after insulin | This picture shows the remarkable change from emaciation to robust health within 4 months of starting on insulin treatment for diabetes. |
| 4:3b | Early patient | Before and after insulin | This even more remarkable pair of pictures shows a thoroughly miserable, wasted child showing a dramatic improvement within 2 months of commencing insulin treatment. |
| 4:3c | First Patient | Leonard Thompson | Although there is no surviving picture of this young man before he became the first person to receive the Toronto pancreas extract, this picture, showing a handsome young man gives no indication what had gone before. Diabetes was diagnosed in 1919 and by late 1921, 14-year old Leonard Thompson was described as ‘skin and bone’, weighing under 30kg when admitted to hospital. He was the first patient to be given an extract prepared by Banting and best on 11th January, 1922 with 7.5 ml injected into each buttock. Despite a modest, temporary reduction in blood and urine sugar but no improvement in his condition and an abscess developed at the site of one injection; this trial had failed. By the morning of 23rd January, Collip’s better-refined and more potent extract was ready for trial and this time the sugar in the blood and urine fell dramatically and the patient soon felt much better. This was the first successful application of the research in clinical practice and paved the way for the Toronto team giving useful insulin to the world. |
| 4:5 | 1st paper | First published paper on Toronto ‘insulin’ | Within about a month of Leonard Thompson receiving Collip’s extract, enough progress had been made with its use to permit preparation of the first paper on the successful use of a pancreatic extract to treat diabetes claiming its unquestionable value on treating at least some phases of diabetes in man. The paper’s authors included Banting, Best, Collip and two of the practising physicians, Campbell and Fletcher, on whose patients the early trials had been conducted. To ensure early publication – and perhaps to underline Canada’s place in this great discovery – the manuscript was sent to the Canadian Medical Association Journal in which it was published by 22nd March. |