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cryocord 凯儿库
premier stem cell bank

Cellebration

celebrating life together

Issue 2017

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Syndrome



15 Years of Excellence



CryoCord takes great pride and honour in reaching a remarkable milestone of 15 years since establishment. The 15th anniversary was celebrated in style, during CryoCord Group of Companies Annual Dinner 2017 themed Oscars Night which was held in Le Méridien Putrajaya. The celebration was graced by the presence of directors, shareholders and staffs across the region.

“Maintaining consistency and being goal driven throughout the years was essential to reach this milestone” said James Then, the Managing Director of CryoCord.

The spirit of the celebration was uplifted with various exciting performances by CryoCord staffs and also professional performers. A two feet tall cake resembling cryopreservation tank was specially made, in conjunction of this auspicious event.

15

ANNIVERSARY

凯儿库 - 经典15年

成立了15年的凯儿库迈入了辉煌的里程碑。凯儿库集团于2017年在布城艾美酒店(Le Méridien Putrajaya)以奥斯卡之夜为主题欢庆15周年晚宴。庆祝活动得到了全体董事、股东和员工的盛装出席。“融汇贯彻始终的理念，是这些年驱使达致目标里程碑的动力，”凯儿库董事经理郑康力致词时表示。凯儿库员工和专业表演者的精彩演出体现了凯儿库精神。此外，大会也特别订制了2尺高肖仿低温储存槽的蛋糕庆祝这项周年庆。

Words from MD

It has been my greatest pride to address our 15 years of achievement. CryoCord has come a long way from a humble beginning of processing and banking Cord Blood Stem Cells in one clean room to culturing/ expansion of various human cells including Mesenchymal Stem Cells in 9 clean rooms. In fact CryoCord Group now consists of 10 subsidiaries and sister companies ranging from processing and storage of cells to operating clinical research (Cytopeutics) and providing health care services (Brighton Healthcare). In addition, we have launched new products such as the next generation Platelet Rich Plasma (PRP) and Hyaluronic Acid for joints and face treatment. The launch of the next generation PRP known as FDP-2B is only attainable after years of collaboration with UM's dedicated team. Please feel free to visit www.fdp2b.com

Our range of MSC products particularly CordMSCs derived from Umbilical Cord Wharton's Jelly has been well optimised from collection, processing down to storage and delivery. This resulted in lowest contamination and highest number of cell extraction than previously possible. All these are dedicated to CryoCord's team over past 10 years in tissue and cell handling under a very stringent cGMP environment (International PIC/S standard) with strict dust and aseptic control. Today we are offering a suite of MSCs processing and storage from bone marrow, dental pulp and adipose (fat) tissues all of which require different stringent standard operating procedures.

It feels surreal that we have bagged the Best Stem Cell Bank Awards for 6 years in a row! Company with the best service and product quality is chosen only after impartial survey with young parents and parents-to-be. Along the way we have also bagged prestigious corporate awards such as the Sun Yat-Sen and Sin Chew Business Excellence Awards for excellent performance and growth in the industry. We are indeed very proud and I would like to dedicate this to our team for the incredible efforts they have put in year after year. Not forgetting our clients and stakeholders who have not only entrusted with their stem cells but also rendered much support and encouragement. To that, I would like to express my most sincere gratitude.

It feels surreal that we have bagged the Best Stem Cell Bank Awards for 6 years in a row!

The world of regenerative medicines and advanced therapies are getting more and more exciting by days. Gene therapies through advancement in gene alteration tools such as CRISPR-Cas9 and latest Base Editing have open doors to unlimited possibility to treat gene related diseases. Regulators worldwide are getting more receptive in approving trials for advanced therapeutic products. Stimvelis by GSK for treatment of 'bubble boy' (ADA-SCID) disease; Glybera by UniQure to



treat an extremely rare disease (LLD) are examples of gene therapies. There are currently over 600 gene trials with almost 10% in late stages.

Kymriah by Novartis and Axi-Cel by Kite Pharma subsequently bought over by Gilead Sciences, on the other hand use engineered T-cells (CAR-T) to fight certain relapsed/ refractory leukaemia and lymphoma only after transplant failure, has shown amazing success (>80% remission).

The road from bench to bedside is never easy and much is yet to be done for bringing successful product into regulatory approval. We have and will endeavour many challenges that trespass our way. We truly appreciate the immense support that you had given us all these years. I ensure you that our quality of service will not be compromised at any level or at any cost, in line with our motto - A Premier Stem Cell Bank for ALL!

James Then
Managing Director of CryoCord

Paralysed Patient Gained New Hope with MSCs

间质干细胞疗法让他奇迹站起来

64岁的陈双喜14年前因车祸导致脊髓损伤、下肢瘫痪，不仅只能瘫坐在轮椅上，大小便也不能自理。这些年来，陈双喜坐坏了一部轮椅，生活极为痛苦。

8月18日上午，在中山大学附属第三医院骨科病房里，经过脐带间充质干细胞蛛网膜下腔治疗近两年的陈双喜，竟奇迹般地从轮椅上站了起来，并在支具辅助下缓慢地迈开脚步（如图）。

广州日报全媒体记者获悉，中山大学附属第三医院院长、骨科主任戎利民教授团队经多年探索，在运用干细胞治疗脊髓损伤方面取得新突破。目前，由戎利民负责的国家重点研发计划“鞘内注射人同种异体脐带间充质干细胞治疗脊髓损伤的临床试验及机制研究”项目正在广州、上海、成都等地开展研究，有望造福更多因脊髓损伤而瘫痪、生活质量低下的病人。

14年前一场车祸让他坐上轮椅

14年前，一场突如其来的车祸让陈双喜四肢瘫痪，被诊断为C4-6节段脊髓损伤，T4节段平面以下完全四肢瘫，也就是俗称的“四肢瘫”。做了C4-6减压融合内固定手术后，他的双腿依旧不能行走。尝试了康复、针灸等各种治疗手段后，2015年8月，陈双喜慕名找到了戎利民教授，开始接受干细胞治疗，想要改善胸腹部的不适。

治疗开始时，他的脊髓里是明显的空洞，会阴部和肛周感觉减退，大小便不能自理。两条腿的肌力分别只有1级和2级，困在轮椅里动弹不得。医生也不能保证一定会让他重新站立。

谁知，做完第二个疗程，有一天，陈双喜突然给主治医生打了一个电话。“电话里，他激动地喊：我站起来了！”医生也感到非常意外。从第三次开始，2015年10月，乳头到膝关节之间渐渐恢复了感觉。

戎利民教授说，陈双喜的治疗过程并不是一帆风顺，期间有过一段反复，期间有几天突然不能站立，后来又又可以重新站立。

如今，陈双喜的双下肢屈髋肌力恢复到4级，踝背伸肌力则为2级。在上肢辅助下，他每次可以站立10分钟，缓慢行走数十米。大便秘明显好转，不需要用尿不湿和通便药物，不用别人帮忙。

车祸、高空坠落等都可能造成脊柱骨折、脊髓损伤，导致患者丧失运动感觉。“很多患者伤后挣扎了半年，往往可以接受瘫痪的事实。但让他们最难以忍受的是，伤后出现大小便功能障碍：大便靠‘抠’，一个星期解一次；小便靠‘漏’，24小时戴尿不湿。”戎利民说，还有一些病人会持续出现肛门括约肌的烧灼感，严重影响患者的生活质量和尊严感。

14年后干细胞治疗助他站起来

中山三院是广东较早开展免疫细胞、干细胞等项目的临床治疗和转化应用研究的医疗机构。目前，干细胞领域的科研目前主要集中在该院的三大优势治疗病种，即肝脏疾病，自身免疫性疾病，神经系统疾病。迄今，戎利民团队已为22名脊髓损伤患者进行了脐带间充质干细胞蛛网膜下腔治疗，其中75%的患者大小便不能自理的情况明显改善，可自行排便。

Reference

http://kandian.sina.com.cn/article_1887790981_70856785034002emk.html?from=health&local=&subch=0&vt=4

“陈双喜的治疗效果是这些患者中最好的一个，我也觉得太不可思议了！”戎利民表示将对他的情况开展严谨细致的研究，从这一个案的经验中获取更多数据，争取形成一套针对脊髓损伤患者的规范治疗方案，造福更多的患者。



Summary

Chen Shuangxi, 64, was paralysed due to an accident which occurred fourteen years ago. The accident caused a severe spinal cord injury, which then led him to paralysis. Since then, Chen completely depended on the aid of a wheelchair. Various medical approaches were initially taken to treat his condition. This includes surgery, physiotherapy, and acupuncture. However, none of it showed any improvement to the condition.

In August 2015, Chen met Professor Rong Limin (Director of Orthopaedics from Third Affiliated Hospital of Sun Yat-Sen University), who performs umbilical cord derived Mesenchymal Stem Cells (MSCs) treatment in that hospital. Chen then began stem cell transplant, to improve his chest and abdominal discomfort which he had at that point of time. To everyone's surprise, upon completing his second treatment, the 64-year-old was able to miraculously stand on his feet.

With the support of his upper body, Chen can now stand for a minimum of 10 minutes and walk for about 10 metres. This has significantly improved his lifestyle as a whole. According to Professor Rong, Chen's case was rather an unbelievable one as it clearly yielded the best outcome among all the others, who underwent the same treatment as him. He hopes this would help him gather essential information for his studies in treating various diseases using MSCs in the future.

The Next Generation PRP

Over the years, **Platelet-Rich Plasma** or commonly known as **PRP**, has been under the limelight in the world of medicine, specifically in the field of orthopaedics. PRP is a process of **concentrating platelets** to **4-5 times greater** than the whole blood; other blood components such as red blood cells and white blood cells are removed during the process.

Platelets possess proteins such as **growth factors** which assist in cellular healing of various musculoskeletal injuries. However, the full potential of these platelets are yet to be harnessed with conventional PRP.

With great scientific innovation and technology, today we have the next generation of PRP known as FDP-2B.

这些年来，富血小板或通称为PRP，已成为医学界的焦点，特别是在骨科领域。PRP是将血小板浓缩至全血的4至5倍的过程；在该过程中除去其他血液成分如红血球和白血球。

血小板具有蛋白质，如于各种肌肉骨骼损伤的细胞愈合的生长因子。然而，这些血小板的全部潜力尚未完全被传统的PRP充分展现。

凭借伟大的科学创新和科技，今天我们开创了新世代PRP，称之为FDP-2B（冻干血小板）。

FDP-2B: The Next Gen PRP

FDP-2B is the next generation PRP derived from one's own fresh blood. It aims to address the shortcomings of conventional PRP by **accurately quantifying platelet count** and **fully activating all growth factors** within the platelets. With a **single blood withdrawal**, FDP-2B can be used for **multiple treatments**. It is processed and **tested for sterility** in a **cGMP** certified laboratory which **ensures defined and consistent platelet quality** for optimal treatment.

FDP-2B：新世代PRP

FDP-2B（冻干血小板）是新世代PRP，源自于自身的新鲜血液。其目的是通过准确量化血小板中的血小板计数和完全活化的生长因子来填补常规PRP的不足。只需单次取血，FDP-2B可供于多次性治疗。在拥有《药品生产质量管理规范》Current Good Manufacturing Practice, cGMP 认证的实验室中进行无菌处理和测试，确保其稳定性和一致的血小板质量以获得最佳治疗效果。



FDP-2B vs. Conventional PRP 冻干血小板vs传统富血小板血浆

	FDP-2B 冻干血小板	Conventional PRP 传统富血小板血浆
Growth Factors 生长因子	• Fully activated 完全激活 ✓	• Partially activated 激活部分
Platelet Count 血小板数量	• Quantified 量化计数 ✓	• Unknown 未知计数
No. of Treatment with a Single Blood Withdrawal 单次采血治疗次数	• Multiple treatments 多次治疗 ✓	• Single treatment 单次治疗
Sterility 无菌性	• Tested in cGMP certified laboratory 在拥有《药品生产质量管理规范》cGMP 的实验室进行检测 ✓	• Not tested 无法测试
Quality 质量	• Consistent 一致性 ✓	• Inconsistent 不稳定性
Efficacy 功效	• Higher 高 ✓	• Lower 低
Purity 纯度	• Pure 纯净 ✓	• Less pure (contains detrimental white blood cells) 不纯净（含有害的白血球）

Relieve Your Pain

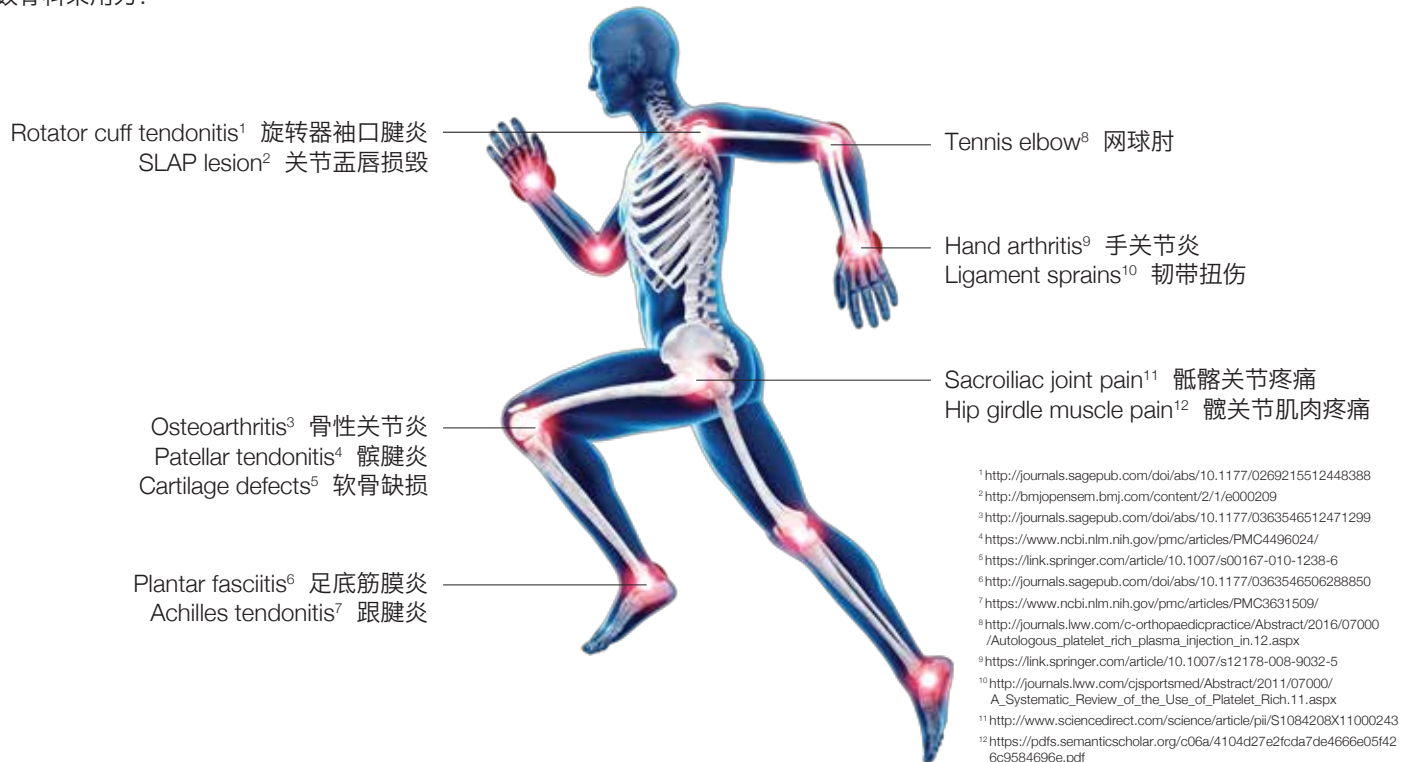
FDP-2B works best for patients with acute and chronic orthopaedics conditions, including muscle, tendon, ligaments, bone, and cartilage injuries. It is also an effective treatment for sports injuries which is a common orthopaedic complication.

At injury, FDP-2B elevates the healing process by delivering a higher concentration of platelets. FDP-2B gives off signals in attracting endogenous stem cells, to further help repair the injured site. Currently, the majority of orthopaedic applications are for:

缓解您的疼痛

FDP-2B适用于急性和慢性骨科病症患者，如肌肉，腱，韧带，骨骼和软骨损伤。这也是常见的运动损伤骨科并发症有效的治疗方法。

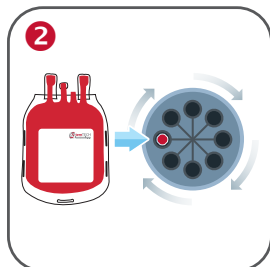
在损伤时，FDP-2B通过递送更高浓度的血小板提高愈合过程。FDP-2B会对内源性干细胞产生反应进而帮助修复受损部位。目前，大多数骨科采用为：



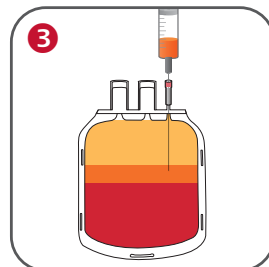
Simple, Safe and Effective 简单，安全，有效



Fresh blood is drawn from the patient.
从患者身上抽出新鲜血液。



The blood is centrifuged to separate Platelet-Rich Plasma (PRP) from the blood.
离心血液以从血液分离富血小板血浆 (PRP)。



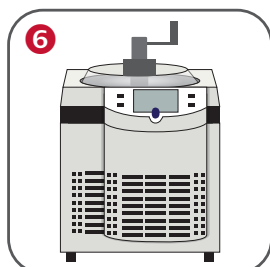
PRP is extracted out after centrifugation process.
离心过程中萃取出PRP。



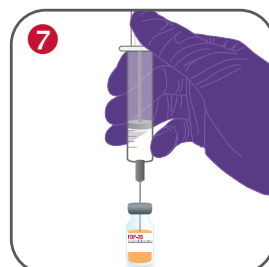
Number of platelets is quantified.
量化血小板计数。



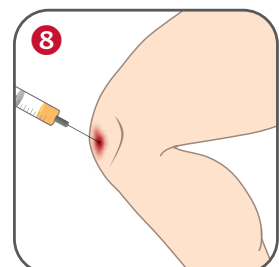
PRP is aliquoted into customized vials.
PRP分成定制等量的小樽。



The PRP undergoes freeze drying process to produce FDP-2B.
PRP经过冷冻干燥处理产生FDP-2B。



When needed, reconstitute FDP-2B with normal saline.
需要时，FDP-2B与盐水再水化还原。



Inject to the site of injury.
注射于受伤部位。

For more information, please call 1800 88 3300

High Quality Care for Wellness and Healthy Aging 优质的医疗保健与美颜养生

Brighton Healthcare is the first ambulatory care centre in Cyberjaya. Established in 2016, the centre strives to deliver professional and quality healthcare services at an affordable level to the local and regional community. Doctors and consultants are focused on preventing, diagnosing and treating common and complex diseases.

Patients can easily access to one-stop and comprehensive range of medical services, general practitioner as well as certain specialist clinic, premium health screenings with lab testing, imaging and pharmacy services are all located within the same building. Moreover, most blood tests can be completed within a few hours via in-house clinical laboratory.

Brighton Healthcare cultivates continuous improvement in quality of life by practicing advanced preventive and personalized medicine. The goal is not merely to prolong the total years of an individual's life, but to ensure that those years are enjoyed productively with vitality.

明敦医疗中心是赛城第一所专科护理门诊中心。创立于2016年，致力于为当地和区域社区提供价格合理、专业与优质的医疗服务。医生与顾问团队都专注于预防、诊断及治疗各种常见和复杂的疾病。

患者可以轻而易举地获得一站式和广泛的医疗服务、全科以及某些专科门诊，优质的健康检查与化验测试、成像检测和药局服务都同处于一栋建筑物内。此外，大多数的血液检验都可以在几个小时内通过内部的临床化验室完成。

明敦医疗中心通过实践先进的预防和个性化医学，不断地促进专业医疗保健及美颜养生。目标不仅仅是延长个人的生命，而是确保个人的健康水平得到全面提升，增加个人的自信与气质魅力，并享有更高品质的生活。



Brighton

Healthcare

Facilities and Services 设施与服务

Specialist Outpatient Clinic 专科门诊

- Internal Medicine 内科
- Haematology 血液学
- Ophthalmology 眼科
- Paediatrics 儿科
- Orthopaedic 骨科
- Otolaryngology (ENT) 耳鼻喉科

General Practitioner Clinic 综合诊所

- Resident Medical Officer 驻诊医生

Health Screening 健康检查

- Pre-university Examination 大专入学前体检
- Pre-employment Examination 就职前体检
- Pre-marital Screening 婚前健康检查
- Basic Health Screening 基本健康检查
- Executive Health Screening 职员健康检查
- Women Health Screening 女士健康检查
- Men Health Screening 男士健康检查
- Comprehensive Health Screening 全面健康检查
- Comprehensive Eye Examination 全面眼科视光检查
- Cardiac & Pulmonary Testing 心肺功能检查
 - Echocardiography 超声心动图
 - Electrocardiography 心电图
 - Pulmonary Function Testing 肺功能测试
 - Exercise Stress Test 跑步心电图

Radiology 放射部

- Digital X-ray 数码X光
- Ultrasound 超声波
 - Upper Abdominal, Breast, Pelvic, Testicular, Thyroid, Carotid
 - 上腹部、乳房、骨盆腔、阴囊、甲状腺、颈动脉

Laboratory 化验室

- Biochemistry 生物化学
- Microbiology 微生物学
- Haematology 血液学
- Serology 血清学
- Immunology 免疫学

Memory Clinic 记忆诊所

Tests for memory loss and early detection of dementia, especially Alzheimer's disease and vascular dementia.

测试记忆丧失与早期痴呆检测，尤其是阿尔茨海默病和血管性痴呆。

- Specialist Consultation In Aging & Gerontology 老龄与老年医学专家咨询
- Cognitive & Functional Tests 认知和功能测试
- Neuropsychological Assessments 神经心理学评估
- Anti-Dementia Treatment 抗痴呆症治疗

Hearing Care & Solution 听力保健与解决方案

- Diagnostic Hearing Test 听力测试诊断
- Hearing Aid Trial, Fitting & Consultation 助听器试用、安装和咨询
- Aural Rehabilitation 听觉复原



Genetics Screening 基因筛检

- Detect Cardio & Metabolic 心血管和代谢疾病基因筛检
- Detect Child 儿童基因筛检
- Detect Onco 癌症基因筛检
- Detect Wellness 健康养生基因筛检

Custom Made Medicine / Individualized Drug Therapy 订制药物 / 个性化药物治疗

- Bio-identical Hormone Replacement Therapy 激素（荷尔蒙）替代疗法
- Ophthalmic Medications 眼科药物
- Pain Management 疼痛治疗
- Hair Care 头发护理
- Nutraceuticals 特制保健品

Wellness & Healthy Aging 保健与美颜养生

- Stem Cell 干细胞
- Next Generation Platelet Rich Plasma 新世代富血小板血浆
 - Freeze-Dried Platelet – 2 Billion (FDP-2B) for Facial & Scalp Rejuvenation
 - 冻干血小板 (FDP-2B) 用于面部和头皮更新再生
- Mesotherapy Micro-needling 微针治疗
- Botox 肉毒杆菌
- Filler 填充剂
- Laser Treatment 激光治疗
 - Vaginal Rejuvenation 阴道紧致
 - Stress Urinary Incontinence 压力性尿失禁
 - 4D Body Tight Sculpting 4D 体态紧致雕塑
 - Permanent Hair Removal 永久脱毛
 - Acne Treatment 暗疮治疗
 - Skin Resurfacing/ Laser Peel 焕肤/ 磨皮
 - 4D Face Lift / Rejuvenation 4D 脸部拉提 / 紧致
 - Spider Vein Removal 改善静脉曲张
 - Snoring 打鼾

Monday to Friday: 9am – 6pm | Saturday: 9am – 1pm | Sunday & Public Holiday: Closed

Vaginal Rejuvenation Therapy

阴道紧致修复



The topic of vaginal rejuvenation is still fairly new in Malaysia, as most women might consider this a topic of taboo. The changes to the vaginal canal as we age due to hormonal changes and after multiple childbirths leading to reduced sexual satisfaction, and urinary incontinence most often cause women to feel very disappointed and dissatisfied. Not every patient sees the desired improvements with Kegel exercises to strengthen loose and weak vaginal muscles causing “leaky bladder”, nor does every patient benefit from hormone replacement therapy. Every year, an increasing number of women turn to surgery to rejuvenate the appearance of their labia and vagina. In the past, vaginal rejuvenation options were limited and involved invasive surgeries that often meant long, uncomfortable recovery periods.

在马来西亚，阴道紧致的话题还是没那么普遍，因为大多数女性都可能认为这是个禁忌话题。由于激素（荷尔蒙）失调、多次分娩伴随着年龄的增长，导致阴道管产生变化而松弛、性满意度降低，还有尿失禁也经常让女性感到非常沮丧和不安。凯格尔运动（又称骨盆运动）可以改善由于阴道周围肌肉伸缩性和弹性减弱所导致的“膀胱渗漏（漏尿）”，或通过激素（荷尔蒙）替代治疗从中受益，但并不是每位患者都能达到所预期的疗效。每年，越来越多女性转向整形手术以恢复阴唇和阴道的外观。过去，阴道紧致修复的选择非常有限，涉及侵入性手术，往往意味着长时间的不适和复原期。

How It Works?

Fortunately, with the development of advanced revolutionary medical grade lasers – IntimaLase, a unique and patent-pending Er:YAG laser therapy, women can now opt for incisionless, non-invasive tightening of the vaginal canal. Specially designed, innovative handpiece technology allows safe, precisely controlled and effective delivery of laser pulses to the treatment area. Its photo-thermal effect stimulates collagen/ elastin remodelling, thickens the vaginal walls and promotes functional recovery of the tissues, resulting in a rejuvenated, and healthier vagina. This procedure is safe, simple as an outpatient session takes around 20 minutes and you may return to your daily routine including work or exercise after the treatment. There are no side effects such as bleeding or swelling after the procedure and treatments are best performed once a month, with 3-4 sessions recommended for optimal lasting results. However, this may vary between individuals.

Who Can Benefit?

This treatment has been proven to effectively treat:-

- Vaginal laxity due to aging
- Excessive relaxation of vaginal muscles due to childbirth
- Vaginal dryness
- Mild to moderate stress urinary incontinence

For more information on IntimaLase, you can consult female doctors at Brighton Healthcare exclusively to ensure your comfort and privacy during the process.

怎么进行的？

庆幸的是，随着先进革命性医疗级激光仪IntimaLase的发展，一项独特正在申请专利的Er:YAG钕激光治疗技术，女性现在可以选择无切口，非侵入性的紧缩阴道。特殊和独创设计的手具技术可以安全、精确地控制并有效地将激光脉冲发射到治疗的部位。其光热效应能刺激胶原蛋白/重塑弹性蛋白，加强阴道壁并促进组织功能的恢复，以致阴道恢复活力和健康。整个疗程相当简单又安全，只需约20分钟的门诊，过后您就可以立即恢复日常活动，包括工作或体能锻炼。治疗后不会有出血或肿胀等副作用，最好是每个月进行一次，推荐3-4次以达到最佳的持续效果。然而，这也可能会因人而异。

谁能从中受惠？

此疗程已被证实能有效地治疗：

- 老化所导致阴道松弛
- 分娩而造成阴道肌肉过度扩张
- 阴道干涩
- 轻微至中度压力性尿失禁

欲知更多有关IntimaLase的详情，您可以咨询明敦医疗中心的女性医生以确保您在此过程中的舒适和隐私。

4D Body Tight Sculpting

4D 体态紧致雕塑



4D Body Tight Sculpting is a unique non-invasive laser treatment for sculpting and skin tightening on all body areas. The exclusive delivery modes are used in concert for hyperthermic adipocyte destruction and collagen remodelling with exceptional results. The procedure is a fast, safe and effective non-invasive alternative to laser lipolysis with no consumables, can typically resume their normal activities immediately following the treatment. Please approach Brighton Healthcare to find out how these treatments can effectively address your concerns.

4D 体态紧致雕塑是一种独特的非侵入性激光治疗，适用于身体所有部位以达成塑形和紧实肌肤。采用独家高热破坏脂肪细胞和重塑胶原蛋白交付模式，具有卓越的疗效。该项疗法足以替代激光溶脂，无需任何医疗耗材，非侵入性并且快速、安全和有效，通常可以在疗程后立即恢复日常活动。

请联系Brighton Healthcare以了解有关疗程如何能有效地解决您的忧虑。



Before 之前



After 1 Session 一次疗程之后

Brighton
Healthcare

BIO X HealthCare Sdn Bhd (982791-M)

Suite G-2, Ground Floor, Bio-X Centre, Persiaran Cyberpoint Selatan, Cyber 8, 63000 Cyberjaya, Selangor, Malaysia.

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CryoCord Presented with Sun Yat-Sen Enterprise Award

凯儿库荣获中山企业精神奖

CryoCord received yet another award for outstanding achievement in the industry, at the 3rd KWYP Sun Yat-Sen Enterprise Award, organised by Kwong Wah Yit Poh. The enterprise award was presented to domestic corporate companies with proven growth and success over the past years. The event was graced by H.E. Mr Wu Jun, Consul General of The People's Republic of China, who presented the award to the Managing Director of CryoCord, Mr James Then.

凯儿库荣获由光华日报主办的第三届中山企业精神奖殊荣。中山企业精神奖是颁发给国内在过去取得稳健增长和成功的企业。此活动也成功的邀请到中华人民共和国总领事吴骏先生颁发奖项于凯儿库的董事经理郑康力。



Shaken Baby Syndrome

摇晃婴儿综合症

Shaken baby syndrome is a form of child abuse that can result in permanent brain damage or death. Shaken baby syndrome causes brain injury as the result from the forceful shaking of an infant or toddler. The brain cells may be damaged permanently if the injury is severe.

摇晃婴儿综合症是一种虐待儿童的形式，可导致永久性脑损伤或死亡。摇晃婴儿综合症会导致脑部受伤源由对婴儿或孩童的强力震动。如果受伤情况严重，脑细胞可能会永久性损伤。

Why It Happens

Babies have weak neck muscles which are unable to support their heavy heads. If a baby is forcefully shaken, their fragile brain moves back and forth inside the skull. This causes bruising, swelling and bleeding of the brain.¹

Shaken baby syndrome usually occurs when a baby is shaken in a forceful manner by a frustrated or angry caregiver. Bouncing a child lightly on your knee or minor falls usually does not cause shaken baby syndrome.

为何会发生

婴儿的颈部肌肉较柔弱，不足支撑他们沉重的头部。如果婴儿被强力摇晃，他们脆弱的大脑会在头骨内部来回移动。这将造成大脑的瘀伤、肿胀和出血。

摇晃婴儿综合症通常发生于当婴儿被沮丧或愤怒式型态的照顾者以用力的方式动晃。把孩子放在腿上轻微摇晃或轻度的跌倒通常不会造成摇晃婴儿综合症。

Risk Factors

Among the risk factors for shaken baby syndrome to happen include:

- Stress
- Domestic violence
- Young or single parenthood
- Alcohol or substance abuse
- Depression
- A history of mistreatment as a child

In Malaysia, the perpetrator is usually non-related caregivers as compared to parents or immediate family members.² In this case, the caregiver is unable to calm or pacify the fretful child and may resort to forceful rocking in an attempt to calm the child or genuinely express their anger in an inappropriate manner.

风险因素

导致摇晃婴儿综合症的危险因素包括：

- 压力
- 家庭暴力
- 年轻或单亲家庭
- 酒精或滥用药物
- 抑郁症
- 虐待儿童的不良记录

在马来西亚，肇事者通常是第三方而非父母或其他家庭成员。在这类情况下，护理人员无法平息或安抚烦躁的孩子，可能会以不当愤怒的表达方式或采取强力的摇晃以企图安抚孩子。

Symptoms And Signs

Symptoms and signs of shaken baby syndrome include extreme irritability, breathing problems, poor eating, vomiting, pale or bluish skin, seizures and coma.^{3,4}

Other injuries may not be noticeable by the caregiver or parents. These include bleeding in the brain and eye, damage to the spine and neck and fractures of the ribs, skull and bones. There may also be evidence of a prior child abuse.²

症状和征兆

摇晃婴儿综合症的症状和征兆包括极度烦躁、呼吸困难、饮食不畅、呕吐、苍白或肤色偏蓝、癫痫发作和昏迷。

其它伤害或许不被照料者或家长发现。这些包括大脑和眼睛出血，脊柱和颈部的损伤以及肋骨头骨和骨骼的骨折。这些也可能成为儿童曾被虐待的证据。

Seeking Treatment

Please seek immediate treatment if you suspect your child has been injured by violent shaking. It is advisable to take your child to the nearest emergency room. Getting early medical attention may save your child's life or prevent serious health problems. Health care professionals are required to report all suspected cases of child abuse to the authorities.

A child who is suspected to be abused will be examined by a number of medical specialists. They will undergo thorough physical examinations to look for extent of the injuries. They may also need various tests such as imaging of the brain, skeletal X-rays and eye examinations.

Among the common injuries inflicted by shaken baby syndrome are multiple fractures and bleeding in the brain and eyes. (Figure 1)

Mild cases of shaken baby syndrome may heal completely without disabilities. It is crucial that the abuse stop and not go on to result in more serious injuries. In severe cases, the survivors may have permanent disabilities. Among them are partial or total blindness, hearing loss, developmental delay, learning problems or behavior issues, mental retardation and seizures.⁵

The photographs in Figure 1 show bleeding inside the eye of a baby suspected of shaken baby syndrome. There are many blood clots overlying the delicate nerve tissue lining the inside of the eye called the retina. This form of bleeding only occurs with forceful shaking or bleeding inside the brain that passes into the eye due to their close relationship or connection.

When the blood clots cover critical areas in the eye then a specialized form of eye surgery called a "vitrectomy" needs to be performed by an experienced eye surgeon called a vitreoretinal surgeon to remove the clots. This will restore vision and prevent development of amblyopia or lazy eye in the future.

However, unfortunately many victims of shaken baby syndrome have concurrent injuries to their brain. Hence, the outcome of surgery in terms of vision may also be limited by these brain injuries.

寻求治疗

如果您怀疑您的小孩受到猛烈的震动伤害，请立即给予治疗。最好把您的孩子带到靠近的急诊室。早日接受治疗可挽救您孩子的生命或预防严重的健康问题。卫生保健专业人员必须向当局报告所有涉嫌虐待儿童案件。

怀疑被虐待的小孩将由一些医学专家进行检查。他们将进行彻底的身体检查以寻找受伤的程度。他们还可能需要进行各种测试，如脑的成像、骨骼X光和眼睛检查。

摇晃婴儿综合症造成的常见损伤是脑和眼睛多发性骨折和出血。（图1）

轻微的摇晃婴儿综合症有机会痊愈而不会残疾。最重要的是停止虐待以防止更严重的伤害。在严重的情况下，幸存者可能会永久性残疾。其中包括部分或全部失明、丧失听力、发育迟缓、学习问题或行为问题、精神发育迟滞和癫痫发作。

图1中的照片显示怀疑是摇晃婴儿综合症的婴儿眼睛内出血。有许多血块覆盖在视网膜的眼睛里的精细神经组织。这种出血形式发生于强力的摇晃或脑部内出血的关系或连接而进入眼部。

当血块覆盖眼睛中的关键区域时，称为“玻璃体切割术”的专门形式的眼科手术需要由经验丰富的眼科医生进行，称为玻璃体视网膜外科医生去除凝块。这将恢复未来的视力，防止造成弱视或懒惰眼。

然而，令人遗憾的是，许多受伤的摇晃婴儿综合症患有脑部受伤。因此，视力方面的手术结果也可能受到这些脑损伤的限制。



Prevention

Shaken baby syndrome is preventable. Awareness and education of this condition must be given to the public.

Seek help if you are unable to manage your emotions and stress. Thus, you will be less likely to channel your frustration and anger towards a child. It is important to always treat your child gently.

If you need help from others to take care of your child, please ensure they know the dangers of shaken baby syndrome.

Nothing justifies shaking a child as it only takes a few seconds of shaking to cause irreversible brain damage in a baby.

预防

摇晃婴儿综合症是可预防的。必需宣导大众这类情况的意识和教育。

如果您无法管理您的情绪和压力，请寻求帮助。这会减低您将不安愤怒的情绪转嫁于孩子。善待您的孩子是很重要的。

如果您需要他人帮忙照顾您的小孩，请确保他们了解摇晃婴儿综合症的危险。

几秒的摇晃并不会导致孩童脑损伤。



Figure 1: Blood clots covering the retina of both eyes of a baby suspected to have shaken baby syndrome. The picture on the right shows the right eye and the picture on the left shows the left eye.

图1：婴儿双眼视网膜覆盖的血块疑似摇晃婴儿综合症。右图显示右眼，左侧的图像显示左眼。

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