

Image and Performance Enhancing Drug use

| Research at LJMU



IPED research group

*“Research, scholarship
and knowledge
exchange for lifelong
health and wellbeing”*

A shared interest in health-related research across all Faculties

The IPED research group was developed in association with the relaunch of the Institute for Health Research (IHR) in March 2017. The vision of the IHR is to establish a world leading health research institute by developing a virtual hub for partnership, collaboration and networking in health research within and beyond LJMU.

The Public Health Institute (PHI) initiated the development of the IPED research group with an overall aim of bringing together a range of multidisciplinary areas that will provide LJMU with an overarching group of experts. The group specialises in Image and Performance Enhancing Drug (IPED) research and explores the complex issues of IPED use in modern society. We bring together a range of research experts from across the University, including:

- Public Health Institute
- School of Sport Studies, Leisure and Nutrition
- School of Sport and Exercise Sciences
- Liverpool Business School

As well as a diverse range of experience and research interests including (but not limited to):

- IPED related health harms, including injecting drug use
- Public health and cross cultural differences in IPED use
- Socio-psychology and sociology of the body and life style choices
- Doping in sport
- Chemistry and pharmacological properties of emerging human enhancement drugs
- Gender, steroid use and gym culture
- Dependency and abuse of substances used for human enhancement



Institute for Health Research

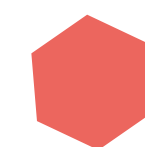
The Institute for Health Research (IHR) is a reflection of the vibrancy of LJMU’s research culture and its commitment to undertake multidisciplinary research with the potential to improve health locally, nationally and internationally and to impact on health procedures, policy and practice.

Our vision is to establish the IHR as a world-leading institute for health research at the forefront of research from a local to a global level. The aim of the IHR is to improve human health across the life course by undertaking research, scholarship and knowledge transfer towards a better understanding of disease, healthy behaviours, the prevention of illness, therapeutics and novel technologies and the improvement of community and hospital-based healthcare.

The IHR is a hub for all activities related to health including: research, education, knowledge-transfer and collaborative partnerships across LJMU and with key external partners. The Institute facilitates collaboration and new thinking from across this wide range of LJMU Research Institutes, Centres and School research groups.

Our expertise

The integration of our health research across the LJMU Faculties is a success due to the dedicated engagement of our staff, their willingness for knowledge exchange, the identification of common or complementary research expertise and the discovery of opportunities for collaborative activities such as supervision of postgraduate research students and joint applications for research funding.



Public Health Institute

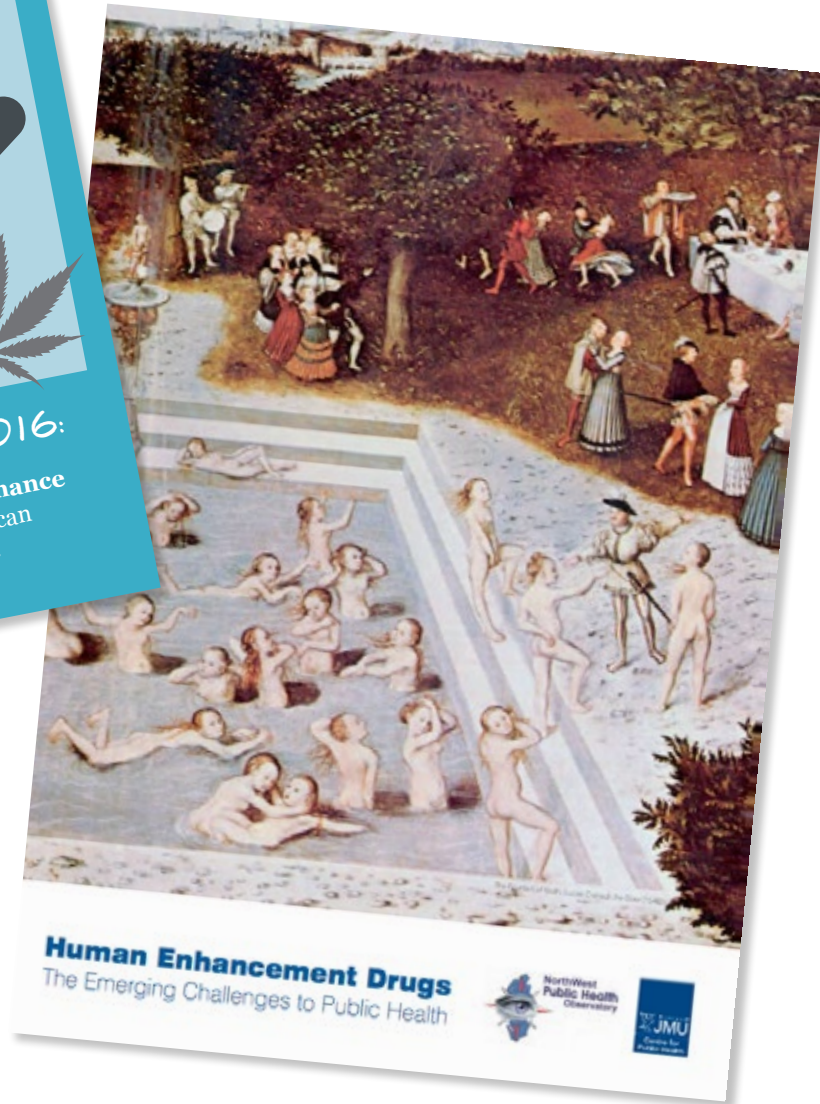
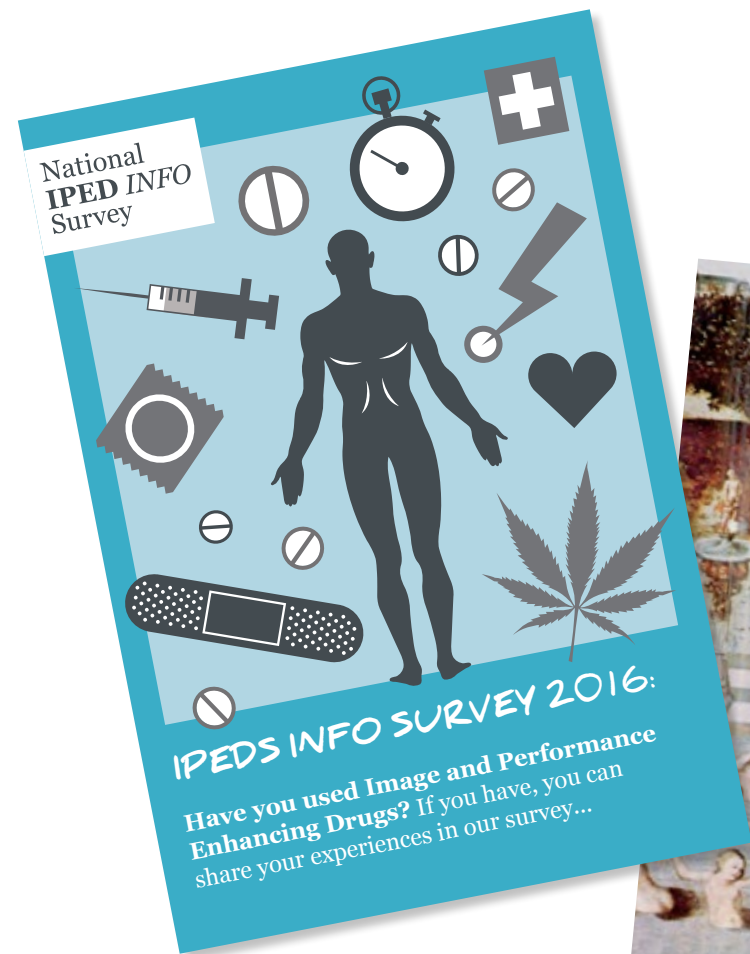


Overview of PHI

Public Health Institute (PHI) is a vibrant research and teaching community working at a local, regional, national and international level.

The organisation specialises in applied research and educational programmes addressing health issues at all levels from policy development to service delivery. PHI is committed to a multi-disciplinary approach to public health and works in partnership with health services, local authorities, judicial bodies, environmental services and community groups.

Influencing health service design and delivery, as well as health related policy, the Public Health Institute's research has been at the forefront of the development of multi-agency strategies to promote and protect public health. PHI turns information and data into meaningful and timely intelligence to deliver within their education programmes and high impact research outputs.



Expertise in PHI

PHI has established itself as one of the UK's leading applied research groups, providing valuable insight into a variety of substance related topics. We have a number of expert visiting staff who are nationally and internationally renowned for their research on the widespread use and public health harms associated with Image and Performance Enhancing Drug use. For example, **Renee Zahnow** from the Institute for Social Science Research at the University of Queensland is a visiting research fellow at PHI; **Bill Llewellyn** is visiting lecturer and also a leading US expert in the misuse of anabolic steroids; and **Joseph Kean** who is a visiting consultant, and substance recovery expert at the Bridge Project in the North West of England.

Over the past five years PHI have collaborated together with a network of academics, practitioners, and those from within the IPED using communities. The national IPEDinfo survey was developed to gather primary research data exploring the use of IPEDs across Wales, England and Scotland and provide insight into the emerging trends and associated health harms. Research of this kind is important because it has the potential to inform appropriate health responses and policy changes that are needed to help reduce harm within the using population. PHI has also supported Public Health England with the development of the monitoring of blood borne viral infections, including HIV, among people using IPEDs. Collaborative research work has also examined infection risks among those injecting IPEDs and the uptake of related interventions.



Director of PHI, **Jim McVeigh (Left)** has an international reputation within his academic specialism of human enhancement drug use and has authored many research reports, peer reviewed papers and been invited to deliver keynote presentations and plenary papers at some of the most influential national and international conferences over the past 25 years.

Professor Vivian Hope's (2nd from left) interests include the public health aspects of the harms, particularly infections, associated with drug use. His research work includes studies on the drug use related harms, such as blood borne viral infections, and the response to these among people using IPEDs. Viv's other research interests are focused on sexual health, homelessness and LGBT health.

Marie Claire Van Hout (3rd from left) is a professor of Public Health Policy and Practice at PHI, with over 17 years of research experience in education, community development and clinical practice in various fields of public health and drug policy and practice. Marie Claire has specific expertise in the area of prescribed and illicit substance use, misuse and dependence, HIV/HCV prevention, treatment, care and support and image and performance enhancement drug use.

Dr Conan Leavey (4th from left) is a senior lecturer in Public Health and specialises in qualitative research methods and cross-cultural approaches to health and the sociology of the body. His interest in IPED research stems from supervising PhD projects with mixed martial arts competitors, adult film performers, unlicensed weight loss drug users and female body builders.

Emma Begley (5th from left) is a researcher at PHI and has collaboratively worked on data analysis of primary and secondary research gathering evidence on the emerging trends of IPED use across the UK. Recently Emma has coordinated the national IPEDinfo survey and has also published work on the public health implications of anabolic steroid use in the UK.



School of Sport and Exercise Sciences

The School of Sport and Exercise Sciences was the first institution in the world to host a single honours degree programme in sport science. Launched in 1975, it has recently celebrated its 40th anniversary. World class teaching is underpinned by world class research, which is supported by a £35 million investment into state-of-the-art laboratory facilities, in the Tom Reilly Building, for current and future sport scientists. A further £10 million investment into the Life Sciences Building ensures that translational research has fundamental mechanistic underpinnings.

The School is a research-informed department and houses its own Research Institute for Sport and Exercise Sciences (RISES). RISES is the home of broad-based, multidisciplinary, fundamental and applied research. Advancing the understanding of sport science through research in biomechanics, cardiovascular health, exercise metabolism, brain and behaviour, physical activity, and sport psychology ensures a cross disciplinary research environment. Staff interrogate the 'exercise response' from the cell to the community; from the elite athlete to multiple clinical groups; from the youngest to the oldest members of society.

Dr David Tod (pictured left, opposite)

I undertake research focused on the relationship identity and self-perceptions have on health, sport participation, and well-being, with a focus on males. Recent research, for example, has focused on the role of identity formation on males' use of IPEDs, such as steroids, sport participation, and exercise behaviour. A key finding from this research in relation to IPEDs, is that males' self-perceptions and body image is a reflection of deeper, more ingrained, identity issues, often around the role of masculinity and a sense of what it is to be a man in current society. IPED use is not solely associated with image and vanity, but for many users reflects their struggles to negotiate a place in the world. My focus on identity and self-perception has also embraced the experiences of elite and professional athletes as they navigate changes and transition in volatile, stressful, and often short, sporting careers.

A related line of research is focused on psychologist expertise development – what does it take to be an effective practitioner who can assist clients with their needs. Male IPED users, for example, often have personal and contextual factors that need to be understood before they are willing to work with a psychologist or other mental health practitioner. My research on psychologist expertise development reveals that effective practitioners will be able to (a) build relationships with clients who may be reluctant to seek help, (b) help individuals with their specific issues by applying interventions and knowledge in

concrete and specific ways, and (c) appreciate and adapt to contextual factors. Each of these abilities are relevant IPED users' mental health needs.

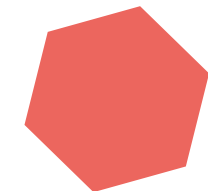
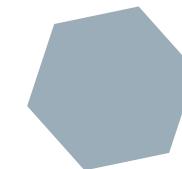
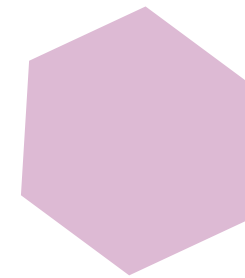
In the presentation I will give on October 13, I will draw together several qualitative projects to reveal the role that IPEDs and self-perceptions interact as part of the ongoing identity formation process in the lives of young adult males who are obsessed with developing a muscular physique.

Prof Claire Stewart (pictured middle, beneath)

I am a cell and molecular health physiologist with over 25 years of experience in the field. With a degree in Developmental Biology (University of Glasgow), a PhD in large animal physiology, biochemistry and endocrinology (The Babraham Institute, Cambridge and the University of London) and post-doctoral expertise in stem cell and molecular biology (Washington University Medical School, St Louis and the University of Bristol), I am one of only a handful of people who has extensive and long term training and experience in cell and molecular health physiology. This enables an ability to design mechanistic questions with relevant physiological applications. Having discovered early on that the insulin-like growth factors (IGFs) are important for muscle cell survival and the inflammatory cytokine tumour necrosis factor-alpha (TNF) for muscle cell death, I was also one of the first worldwide to develop adult human skeletal stem cell models of cancer and ageing as well as childhood stem cell models of muscle and fat development, areas which underpin some of my research to date. In addition to research and teaching skills and of particular relevance to this meeting is the fact that I am the recently appointed Chair of the British Society for Research on Ageing, I work on the British Society for Endocrinology Public Engagement Board and I am on the Advisory Council for Misuse of Drugs: Performance and Image Enhancing Drug Working Group.

Dr Neil Chester (pictured right, beneath)

Neil is a senior lecturer in sport and exercise sciences at Liverpool John Moores University. His teaching commitments are in exercise physiology with a particular focus in sports nutrition, supplementation, drug use and anti-doping in addition to research ethics and ethics in sport and professional practice. As a researcher, Neil is particularly interested in all aspects of drug use in sport in relation to anti-doping and is co-editor of the text, *Drugs in Sport*, published by Routledge. Neil works closely with UK Anti-Doping in a research, education and testing capacity and is a committee member of the British Association for Sport and Exercise Sciences Clean Sport Interest Group.





School of Sport Studies, Leisure and Nutrition

The School of Sport Studies, Leisure and Nutrition works at local, national and international levels with a focus on development, innovation and supporting best practice. The school works collegiately and in partnership to develop and enhance staff, students and partners' knowledge and experience. With an excellent reputation for diverse, cutting-edge and multi-disciplinary research, staff are closely aligned with the University mission, which strives for research to inform scholarship. The school is regularly involved in producing publications, take active roles in conferences and are members of professional associations. Many research activities have informed the policies and practices of various external organisations. With collaborations of over 300 external partners it enriches our programmes. The school works alongside a wide range of public, private and voluntary organisations including schools; local authorities; sport, dance and outdoors organisations; and tourist and leisure attractions.



Dr Ian G. Davies

Ian is a Nutritional Scientist at the school of sport studies, leisure and nutrition with a primary research interest in cardiovascular disease (CVD) and passionate about how the effects of nutrition and other lifestyle choices influence cardio-metabolic (CM) markers. My research has had international recognition and impacted upon nutrition policy with respect to dietary fat and

cholesterol. Studies include investigations into the complexity of the LDL particle; CM risk in patients with type 1 diabetes; CM risk in relation to various phenotypes and genotypes of obesity; the effect of novel omega-3 fatty acids in metabolic syndrome; and currently investigating precision nutrition with respect to carbohydrate intake.

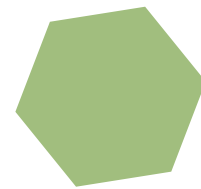
Ian supervises a number of PhD students and a postdoctoral researcher, this wider team are involved with some of the above research but also on the effects of competition dieting in bodybuilding; investigating urinary markers for various food intake; and exploring socio-psychological aspects of dieting.

Relevant projects

- The complexity of low density lipoprotein particles
- Bodybuilding competition dieting
- CALIBER study: low vs. high carbohydrate diets on cardiometabolic risk markers and cellular mechanisms
- Urinary biomarkers of takeaway food
- The effects of krill oil on cardiometabolic risk

Stakeholders or specific individuals who engage in your research

- Local authorities
- SACN
- WHO
- NICE guidelines
- Food industry



Liverpool Business School

The Liverpool Business School is an innovative business school, which nurtures talent and provides the knowledge, experience and contacts students need to succeed in their specialist areas; whether that is within accounting, marketing, human resource management, public relations or business.

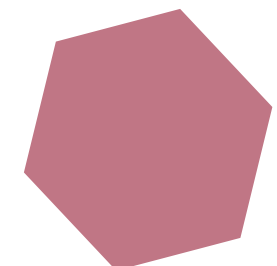
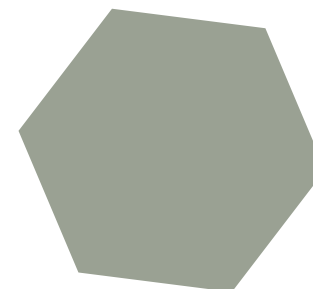
Academics within the school tackle complex issues, securing international acclaim in three broad research groupings relating to:

- Finance, Economics Operations and Evaluation
- Management Learning, Knowledge, Organisations, Human Resources and Evaluation
- Marketing, Consumption, Social Engagement and Entrepreneurship

Building on the successes individuals in our research groups have achieved, we are now undertaking new work, developing a range of impactful research projects within social and economic engagement.

Professor Shona Bettany

Shona Bettany is a Professor in the Liverpool Business School and has a wide range of expertise in consumer research and marketing. She has published many journal articles, book chapters and presented her work at both national and international conferences. More recently Shona has been involved in conducting researching in the sexual risks of male drug users.





PhD research

Geoff Bates is a PhD student at the Public Health Institute. Geoff's main interests relate to interventions to change behaviour relating to use of IPEDs including prevention, harm reduction and cessation. His PhD is focussing on identifying priorities and opportunities for such interventions; and how, where and through what modes they might be delivered. I am also interested in identifying the positive and negative potential outcomes from interventions and policies, and the potential for approaches to tackle multiple health issues including IPED use, negative body image, eating disorders and excessive exercise. Geoff is due to complete his programme of study in 2019.

Charlotte McLean is a PhD student at the Public Health Institute. Her research engages with female bodybuilders, a hard to reach and understudied population of PED users, which is reflected in the paucity of data currently available. Combining ethnography, in depth interviews, and photo elicitation, the project comprises an exploration of PED use within the context of wider BB culture. Through observation, participation and immersion in the BB community the research seeks to identify the specific, yet unquantified needs of female PED users, and forms the first stage in developing unique harm reduction initiatives to ensure the needs of this population are met.

Jenny Germain is a final year PhD student researching unlicensed weight loss drug use in females. Her research is mixed methods and includes statistical analysis of the Global Drug Survey as well as a qualitative study of online forums and interviews with forum moderators and weight loss drug users. Jenny has a specific interest in how harm reduction strategies are shared online as well as the role of online peer mentors. She also has a wider interest in all 'body beautiful' drugs and the underlying motivations for use.

Ieuan Cranswick is a PhD student at the School of Sport and Exercise Science. Ieuan's main interests relate to body image, drive for muscularity, muscle dysmorphia, anabolic steroid use and identity. His PhD thesis is entitled "Beyond the muscles: Exploring the role of the Drive For Muscularity (DFM) in identity" and presents a series of 4 studies including; a systematic review of the evidence for two muscle dysmorphia models, an autoethnography, a qualitative interview, and an ethnography. The autoethnography explores the role and influence of DFM throughout my own life, introducing the notion of muscularity as a form of masculine capital. The qualitative interview expands upon the role of muscularity within the masculine identities of others, and specifically explores influence DFM has on the response to the threat of injury. The final ethnography explores the meaning of muscularity within the broader weight lifting culture. The ethnography highlights muscularity's more global role as a form of identity capital, and the role DFM plays in mastering a variety of identities.

Nura Alwan is a PhD student at the School of Sport Studies, Leisure and Nutrition. Her PhD researches the weight loss practices, health and well-being in competitive female physique athletes. This population is a fairly new class in women's bodybuilding, but is classified as the lower end of the continuum, and accommodate less extreme and smaller athletes (Women's Bikini, Women's Fitness, etc.). Consequently, physique competitions have attracted significantly more females than it first did in last decades. Nura's PhD research involves working with female physique athletes to optimise not only their body composition, but also their physical and mental health pre-and post-competition.



