ACTIVATE

JUNE 2020

a work in progress

An Exercise & Sports Science Australia (ESSA) Publication

THE EVOLUTION OF A PROFESSION

A look at the progess of exercise physiology over the last few decades

EXERCISE AS MEDICINE

Experts share on using exercise prescription to improve health

AUSTRALIAN PARA-SPORT

A highlight of the progress and opportunities in this unique sporting space

THEN VS NOW CAREER PROGRESS

A look back on industry leaders pioneering the way to career success

ACTIVATE

A publication of ESSA
EXERCISE & SPORTS SCIENCE AUSTRALIA

THIS ISSUE

With a new decade comes the opportunity to reflect on our **PROGRESS** and the changes we have made as an industry and as a nation to improve ***health care, technology, equality*** and the ***future.***

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ESSA pays respect to the Traditional Custodians of the lands on which our organisation is located, and acknowledges the Elders past, present and future.

a word
FROM THE CEO

The theme for this edition of Activate is **Progress**, but when the ESSA Marketing and Communications Unit were planning the theme for this issue at the start of 2020, I am not sure they saw COVID-19 happening. Progress is now taking on a different meaning for us all.

At the end of last year, I was considering a technology project for the organisation in 2020, both with an internal and external mandate. Firstly, internally – what does ESSA need now and into the future to ensure we can improve our efficiencies and member interactions? Secondly, externally – what does technology look like for our members and how can we support our members to ensure they embrace technology in being efficient themselves as businesses, and engaging and servicing their clients? I had started work on this project when COVID-19 hit. The relevance of this project took on a completely different meaning. We were all faced with the fact that we needed to embrace technology immediately with social distancing rules being thrust upon us. Gone was the idea of a 6-month project scoping out and researching the needs and options. Quickly we have all jumped into making sure our IT infrastructure was capable of ensuring we could continue providing services, staff could work from home, and we maintained or improved our services.

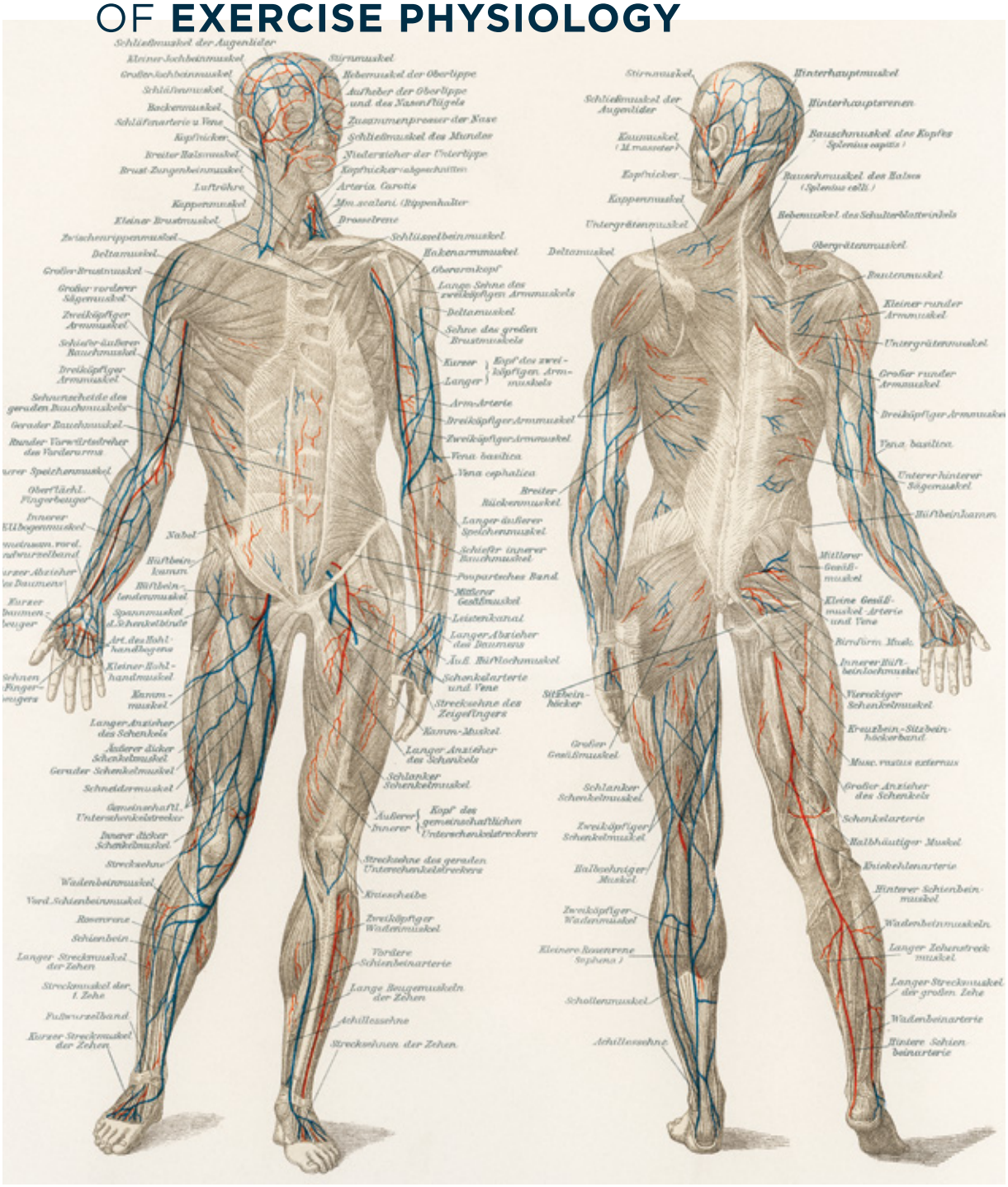
COVID-19 has definitely changed our world. The way we interact with people, the way we consider hygiene, the interactions with our family, the value we place on being out of our homes, and the value of our health. I always enjoy learning from every experience and COVID-19 will be no different, personally and professionally. Do I see ESSA and our members going back to the way things were pre-COVID? No. Is that a good thing? Probably. Change is never easy but having change thrust upon you to ensure progress could be a good thing. This pandemic has definitely forced ESSA to increase our online presence and invest in online systems to better support, engage and interact with our staff. Would we have actioned these opportunities later on our own terms? Again, probably, but the value of these systems might not have been recognised down the track.

ESSA have five values that the organisation lives by – Quality, Responsibility, Leadership, Passion, Customer Service. I would see these values being regularly endorsed by the staff and volunteers, but never so to the level that I have seen over the last few months. Never before have these values been so important and so has been the need for professional bodies and their support and advocacy for their industries. After the craziness of living through the necessary measures that were needed to be put in place with COVID-19, I hope the level of our appreciation of our values does not die down and they are here to stay.

Yours in health,

Anita Hobson-Powell
CHIEF EXECUTIVE OFFICER

THE *evolution* OF EXERCISE PHYSIOLOGY



Written by Dr Jarrod Meerkin, Accredited Exercise Physiologist and ESSA Fellow

In the context of many other professions, exercise physiology is a relatively new one to the allied health environment. Compared to long established fields such as medicine, law, engineering or teaching for example, all considered 'old' professions, we are in a unique position to be able to see the evolution of exercise physiology in a just a few short decades.

During late 80s/early 90s, universities recognised a niche in tertiary education for a new structured degree in the application of exercise. The benefits and therapeutic uses of exercise were well established, though progress in the field recognised the need for a structured 3-year degree covering all the required learning to specialise in a newly defined field of exercise physiology.

Those early days were driven by academics motivated by little more than seeing their graduating students become working professionals. This includes the likes of Tom Penrose, Emeritus Professor Tony Parker and Dr Phil Hamdorf, whose passions supported the establishment and purpose of the profession. The transition to employment in those initial years, however, was at times convoluted, with many graduates unsure of how to pursue a career in their new chosen profession. Take my graduating class of 1990 as an example, it's a telling statistic that very few of those that I finished with at The University of Wollongong actually ended up practising as an Exercise Physiologist. Some classmates moved to physiotherapy, business or medicine. Some also moved to the closest thing to working in the field of rehabilitation – case management with an insurer.

In those 'early days', our association was originally known as the Exercise Therapy Association before we (quickly) became AAESS, and then ESSA. The use of the term 'therapy' caused significant issues with our colleagues in the rehabilitation arena. ESSA now encapsulates the broader community of both academics and professionals in the field. Even so, the 10-year period between 1995-2005 was still difficult for exercise physiology graduates that were emptied into the market from the rapidly growing number of courses offered throughout the country. They struggled to define their own career path; some even created their own position in the workforce. Some set up shop with little or no support or mentorship, some pursued personal training as gyms were often the only places offering employment.

These pioneers of our industry led to our universities designing courses specifically for those that choose not to undertake a fourth year of learning. Our field has diversified considerably so that now we provide an accredited and structured environment for Exercise Scientists that choose not to take the clinical path of employment. An Exercise Scientist can work in many industries and employment sectors at an individual, community or population level, including both government and non-government sectors. For example, as health educators, in health promotion or in corporate health, and many still operate a higher level of knowledge and care within the fitness industry.

The turning point for our profession was achieving provider recognition for Medicare in 2006 and this has continued to progress through to the NDIS, WorkCover, TAC, DVA and private health insurance rebates for patients. Nowadays, pursuing a career as an Exercise Physiologist is more desirable due to the diverse clinical domains that we can work in. From cardiovascular, musculoskeletal and injury rehabilitation and diabetic management to name a few. The evidence supporting exercise as a valid intervention in the treatment and management of many chronic diseases, combined with the recognition of the Accredited Exercise Physiologist (AEP) as allied health providers, has ultimately resulted in increased employment opportunities.

We have also witnessed significant progress in the advancement of the profession of the Sports Scientist. In the 90s, those graduating with interests in sports science were largely left to chase employment at their alma mater. This is still a priority for many seeking to remain in the academic domain, however, others have carved a pathway of employment among the academies and institutes of sport throughout the country. We can find our members embedded in professional sporting teams and private tech companies which have developed technologies utilised by professional sporting organisations.

Adverse events ('the Essendon affair') have also led to further recognition of our members by the public and professional sporting teams. ESSA has developed the Accredited Sports Science Professional Standards and ESSA is the peak professional body and the sole accrediting body for Accredited Sports Scientists and High Performance Managers. This accreditation is now also supported by the Australian government and represents significant progress for this group of professionals and our members.

My own experience both as a practitioner and an employer is a clear reminder to me of how exercise physiology has become a successful, long-term career choice. Since establishing my business in 2006, pioneering the use of DEXA for bone density and body composition, I continue to wear my AEP hat. In addition to offering a measurement service, I am providing clients with specific exercise programming. Sometimes this is for the purposes of the client's general fitness or in some cases the more specific therapeutic application for those with clinical conditions. I have been lucky enough to only have needed to employ five 'long-term' AEPs in our business. It is a pleasure to support these individuals as they develop their own style of practice and gain confidence in their skills and knowledge which will inevitably allow them to move onto other roles in what has become a diverse work playground.

If I were to regress to those early years (2006-2009) of my career, what was lacking for me was business acumen. The essential nature of that kind of learning was just not offered at the time. This is one area which has greatly evolved for today's AEPs who now have the ability to combine their knowledge as a practising AEP and bolster it with further education and support provided by ESSA. Courses in business practice, managing employees and marketing are just a few of the further education and development which is of enormous value in order to operate profitably and successfully as an Exercise Physiologist. This is the same for our Exercise Scientists and Sports Scientists.

We have also seen the establishment of new businesses that now work alongside us to assist, train and mentor our skills in business. Our numbers have grown to the point now where we have spawned a new industry of specialist AEP allied health business coaches, filling an important gap between what's taught in academic (AEP) circles and running a profitable practice once you hang out your shingle. This is important progress for any profession as it establishes itself in society.

Technological improvements will undoubtedly assist our profession in continuing on an upward trajectory as it provides a major growth opportunity for AEPs. Precedent shows us that government can move quickly when there is pressure placed upon it. At the time of writing, the government announced new Medicare item codes for telehealth consults with Exercise Physiologists in an effort to assist in the allied health requirements of those patients requiring home isolation for COVID-19.

ESSA's continued efforts to lobby the government will hopefully lead to opportunities for AEPs to continue to undertake telehealth consultations for GP Management Plans, particularly for those in rural and regional locations throughout the country.

After a recent search on seek.com.au where I typed in the keyword "Exercise Physiologist" under 'Health Care and Medical', I was pleasantly surprised by the number of job opportunities available in our profession: 67 positions – just in the first 3 pages – all posted within the last fortnight, with a salary range of $65,000 to $100,000+. The Human Movers Class of 1990 would have been overwhelmed by such a wealth of work opportunities (not to mention the internet). Now that is definitely progress.

So, where to from here, we wonder. A lot has changed since I graduated, much of it for the positive evolution and validation of the profession. We have governments ear and we're now embedded in the Australian health care system. It's a dynamic profession to be a part of and inspiring to follow the success of those who have chosen to make exercise physiology a career choice. Certainly, it seems there has never been a better time to enter the workforce as an Exercise Physiologist, Exercise Scientist or Sports Scientist.

Perhaps in decades to come, we too shall be one of the 'old professions'.

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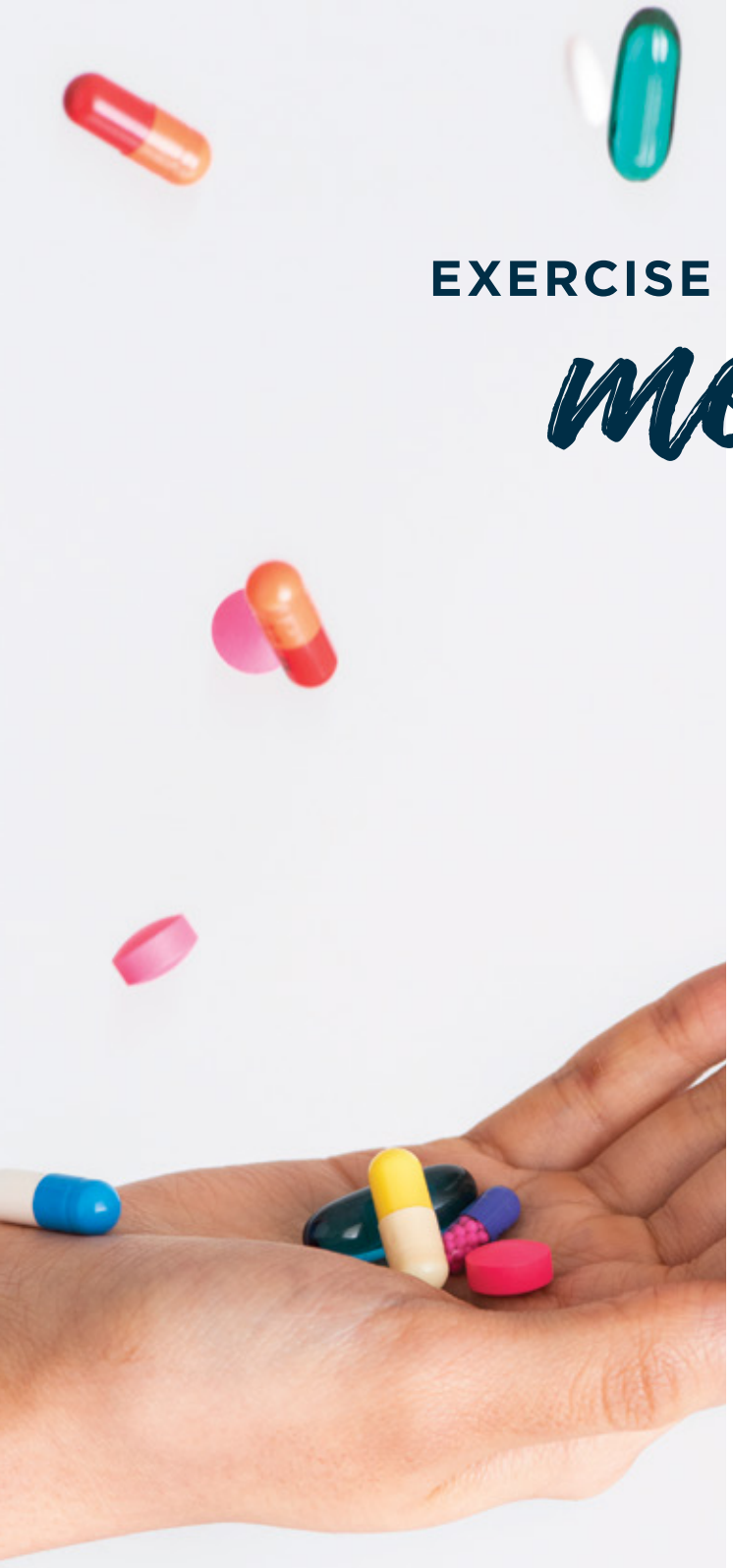
EXERCISE AS *medicine*



Around the world, exercise is becoming more widely accepted as a form of medicine for chronic conditions, illnesses and injuries. Although the many benefits of physical activity are continually backed by mounting research, this hasn't always been the case. We spoke to three experts in the fields of cancer management, women's health and mental health to find out more about how exercise, over time, has been incorporated as a form of treatment or 'medicine' within their work.

CANCER

Written by Dr Robert U. Newton
PhD, AEP, ESSAF, Exercise Medicine Research Institute, Edith Cowan University

In 2005, my colleague Daniel Galvão and I published a narrative review in the Journal of Clinical Oncology, reporting that there were only 26 scientific papers in existence reporting studies of exercise during or after cancer treatment[1]. As of May 2020, a search of scientific papers with "exercise OR physical activity" AND cancer in the title returns 4021 titles. Confining the search just to clinical trials returns 675 papers.

The evidence from high-quality research as well as reports from clinical practice are that appropriately prescribed exercise is safe and beneficial for cancer patients across the cancer spectrum from point of diagnosis to end-of-life. Exercise medicine is now prescribed as a neoadjuvant (before the main treatment) therapy preparing patients

"If exercise could be packed in a pill, it would be the single most widely prescribed and beneficial medicine in the nation."

Robert N. Butler, M.D. Former Director, National Institute on Aging.

for surgery or chemotherapy, potentially slowing disease progression and to get them resilient enough to cope with subsequent treatments with less complications.
Exercise is being used as an adjuvant (therapy during the main therapy) to chemotherapy and radiation therapy, with emerging evidence regarding immunotherapy, to reduce side effects and based on early research indicating appropriate exercise may actually enhance effectiveness of the primary treatment.

Finally, as a rehabilitative therapy, exercise facilitates the patient to recover from surgery, chemotherapy or radiation therapy. There is also a large evidence base that continued exercise and physical activity will reduce risk of recurrence and onset of other chronic diseases and reduce long-term side-effects of cancer treatment.

In 2019, the ESSA position statement on exercise medicine in cancer management was published with a clear imperative that exercise prescription should be tailored to improve the health issues causing greatest morbidity and mortality risk[2]. This was an important departure from previous generic recommendations that all cancer patients should try and meet healthy adult physical activity guidelines[3]. Recent research in patients with more advanced cancers and experiencing considerable disease and treatment issues suggests maladaptation to higher exercise dosages[4] and interference effects of aerobic and resistance exercise[5]. Clearly, we must be more sophisticated in our exercise assessment and prescription and extend beyond recommendations for cancer patients to simply be more physically active.

While the epidemiological evidence is very strong that there is a relationship between physical activity and cancer survivorship, causality and mechanisms have not been established. Importantly there are now at least three randomised control trials in progress with overall or progression free survival as the primary outcome. If these prospective studies prove exercise medicine provides a survival advantage, then we should expect a large shift in clinical practice with clinicians recommending and patients demanding targeted exercise prescription to help them survive their disease. Hopefully, Government through Medicare and private health insurers will recognise such research and appropriately support exercise medicine as a safe, effective and relatively inexpensive therapy for cancer patients.

The challenge is improving implementation and translation of the research and this will require up-skilling of Accredited Exercise Physiologists specifically in exercise oncology. For those cancer patients that are post-treatment and absent of significant health issues, there is very large capacity in the commercial health and fitness industry to support these people. However, this would require further training of exercise professionals as well as considerations within the fitness facilities, particularly in the new landscape of COVID-19.

Finally, the current COVID-19 pandemic has by necessity greatly expanded exercise medicine services delivered via telehealth. We need to capitalise on the new technologies, learnings and experiences as digital exercise medicine would overcome many barriers to cancer patients exercising in a safe and effective manner. This is particularly important for patients outside metropolitan areas where access to Accredited Exercise Physiologists and appropriate exercise facilities is limited or non-existent contributing to the geographic health disparities in cancer outcomes.

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WOMEN'S HEALTH

Written by Esme Soan
AEP, Women's Health Expert

"Is it safe to do this exercise now that I am pregnant?" This is one of the hottest questions I get in my clinical practice, usually from newly expectant mums in their first trimester.

Exercise during pregnancy is really quite controversial. From professional athletes like Serena Williams or Alysia Montaño (Alysia ran the 800-meter race at the 2014 U.S. track and field championships while eight months pregnant), to the regular gym attendee – there is still a very public misunderstanding of the risks, and the practical how-to's of pregnancy exercise. It's understandable when you consider how much information has changed around exercise in pregnancy in just the last 30 years.

Historically, pregnant women were treated as if they were ill – wrapped in cotton wool, told to relax, avoid strenuous exertion, and minimise stretching for fear of squashing the baby or knotting the umbilical cord. It was only in 1985(!) that the American College of Obstetrics and Gynaecology (ACOG) published its first guidelines for exercise during pregnancy.

These very first ACOG guidelines, albeit conservative and not entirely evidence based, were at least a starting point for women who wanted to be physically active

during pregnancy, and they provided some guidance for the health care professionals who would advise them. The guidelines contained very specific exercise heart rate max and duration of 140 beats/minute and 15 minutes, respectively – which didn't get you very much or very far with an exercise program.

We now know that heart rate response is augmented by the additional blood volume and consequential increased cardiac output in pregnancy[1], and that a better indicator of exercise intensity is using the 'talk test' – an indicator of RPE (rate of perceived exertion) and level of breathlessness.

In the 1990s, pregnancy exercise researchers like James Clapp (considered one of the OGs of pregnancy exercise research) helped to expand on the understanding of the safety of exercise in pregnancy, clearing up the myths of miscarriage and placental growth. In fact, Clapp and his researchers helped us better understand how the multiple physiological changes that occur in pregnancy on the cardiovascular and metabolic systems work to protect mother and developing placental unit from risk[2].

Comprehensive position statements from the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG), Canadian Society for Exercise Physiology (CSEP) and ACOG have supported how the multiple benefits of exercise in pregnancy far outweigh the risks – it is actually considered a 'window of opportunity' to begin exercising and it is actively encouraged for women to exercise at a moderate intensity throughout pregnancy.

Within even the last five years, understanding and public interest in exercise during pregnancy has absolutely soared, with access to social media, growth in supporting research in exercise as a preventative health measure for pregnancy induced complications (such as Gestational Diabetes Mellitus[3]), and an increase in knowledgeable health care providers who can educate pregnant clients on how to keep/get moving (such as women's health AEPs and physiotherapists).

Whilst we still have a lot to do in public perspective of 'safety' of exercise in pregnancy, and have more to learn on the optimal exercise prescription for pregnant/postpartum athletes, with the rapidly expanding understanding of unique female physiology, and the demand for gender equality in research, we might see even further progressions in pregnancy exercise in years to come.

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MENTAL HEALTH

Written by Dr Rob Stanton
PhD, ESSAM, AEP, AES

Mental illness has always been surrounded by stigma, and this remains unchanged today. Prehistoric efforts to treat people with 'aberrant behaviour' or mental illness might be considered barbaric at best, and included removing a section of the skull in a procedure known as 'trephination', presumably to allow the demons inhabiting the skull a method of escape[1]. Throughout history, treatments including bloodletting, institutionalisation, removal of brain tissue (frontal lobotomy), and insulin-induced coma therapy were trialled but subsequently surpassed as knowledge of brain functioning improved.

The notion of exercise as medicine is not new. Evidence of the prescription of daily moderate exercise for physical and mental health can be traced back to 600 years Before Common Era in India, and later in ancient Greece[2]. Although physical pursuits have long thought to be beneficial for physical and mental health, the first randomised controlled trial on exercise and depression was conducted in 1979, showing benefits comparable to psychotherapy[3]. Although initially dismissed as ineffective for methodological reasons[4], researchers continued to examine how exercise might benefit people with mental illness. This is especially pertinent since high levels of physical activity are associated with lower mortality, and people with mental illness are less physically active compared to the general population[5].

There is now irrefutable evidence that exercise, even in small doses, is a valuable contributor to the prevention and treatment of a range of mental health conditions[6]. Even 10 minutes of moderate intensity performed once per week can reduce the risk of future depressive episodes[7]. Evidence exists for both aerobic[8] including high intensity interval exercise[9] and resistance exercise[10] in improving symptom reduction. However, recent research has looked to examine the mechanisms by which exercise exerts its therapeutic effect, showing changes in neurotransmitter function, building new neural pathways in the brain[11, 12], and changes in the hippocampus[13]; a region of the brain responsible for motivation, emotion, memory, and learning.

Despite our advanced understanding of the benefits of exercise for mental illness, it remains to be translated into routine care, and little progress regarding barriers to exercise prescription has been made. International consensus indicates a need for changes in the culture of mental health treatments, improved infrastructure, and clinical training in exercise to enhance translation of research to practice[14].

Exercise Physiologists (EPs) are ideally placed to develop and deliver evidence-based exercise interventions as part of multidisciplinary teams across a range of mental health settings[15]. Evidence suggests EP-led programs are effective, well-received, and serve the individual needs of people with mental illness[16, 17]; however, ongoing advocacy and training for mental health clinicians is needed to see EPs become a part of multidisciplinary mental health care teams.

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A SNAPSHOT OF OUR *initiatives*

As ESSA progresses, so too does the way we support our members.

EXERCISE RIGHT

Created in 2014, Exercise Right is a public awareness campaign designed to inspire Australians to be more active and to help them understand the importance of getting advice from our accredited professionals. Now, six years later, Exercise Right has grown exponentially in to a resource used by over 400,000 users this year alone. Visit **www.exerciseright.com.au** to learn more.

ESSA PROFESSIONAL DEVELOPMENT

ESSA is continually continually providing the latest professional development opportunities through face-to-face delivery, webinars and podcasts, and has progressed to offer over 200 professional development events in 2019 to over 14,000 delegates.

RESEARCH TO PRACTICE

Research to Practice is a biennial conference hosted by ESSA and is an international scientific meeting that provides a platform for strong research-based evidence to be presented and shared among industry professionals. With the first ESSA conference held in 2004 with approximately 100 delegates, Research to Practice has since grown in to a world-class conference, with over 1,000 delegates at our 2018 event. Visit **www.researchtopractice2021.com.au** to learn more.

HR SUPPORT

Our membership has grown significantly over the last five years, and with that, members require more assistance to understand the industry as an employee and/or employer. Due to this, ESSA partnered with the Human Resources experts Strawberry Seed Consulting to provide advice and online education to ESSA members.

ESSA EARLY CAREER NETWORK

ECN

As our members get started in their careers, ESSA is there to offer tailored resources to help them progress through the change. The Early Career Network (ECN) includes the relevant tools, guides and advice to support our members during their first three years of practice.

ESSA BUSINESS NETWORK

EBN

As our industry grows, so does the career opportunities of our members, especially those running their own business. The ESSA Business Network (EBN) is designed to provide resources and support for ESSA members who are starting up or growing a business.

ESSA ACTIVE NATION

ACTIVE NATION

Active Nation is ESSA's advocacy platform which lobbies for better support and more access to exercise services and programs to help Australians to become more physically active.

ExeRxcise is Medicine® Australia

EIM

Exercise is Medicine® Australia empowers primary health care providers to effectively counsel patients about physical activity leading to sustained behaviour change, and promotes evidence based screening to easily identify when and how to refer patients to appropriately trained allied health professionals to deliver exercise treatment services.

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AUSTRALIAN para-sport

The Progress and the Opportunities

Written by Zoe Bickerstaffe, ESSA Marketing & Communications Manager; and Camella Brightman, ESSA Member Communications Officer

Australians love their sport. Whether it be tennis, rugby or basketball, para-sport has enabled all Australians to be included in a wide range of sporting activities both within the Paralympics and their communities, regardless of their ability levels.

The progress and growth within para-sport has been documented both in the media and within research, with Paralympic athletes becoming household names (think Dylan Alcott and Louise Sauvage) and statistics reporting that sport participation by people with a disability increased from 18% in 2012 to 27% in 2015[1].

At ESSA, we have also experienced progress within the para-sport space through some of our exercise and sports science professionals; members of the community dedicated to improving the landscape of para-sport for our athletes and those living with a disability who just want to get involved. This article delves a bit deeper into the world of parasport and how our members have been involved in supporting this important movement.

PROGRESS IS PROMISING

Accredited Exercise Physiologist, Accredited Sports Scientist and ESSA National Board Director, Dr. Emma Beckman has worked within the para-athlete industry for several years and has seen numerous positive changes as society shifts.

"So much has happened in the last 5-10 years! We saw growing numbers of Paralympians at every Olympic Games as the support grew but the number will remain similar now (about 4,000 athletes), and what you'll notice now will be the quality of the performances that will continue to explode as professionalism increases and athletes continue to show us amazing things," explained Dr. Beckman.

"From a research perspective, prior to 1992 there were nine articles that referenced para-sport. From 1992 to 2010, there were about 150 published, but in the last 10 years alone, we saw over 700 articles about para-sport published! That means we are growing our knowledge on sports medicine, training methods and adaptations, technique, technology, classification, psychology – everything!"

"I think we will consistently improve our understanding of how impairments impact on sports performance and how to best use technology and training methods to optimise performance outcomes. The benefits of sport for both physical and psychosocial outcomes will become so clearly articulated, and improvements to accessing programs and coaches will mean that more and more people with a disability will be able to participate in whatever physical activity and sport they like – as they should."

PARALYMPICS AUSTRALIA AND GROWTH OF THE SECTOR

In 2019, the birth of Paralympics Australia developed out of a strategic move to better fit the growing stature of para-sport throughout Australia. The re-brand of the Australian Paralympic Committee was a clear identifier of growing success on and off the sports grounds.

Lynne Anderson, Chief Executive Officer for Paralympics Australia was quoted in the 2018/19 Paralympics Australia Annual Report[2] and explained in more detail.

"(2019) This was indeed a powerful year for Paralympics Australia, one in which our growing status and respect within Australia's elite sports sector was rewarded with key and pivotal wins. Never before have para-athletes had a greater impact in Australia, with community desire for equity and inclusion of para-sport becoming more evident every day. As the Australian Paralympic movement continues to influence and empower a greater number of Australians, so too does its peak body, and it was evident to us that the Australian Paralympic Committee was a name that no longer captured such a broad role within Australian sport."

2019 provided to be additionally pivotal due to two substantial revenue streams. First was a historic $12 million-dollar Federal Government grant which aimed to boost the preparations of Australia's most elite para-athletes ahead of the Tokyo 2020 Paralympic Games. This was to be on top of the $385.4 million package for sport and physical activity announced in the 2019 Federal Budget which has been acknowledged as one of the biggest funding injections for sport in years.

Second was an agreed offer from Seven West Media to become the broadcast partner for the 2020 Paralympic Games. The deal was a massive coup which will position Seven alongside the United Kingdom's Channel 4 as world leaders in Paralympic sport coverage.

Lynne Anderson continued by agreeing that this commitment came at a critical time for Australian sport.

"Para-sport continues to demonstrate a high return on investment, not just in relation to medals won by our athletes, but in the increased physical and mental well-being for Australians with a disability compared to those who don't have access to sporting opportunities," Anderson said.

"Australian sport needs funding support like this to grow high performance sport and participation opportunities at the grassroots level, and to help deliver on the National Sports Plan – Sport 2030."

"The resounding feedback we are receiving from our stakeholders is that talent identification, supporting athlete pathways, and the high cost of para-sport equipment are the most important issues facing our movement, and we are pleased that this new funding is targeted at addressing these issues across sport."

"The Paralympic movement is experiencing a wave of momentum, but with our growth, comes additional responsibility and challenges."

OUR ATHLETES AND THEIR EXPERIENCES

Recently retired Matthew Cowdrey OAM said it's incredible to think how far the Paralympic Games and the para-sport movement in general have come since his first Games[3]. The three-time Paralympian is the most successful Australian Paralympian in history, having won a total of 23 Paralympic medals including 13 gold. Matthew named the Athens 2004 games as a turning point.

"Instead of swimming in the outdoor pool in Athens we were in the indoor water polo pool that was obviously significant smaller in seating capacity. There's a range of other things that you notice in retrospect but at the time, when you were there, was the most exciting thing I've ever done. I just loved every second of it."

"I think we had maybe a half an hour highlights package on the TV and that was it. In many ways, I was lucky I grew and matured in the same way that the movement grew and matured across all the years that I was involved."

Following on from the Athens Paralympics, Paralympic gold medallist, Kurt Fearnley OAM addressed his experiences during his 2013 Australia Day speech[4].

"Things slowly built over the next two games in Athens and Beijing, however, the advances were more on the sporting field than off it. The approach and performance of the athletes were becoming more professional, teams were better prepared, athletes were faster and stronger.

London made us athletes feel like superstars, not just gladiators in the eyes of our peers but genuine superstars. Everywhere you looked across the city of London, every disability was proudly displayed across buildings and banners. You were stopped in the streets, not just because you were in a uniform but also because people knew your name and what you did. Major corporations featured Paralympic athletes in their advertising campaigns. You couldn't switch on the television or pick up a paper without being smacked in the face with the Paralympics.

We may have shared venues with our Olympic brothers and sisters but by the time the Paralympics came around they were long gone, and this was obviously our stage. Seeing the corporate world support and be the standard-bearer for Paralympic sport was something that I'd always hoped would become a reality and it really was that way in London."

Dylan Alcott is an undeniable shining star in the realms of para-athletes has also seen a positive change over the years explaining that 15 to 20 years ago athletes with a disability had to pay to compete[5].

"There was no funding, no-one cared. The changing of the tide is now, and sponsors are realising that. If they don't, they'll regret not getting involved."

"I'm the lucky one who has it at the moment," reflected Alcott. "The next generation of young athletes, other sports, they deserve the same thing. They train just as hard as the Roger Federers, Usain Bolts, Michael Phelpses, whoever it is. It means the world to me to be able to cut through, break that glass ceiling. Hopefully it flows on for years to come and this becomes the norm."

"When I made the switch to play tennis from basketball, I remember I said to Tennis Australia, 'I really want you to treat me like a professional tennis player first and foremost, who just happens to have a disability'," said Alcott. "I wanted to get treated like Nick Kyrgios did, or Thanasi Kokkinakis, or Sam Stosur or Lleyton Hewitt."

"I remember as a 14-year-old lying in bed and all I wanted to do was make it in the mainstream in some way," he tearfully recalled after lifting his latest Australian Open trophy[6]. "I wanted to show we could be normal people, get a job, have a partner – I just wanted to see people with a disability succeeding in the mainstream."

ESSA CONNECTIONS

ESSA members are working within various avenues to support the para-sport space and members of the community living with a disability to engage in sporting activities to benefit their physical, mental and social health.

Dr. Emma Beckman is working with the next generation

"I'm lucky enough to work with athletes who have high support needs and we have three incredible athletes in the UQ ParaSTART program who are smashing goals and doing amazing things. I've also been working with a few RaceRunning athletes over the last six months. RaceRunning is a new athletics event for people who have cerebral palsy and are moderately to severely impaired. Watching these athletes find the freedom of running through RaceRunning is an incredible thing to watch."

Max is 12 years old and dreams of one day competing at the highest level, the Paralympics. He trains incredibly hard with his Accredited Exercise Physiologist and has a Sports Scientist in his team (and an amazing judo instructor!).

Matthew Knapman is working with para-athletes

Matthew previously trained Australia's oldest Invictus Games competitor, Graham Bell for the 2018 Invictus Games

(competing in archery), and was interviewed by ESSA in late 2018 where he shared his support for the Games and the importance they hold in parasport community.

"Graham Bell contacted me in September 2017. Graham had a number of injuries which included a moderate to severe impingement in C6/C7 due to his operational service in the Army. He also suffered multiple orthopaedic injuries 20 years ago from a serious motor vehicle accident with residual arthritis and other complex issues."

"His initial goals were to participate in the Invictus Games in Indoor Rowing, Seated Volleyball, Cycling or Archery. We trained once a week focusing on improving overall fitness (on the rowing machine and bike), and increasing strength and endurance completing full body movements. I wrote a program for Graham to complete independently as well which he was able to adhere to. At the end of the Games, Graham came 11th in the Men's Open Recurve (Archery)."

"The Invictus Games have been so amazing to watch! It gives them purpose again after struggling to fit back into regular life post-service. Additionally, it gives them focus on an end goal such as reaching a certain distance in one minute on the rowing machine or being able to consistently hit the target in archery. Being so easy to measure, it gives them back some control which they may have lost. The opportunity to represent your country getting the recognition they deserve and the chance to be athletes despite their injuries or illnesses would be life-changing."

Heidi Joosten and the view from an athlete

Heidi is both an Accredited Exercise Physiologist and a para-athlete and was interviewed last year by ESSA about her involvement in the Invictus Games.

"In 2017, I competed in Toronto at the Invictus Games in athletics in the 100m, 200m, and 400m event, as well as the mixed relay, where I received silver medals in all four events. Then, competing at the Invictus Games last year was such a healing and uplifting experience alongside my fellow Australian teammates and competitors from other nations. The social connection was very important to me and I have made lifelong friends. The Invictus family has been important for my recovery by helping to assist with my transition and allow me to feel socially connected with other like-minded veterans."

"In 2018, I was selected for the Invictus team and competed in Sydney in October. My favourite highlight from the 2018 Invictus Games was crossing the finish line in the 200m race and winning a gold medal on home soil with the crowd roaring and having my family and friends there to share the special win with me – it was a very emotional moment for me. The overall outcome of my performances surprised me immensely. The icing on the cake was backing it up with three other gold medals in the 100m, 400m and the long jump."

Mark Liberatore is working behind the scenes

The expansion and roll out of the National Disability Insurance Scheme (NDIS) since 2016 have enhanced the opportunities available both for people living with disabilities and for the service providers who function within the scheme. Mark is an Accredited Exercise Physiologist (AEP) and the Manager for Health, Wellbeing & Sports for the Cerebral Palsy Alliance in Northern Sydney – he provided commentary on how the NDIS has helped to progress the disability and sport/exercise physiology sector.

"There has been a huge surge in demand for exercise delivery services over the past five years. When the NDIS was first trialled in regional parts of NSW and the ACT and then implemented in metropolitan NSW in 2016, the majority of NDIS plans funded to include support around exercise focused on capacity building outcomes and specifically how AEPs could support participants to achieve functional goals related to activities of daily living.

In the past couple of years, there has also been increased acknowledgment from the agency and more specifically NDIA planners around participant goals related to sports and recreation. This change has led to increase in demand for services run by exercise professionals and goals related to participation in community sport and elite sport outcomes. The focus has progressed from simply allowing the clients to improve their standard of living to allowing them to thrive socially as they now have another outlet.

There has been significant growth in disability sport and recreation options in both the community and at an elite level, which has had a positive impact on referrals. There are a range of providers in the sector as well as from mainstream services who are providing community sports and recreation opportunities to people living with

"Working with athletes in the para-sport space brings new or alternative considerations from a scientific and coaching perspective"

disabilities. This increase in supply was based on a surge in demand for these supports in their NDIS plans under social and community participation funding categories."

Mark also highlighted how the NDIS provides a significant opportunity for the exercise and sports science industry to support this specific community.

"This rise in participation has led to an increased number of participants looking to engage in sport at a community and elite level. The pathway to elite sport and community-based competition provides opportunities for exercise and sports scientists by way of the need to develop strength and conditioning aspects related to performance. The unique challenges of disability sport provide an outstanding opportunity for growth in both the client and practitioner as they both need to think outside the box to get the most out of the experience.

The progress of services within the sector to include these funding supports has aligned with the vast amounts of research highlighting the essential role participation in sport and recreation plays in empowering people with a disability. The NDIS provides exercise professionals with many rewarding opportunities to collaborate across disciplines while ensuring that clients not only overcome their challenges but forge a strong sense of self in the process."

FINAL THOUGHTS

Para-sport is not a new notion. Sport for athletes with an impairment has existed for more than 100 years, and the first sport clubs for the deaf were already in existence in 1888 in Berlin[7]. What is important, is the progress that has been made in the last 10 years which has provided brand new opportunities for those living with a disability to enjoy sport, and for our para-athletes to have their well-deserved time in the spotlight.

Behind these successes is also the exercise and sports science professionals who are working together towards continued growth. Dr. Patrick Campbell, ESSA's Member Development Officer for Sports Science sums it up below.

"The growth of parasports is undeniable and it's a space that will continue to evolve. With this, comes many new opportunities for accredited exercise professionals to move into interesting and challenging new areas. Working with athletes in the para-sport space brings new or alternative considerations from a scientific and coaching perspective and will provide fresh opportunities to develop new skills. The setting is often a diverse and complex environment, with many unique issues that will be both extremely rewarding and challenging; but will ultimately lead you to become a better practitioner.

The progression and popularity of para-athletes in the public-eye is there for all to see, with Dylan Alcott now considered to be among the top echelons of Australian sporting identities. Funding, support and political focus on the industry will continue to progress meaning there will be some fantastic opportunities for ESSA professionals to build on these successful foundations and move into new and exciting areas."

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HISTORY OF THE paralympic MOVEMENT

1944

At the request of the British Government, Dr Ludwig Guttmann opened a spinal injury centre at the Stoke Mandeville Hospital in Great Britain, and in time, rehabilitation sport evolved to recreational sport and then to competitive sport.

1948

July 29th saw the Opening Ceremony of the London 1948 Olympic Games, Dr. Guttmann organised the first competition for wheelchair athletes which he named the Stoke Mandeville Games, a milestone in Paralympic history.

1952

Dutch ex-servicemen joined the Movement and the International Stoke Mandeville Games were founded.

1960

Under the aegis of the World Federation of ex-servicemen, an International Working Group on Sport for the Disabled was set up to study the problems of sport for persons with an impairment.

1960

The Stoke Mandeville Games later became the Paralympic Games which first took place in Rome, Italy, featuring 400 athletes from 23 countries – including Australia! Since then they have taken place every four years.

1964

The creation of the International Sport Organisation for the Disabled (ISOD).

1976

Blind and amputee athletes were included in the Toronto Paralympics and athletes.

1976

The first Paralympic Winter Games were held in Sweden and have taken place every four years. Australia was unofficially represented at these Games by Ron Finneran, who competed but was not officially recognised as he did not fall into the amputee or visual impairment categories.

1980

Athletes with cerebral palsy welcomed at Arnhem Games.

1982

"International Co-ordinating Committee (ICC) of World Sports Organisations for the Disabled" was established.

1984

Amputee swimmers and track and field athletes attended their first training camp at the Australian Institute of Sport (AIS) in preparation for the 1984 New York/Stoke Mandeville Paralympics.

1986

The International Committee of Sport for the Deaf (CISS) and International Sports Federations for Persons with an Intellectual Disability (INAS-FID) joined ICC.

1989

On September 22nd, the International Paralympic Committee was founded as an international non-profit organisation in Dusseldorf, Germany, to act as the global governing body of the Paralympic Movement.

1990

The Australian Paralympic Federation was established to coordinate elite Australian athletes with a disability participation in the Paralympic Games and liaise with the International Paralympic Committee.

2002

Australia's best performance at a Winter Paralympics, winning six gold and one bronze medal.

2009

Three-time wheelchair racing Paralympian, Kurt Fearnley completed the gruelling Kokoda track by crawling with just his hands in support of Movember.

2014

First ever Invictus Games held in London.

2016

Summer Paralympics held in Rio de Janeiro, Brazil, saw Australia ranked 5th overall with 22 gold, 0 silver and 29 bronze medals.

2016

Tennis superstar Dylan Alcott won his first Australian Open Quad Wheelchair title. This was the start of a 6-year winning streak, making Dylan a champion of the game.

2019

Apple introduced a new range of emojis surrounding disability.

then VS now

The Career Progress of Industry Leaders

The exercise and sports science industry offers us an extensive list of pioneers who have helped to forge significant pathways for those who have followed after them. Honourable mentions must always go to Emeritus Professor Tony Parker, Tom Penrose and Dr Phil Hamdorf who were the driving forces behind the establishment of ESSA (previously known as AAESS in the beginning).

Since then, we've had a wave of leaders throughout many streams of the industry, and you only need to look at ESSA's roll call of Fellows to read more about those members who have achieved a high level of professional accomplishment, responsibility and service to the organisation and industry.

As we reflect on the progress the industry has made throughout its many different avenues, we spoke to three distinguished Fellows, working in separate fields, about how much has changed and progressed within their 20+ years of experience.

Professor David Bishop
PhD in Applied Physiology

With over 20 years of experience as a researcher and applied sports scientist working with elite athletes, Professor David Bishop is a world leader in muscle exercise physiology and was the youngest-ever ESSA President (2004-2006). During his presidency, he was lead author on a submission to the Productivity Commission that led to the inclusion of Accredited Exercise Physiologists (AEPs) in Medicare. David has also been an ESSA Fellow since 2006.

What was your first year of practice like, and what role were you doing?

This was more than 20 years ago, when I started a job with the Western Australian Institute of Sport as a Sports Scientist working with state and national athletes on kayak, water polo, netball, beach volleyball, and field hockey teams. What I remember is doing a lot of things that I wasn't specifically trained for and learning a lot on the job. Fortunately, one thing that a PhD does develop is excellent problem-solving abilities. While my supervisors were excellent, a PhD is often a largely solo effort and I remember enjoying being able to contribute to the success of others in a team environment. It was during this time that I first joined ESSA (AAESS at the time) and was elected the Vice President of Sports Science. All in all, it was a good experience.

What limitations did you come across?

As I was young, I don't recall too many limitations and I nearly always found that athletes and coaches were receptive to new ideas. There were, however, probably three limitations from my perspective, which I think still remain.

The first is that I think there needs to be more thought into a career path for sports scientists. In many cases there might be a sports scientist role and then a senior sports scientist position, but where to from there? Related to this is what does a sports scientist need to demonstrate to progress throughout their career, and should their roles change to reflect any promotions? ESSA has done a great job with accreditation and mentoring, and I think the next stage in the evolution of the role of sports scientists is improving the career pathways and prospects for sports scientists.

The second limitation I found is the unavoidable conflict between making decisions based on the best available evidence at the time and the acknowledgement that further research is nearly always needed; getting this balance right remains tricky.

The third limitation I came across is that I felt some research degrees did not place a great enough emphasis on developing excellent research skills. Without this foundation, the good intentions of applied research projects may not always be realised.

What's been the biggest change you've seen since that time (within sports science)?

The three biggest changes I have seen are:

a) the increasing acceptance of sports science by sporting clubs. Sports science had long been an important part of the success of the institutes of sport, but the increased recruitment of sports scientists to work full-time with elite sports clubs has been a pleasing development.

b) the better integration of university research centres and sports.

c) the acceptance of the need for the accreditation of sports scientists.

How are things better now within the industry?

While things can always be improved, I'd say the increased recognition of the important role of sports science and sports scientists is better now within the industry. This is also reflected by the acceptance of the need for sports science accreditation, which recognises that the role of the sports scientist is a profession with specific skills and competencies. From a 'boutique' conference in 2004, the ESSA Research to Practice conference has developed into a bona fide international conference where sports scientists can learn and exchange new ideas. Finally, I'd say the integration of sports science research and sports science practice is better now.

Associate Professor Marg Torode
B.ApSc (HM); Dip Teach; M.Sc; PhD, FASMF; ESSAF

For over 40 years, Associate Professor Marg Torode has played a significant role in the academic space of the exercise and sports science industry. Marg contributed to establishing ESSA's previous standards for exercise science and exercise physiology and has also been behind the accreditation of many university courses for ESSA. Although retired, she continues to serve the industry from a mentoring perspective. Marg has also been an ESSA Fellow since 2013.

What was your first year of practice like, and what role were you doing?

I moved to Oregon in the United States in 1980 to study at the University of Oregon having left Melbourne where I had previously been a Physical Education (PE) teacher. I commenced teaching at the university that year in the College of Human Performance and Health. My role in the industry commenced then as an academic and has continued until 2019, at various universities, until I retired.

What limitations did you come across?

When I returned to Australia in 1985 there were not many universities offering exercise and sports science degrees, so my first job was in a PE department and then Biomedical Science. Finally, I moved into Exercise and Sports Science in 1996 at The University of Sydney, the first year of the degree program. This meant that my main limitation in the beginning was having access to research collaborators and mentors in the specific discipline of exercise and sports science.

What's been the biggest change you've seen since that time (within the university sector)?

This biggest change has been the evolution of exercise and sports science degree programs throughout the Australian universities and doctoral graduates completing their research in the context of exercise/sport (1980-2020).

When I returned from the United States, most of my colleagues were members of the Australian Council of Health, Physical Education & Recreation (ACHPER), however, there was change occurring at this time in university courses with the advent of 'sports science', and a transition in professional allegiance to the Australian Sports Medicine Federation (ASMF), now known as Sports Medicine Australia (SMA). My responsibilities within this organisation commenced as a Program Committee member for the National Annual Scientific Conference in 1988. Following this, I was nominated for State Council in 1989, thereafter State Secretary and National delegate in 1990. Due to work accomplished in this role, I was elected as National Secretary of the Board of Directors, in 1991. In the 28 years of its association, this was the first time a female had been elected to serve on the National Board. During this time as Director, I assisted with the formation of a committee: Medicine & Science for Women in Sport (MSWIS). This has been a particularly active committee, producing numerous articles for use as educational material to both the sporting female and allied health professionals. Additionally, I took on the role of National Conference-Scientific Convenor from 1996-1997 for the now SMA, and subsequently was awarded a Fellowship of SMA.

As SMA Conference Convener, I had the privilege of working with the leaders in the Australian Association of Exercise and Sports Science (AAESS, rebranded as ESSA), as such, I became involved in the AAESS professional organisation. In 2005, after successfully embarking on the accreditation process of The University of Sydney course (one of five programs initially accredited), I accepted the invitation to be a member of the accreditation committee to further develop the accreditation guidelines in light of the recent Australian government, Medicare provider number approval process for Exercise Physiologists. From then I became involved in the university course accreditation program (previously known as NUCAP) and continued as a course accreditation assessor (2007-present), currently serving as Chair of the Course Accreditation Committee.

So, a message I want to express when thinking back through the chronology of my early academic years is for women who want to take on more leadership roles. To them I say: take the risk, embrace the challenge, involve others, and take a team approach so that any successes are shared. Be enthusiastic, inclusive, and transparent, seek out a mentor, and be prepared to take advice.

How are things better now within the industry?

There has been a significant increase in university programs and academic units dedicated to exercise and sports science and, in particular, the specialisation of clinical exercise physiology and sports performance courses. It is only in the last decade where our discipline was recognised appropriately within the university sector and I think we can thank the exercise/health/sport research evolution for this change. Our research leaders have played a significant role in putting exercise and sports science on the academic platform, with research funding and publications in addition to senior appointments in the university sector. The increase in evidence-based research validating the significant role of exercise to the individual's and the community's health has made our profession visible. Emeritus Professor Tony Parker and Dr Phil Hamdorf must be congratulated for their vision in 1991 to establish our professional body and the university accreditation program in 2005.

Nathan Reeves
AEP; AES

Nathan has played a key role within the governance of ESSA, having previously sat on the ESSA National Board as a Director from 2010-2017, including serving as President from 2014-2017. Nathan now sits as the Chair of the Standards Council and the International Alliance Steering Committee. Nathan has been a practising Accredited Exercise Physiologist for over 20 years and is also currently a Senior Lecturer at Griffith University. Nathan has been an ESSA Fellow since 2018.

What was your first year of practice like, and what role were you doing?

My first job in the field of exercise physiology was at a private rehabilitation hospital in Victoria. As many of you may know, I am born and bred in South East Queensland, and in particular the Gold Coast. So, after securing the new job, and with much excitement, I packed up my 4WD with the essentials, surfboard, mountain bike, TV and a few clothes, and headed down the Pacific Highway to the big smoke. I started working alongside another practitioner and our job title was 'Physical Conditioners.' At the time the recognition and use of the professional title of 'Exercise Physiologist' was only in its infancy.

The first year of practice afforded me an amazing opportunity to immerse myself in a multidisciplinary health care setting responsible for the management of sub-acute and chronic musculoskeletal, neurological, respiratory, cardiovascular and chronic disease patients. The multidisciplinary team included surgeons, physiotherapists, occupational therapists, psychologists, social workers, dietitians, and of course physical conditioners.

What limitations did you come across?

As mentioned, we were employed as physical conditioners and as such our scope of practice in the hospital setting was quarantined to this function. Initially our treatment plans were heavily guided by the physiotherapists and if I am fair, with some of the more complex presentations, we were happy for this to be the case. A barrier to us being able to service our patients to the level that they needed was due to the compensable systems at the time either not recognising our type of service or putting a quota on the amount of services that we could provide.

We certainly did not let these limitations stop our mission to have physical conditioners renamed as Exercise Physiologists and to have us elevated both internally and externally to the level of other allied health professions. As a result of dogged persistence and the provision of highly effective interventions, we became an integral part of most inpatient and outpatient care plans. We also saw our contribution to traditional patient medical presentations grow to new and emerging service delivery areas.

What's been the biggest change you've seen since that time (within the clinical sector)?

Without a doubt the growth in the number of practising Exercise Physiologists (EP) and all the things that come with having this critical mass has been the biggest change I have seen since I first stepped into the ring. With the increase in EP numbers has come a greater recognition of what our skill set is and an understanding of our unique offering. With the increase in EP numbers, we have more evidence to support the efficacy of our intervention which has brought about more and more compensable bodies funding EP services. With the increase in EP numbers, we have seen the growth of a professional organisation whose work has benefited us all and whose achievements and structure are the envy of many domestic- and international-like organisations.

How are things better now within the industry?

Over the last 20 or so years, I've had the privilege of serving the exercise physiology industry as both a practitioner, educator and ESSA volunteer. I have been able to attend many domestic and international exercise physiology conferences and business forums. What has dazzled and delighted me is the amount of innovation that Exercise Physiologists have. It would be hard to find an area of the broader health industry where exercise physiology does not have a presence, and a profound and influential presence at that.

As I migrate to my rocking chair in the next decade or so I can do so in the comfort that the profession is in good hands and the achievements I have seen the exercise physiology profession make in my professional lifetime will only continue.

OUR *attitudes* TOWARDS **EXERCISE**

Written by Zoe Bickerstaffe, ESSA Marketing & Communications Manager

Do you remember the days when exercise during pregnancy was a new thing? When joining the gym meant you were locked into a contract for a year? Or when GPs started to talk about physical activity being 'good for your health'?

Fast forward a few decades and we have specialised exercise professions servicing a wide range of consumers from child athletes to those with chronic disease and injury. Social media is full of 'exercise influencers' and are, rightly or wrongly, recruiting consumers to jump on the 'get fit' bandwagon.

The promotion of exercise by global health authorities, governments, insurers, workplaces and businesses has helped to educate today's consumer about physical activity and exercise for health. Exercise is now a globally accepted medicine. In this article, we talk about the change in consumers' attitudes towards exercise and how this can have an impact on the way in which exercise professionals offer their services in the future.

THE CHANGE IN HOW AUSTRALIANS MOVE

It is a fact; Australians are moving more. In April 2020, Sport Australia released its AusPlay Report that was the culmination of over 87,000 interviews and months of research. The national data showed that participation in sport and physical activity has significantly increased over the past two decades. Participation in non-physical sporting activities also increased between 2001 and 2019 by approximately 20%. Interestingly, participation in general fitness/gym has almost doubled since 2001!

However, although these statistics have improved, the Australian Institute of Health and Welfare 2019 Report states that just over 1 in 2 adults (55%) did not participate in sufficient physical activity guidelines in 2017–18. Among those aged between 18–24, 41% of men and 48% of women were insufficiently active. For those aged 65 and over, 69% of men and 75% of women were insufficiently active.

So, we may conclude that although participation is increasing, the levels of physical activity are still not enough to meet the national guidelines. Consumers are showing interest, but we still have a long way to go, and a lot of education and nurturing to do.

Exercise professionals could see this as an excellent opportunity to harness this interest and create stronger outcomes for keen consumers.

THE RISE OF THE HEALTH INFLUENCER

With the boom of social media so came the boom of the health blogger and influencer. Whether we agree with their impact on society or not, their reach and influence over the industry grew and is here to stay.

Carefully manicured Instagram images and video blogs (vlogs) on how to get and stay fit now have thousands of likes and shares, but is this necessarily a negative for the industry? Have these social media stars helped the rise of widespread understanding of the need for better health and well-being? Are consumers now more aware of their health than ever?

On the flip side of this rise of awareness is the misunderstanding of what is the right exercise for each individual. Could this be a key opportunity for our profession? As knowledge grows so then does awareness of exercise and the need to find the right fit for the consumer.

One Accredited Exercise Physiologist, Sam Rooney (@ samrooney_ep on Instagram) of ION Training has seen firsthand the ups and downs of the influencer.

"I've recently turned down some relatively well-paying opportunities in order to distance myself from what I consider pseudo-science or 'influencer' marketing."

"I would say that there are some really great role models and fantastic social media personalities with a large following who do provide some researched information and guidance. Unfortunately, most brands are always drawn to 'what's hot' and therefore these role models don't necessarily get the same exposure as the other influencers. This can lead to confusion and misinformation in those looking for help on their health and fitness journey."

"I think as exercise professionals, we have a duty to leave the industry in a better place than where we found it. Influencer and social media culture can lead to people placing financial gain over the provision of sound advice. As Accredited Exercise Physiologists, we need to ensure that we are educating our clients, the industry and the general population using the latest research and evidence in order to facilitate a positive and realistic journey for someone engaging in an exercise program."

Perhaps degree-qualified exercise professionals have a duty of care to tidy up the confusion and the misinformation and educate consumers on recognising fact from fiction? Consumers are hungry for information, and it is clear they are turning to social media and influencers. Accredited exercise professionals need to educate consumers in a way that gets their attention. Using scientific terms and referencing research abstracts is probably not going to cut it. In other words, make your facts attractive, make it easy to understand and most of all – make it meaningful.

GROWTH OF TRIBAL COMMUNITY EXERCISE

A fancy facility, awesome website and looking the part helps make the sale, but the 'experience' will motivate consumers to hang around. The experience is undoubtedly related to connections made. There's no denying the fact that over the last ten years we have seen a huge increase in the tribal community exercise industry. CrossFit, F45, SoulCycle (US) and local level boot camps and mum's groups have experienced exponential growth.

F45 is the fastest growing franchise and now boasts of 1750 studios globally. The Australian-based business was founded in 2012 with one key concept in mind as described by CEO Rob Deutsch in Fast Company magazine, "I'm trying to get people to actually want to attend a gym and feel like they're part of something."

"We highly encourage all the studios before the challenge starts and after the challenge finishes to hold social gatherings," says Deutsch, noting the importance of community functions. "We're big on people getting to know each other outside of the gym."

SoulCycle is a similar phenomenon coming out of the US, with participants numbers soaring over the past few years. Once again, the chain relies on creating a community and personal connection with the client. So much so, that trainers are chosen because of their 'sellable' assets rather than skillset, even hiring cheerleaders, gymnasts and actors.

In an interview with The New Yorker, Janet Fitzgerald, the director of instructor training and talent judge explains, "I can assess their skills on a bike in three seconds but cycling prowess can be taught. We're really just looking for sparkle and shine."

In his study "How We Gather", Casper ter Kuile, a researcher at Harvard Divinity School explains how clients flock to these tribal gatherings as a way to explore a spiritual and emotional connection as much as a physical one.

"People come because they want to lose weight or gain muscle strength, but they stay for the community. Really what people experience is a sense of release of stress, or a new insight and clarity about what's important to them, or a renewed commitment to the goals in their life, or an experience of sanctuary, amid anxiety and pressure from their job. So, it's really an emotional and spiritual experience as well as a physical one."

Accredited exercise professionals and their practices should be looking hard at the way they evaluate their services and how this information can be used to develop personal retention strategies. What will make clients come back next week, next month and even next year?

THE EVOLUTION OF THE EXERCISE PROFESSIONAL

Dale Ischia, an Accredited Exercise Physiologist from Melbourne Exercise Physiology/Moving Beyond Cancer started her career as an 'Exercise Therapist' which confused clients and referrers alike. Then along came personal trainers to the fitness industry and everyone who provided exercise was labelled as such. Dale spent much of her time explaining what she did and correcting consumers.

"When I first started as an Exercise Therapist in the mid-90s, people had never heard of our profession. The client's attitude in the 90s was that of confusion and most were funded by WorkCover or TAC. I would spend a lot of time explaining to referrers, doctors, other physiotherapists and surgeons why they should refer to me. I would also spend a lot of time socially explaining what I did!"

"In the 2000s, it was trendy to have a personal trainer, so clients often referred to me as their personal trainer, especially when on the phone to their friends. I would always correct them."

"Today, I rarely come across a client who hasn't heard of an AEP (Accredited Exercise Physiologist); our clients fully respect our profession and regularly seek out our services.

In the oncology world, there is so much research that is widely published on the benefits of exercise during and after cancer treatment. Many oncologists and nurses are now recommending their patients see an AEP. These clients are eager to learn from us, they listen to what we have to say, they act upon our advice, and they get results."

Accredited exercise professionals have moved a long way from the times of having to explain a burgeoning profession. Fast forward to today and we all have the chance to make our mark on the industry and within our communities. The passion, expertise and experience demonstrated by those who have been in the industry have laid a strong foundation for those practising today.

MOVEMENT AS MEDICINE

Brady Schulz, Director of Healthy Lifestyles Australia says he has seen a positive change in client attitudes towards exercise in the last ten years.

"Incidental activity was all they felt they needed to do," says Brady. "Fast forward to 2020, and the importance of sufficient activity for health are finally being filtered into the community, with greater accepted awareness by other health colleagues and patients alike."

This is true for consumers in both rural and metropolitan centres. Brady says they are starting to realise activities of daily living may not be enough for them to claim health benefit from movement.

"Now, was this as a result of the increase of community exercise physiology services being provided over this time? Or an increase in government-employed Exercise Physiologists? Or an increase in health messaging through the government, social media and other forms of printed media? I would agree that it is likely because of all of the above and even more."

"Interestingly, changes in other physical therapy treatment modalities who previously provided hands-on therapy are transitioning to either incorporating exercise more readily into their treatment plans or minimising hands-on based therapy to utilise exercise as their main tool within their professional suite of skills. This speaks to the power of exercise for health and well-being and as such, is potentially another reason why we are seeing attitudes progress positively towards the acceptance of exercise and physical activity as being an important component of their lifestyle."

David Beard from Lifelong Fitness backs up this thought process.

"The big change in attitude has been the realisation that just 'moving' is not enough. It was thought that as long as you were 'doing something' to get your heart rate up, and you had reasonable cardiovascular fitness, that was enough."

"As the population has aged, we have learnt that maintaining muscle mass and strength becomes more important the older someone gets. Frailty is the biggest risk factor for older adults, however, the thought of doing weights is too foreign for many. Fortunately, this is changing, however, not enough people appreciate the benefit of regular strength training and specific exercise for different health conditions."

WHAT'S NEXT?

It is clear that today's consumer has an appetite for exercise and is wanting to engage in physical activity. Each hour, thousands will want to educate themselves by scrolling through social media and are even willing to pay a professional to get it right.

The clients of tomorrow are equally educated; children are constantly being bombarded with messages from all channels on why movement is good or are being signed up for community sport each weekend. This knowledge will only continue to grow and could impact the demand for exercise professionals.

Exercise has been, and will continue to be, a great social driver; an excuse to connect with others whilst the 'exercise' part happens in the background. The industry needs to nurture this basic human need to connect and reduce increasing social isolation statistics. As a professional, we will need to have a strong focus on how to create an exercise 'experience' (online and in-person) for all the family.

As professionals, how we identify all these subtle changes to consumer behaviour and implement proactive systems to educate and retain the client will be the key to success in the future.

Thank you

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REFLECTING ON **WOMEN** IN *sports science*

Written by Kellie Pritchard-Peschek, PhD

For the early part of my career as a female sports scientist in the Australian high-performance sport industry, gender inequality in the workplace was not on my radar. First, because I had not experienced it personally, having had the good fortune of working with open-minded coaches and managers who respected me for my skills and abilities – regardless of my gender. Second, it wasn't talked about publicly, nor were we specifically prepared or developed differently to work in what is a typically male-dominated industry. We learnt through trial and error, and by observing other practitioners on *how things are done*, thus morphing into who we thought we needed to be to get the job done.

I am thankful to have been respected as a skilled practitioner during my early and mid-career, having later experienced gender inequality firsthand in an international managerial role. With the ability to compare and contrast the two working environments, I have to ask myself, *what is the purpose of stunting the growth, development and opportunities of skilled female practitioners in our industry, when we have so much to offer?*

WHERE ARE WE?

With the rise of women's sport in Australia in 2019, there also came a greater focus on females in leadership from an organisational perspective, with new leadership programs, initiatives and advisory groups being established. The 2019 ESSA Women in Sports Science and Medicine Breakfast gave voice and insight into the current experiences and challenges faced by women in support service roles, many of which were common across sectors. This enhanced awareness of the current state of play, combined with the gathering momentum around women in sport, flung open the doors of opportunity for progress. Now in 2020, with the advent of COVID-19 and the inevitable shifting landscape of the sports industry, there is another opportunity for change in this space. The question is – will we capitalise on it? To take effective action, we first need to understand where the challenges lie, and which areas require developing, in order to move the industry forward as a whole.

If I reflect on my career in high performance sport over the past decade, the one thing I would have appreciated more of is opportunities for development in leadership and management, and having female role models to emulate, interact with, and learn from. If we can't see it, we can't be it, and we thus run the risk of suppressing the very characteristics that make female leaders so effective and valuable in their organisations, such as emotional intelligence and people development[1], in order to fit the mould of the status quo. In a similar vein, another common

theme that was raised by the Breakfast attendees and panel members is the job scarcity across the industry, compounded by the 'glass barrier' to roles in professional sports for women, being traditionally male-cultured environments. I say 'glass barrier' because like the glass ceiling, it is subtle; it exists and is experienced by female practitioners but is not yet fully recognised. Finally, if we *are* in one of these coveted practitioner roles, the next big question is – will we still have a job after maternity leave?

WHAT FUTURE DO WE WANT?

If we don't know where we are going, it's difficult to plan the route to get there. A greater understanding of all the current issues is needed before we can really capitalise on new opportunities for the inclusion of women in high performance sport. Whilst by no means an exhaustive list, some of the main themes that have emerged so far include:

- employment and management of practitioners on a meritocracy;
- access to leadership, learning and development pathways to create (and become) role models;
- training in effective communication methods for advocacy, influence and effecting change in male-dominated environments;
- understanding our strengths and identities as female practitioners to enable us to show up and operate authentically; and
- creating cultures that embrace female practitioners for the unique skill sets they offer.

OPPORTUNITIES FOR PROGRESS

With women currently making up 22% and 13% of board chairs and CEOs of Australian sporting organisations, respectively[2], and 15% of high performance coaches[3], there is certainly capacity for change within the industry. The encouraging part is, more opportunities are opening up which we can capitalise on to generate further progress.

1. With a continued rise in women's sports and the professionalisation of services, opportunities will likely arise for practitioner roles, thus widening the net of job availability.
2. Developing and nurturing female leaders through new initiatives, employing them, and providing an opportunity to change from within by challenging the existing narratives around sports cultures.
3. Policy and advisory groups being established to advocate for women in high performance sport across the industry.
4. Changes to workplace structures, employment models and the sporting landscape itself as a result of COVID-19, with a potential shift towards flexible and/or contract-based roles which may benefit women balancing families and returning to work post-maternity leave.
5. Creating peer support networks and programs that provide safe spaces for female practitioners to share experiences, discuss challenges, and learn and develop through mentoring relationships.

Ultimately, strengthening the industry through greater contribution, from enhanced inclusion, is our goal. We have a unique opportunity to leverage the current circumstances to our collective benefit – are we ready to take it?

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