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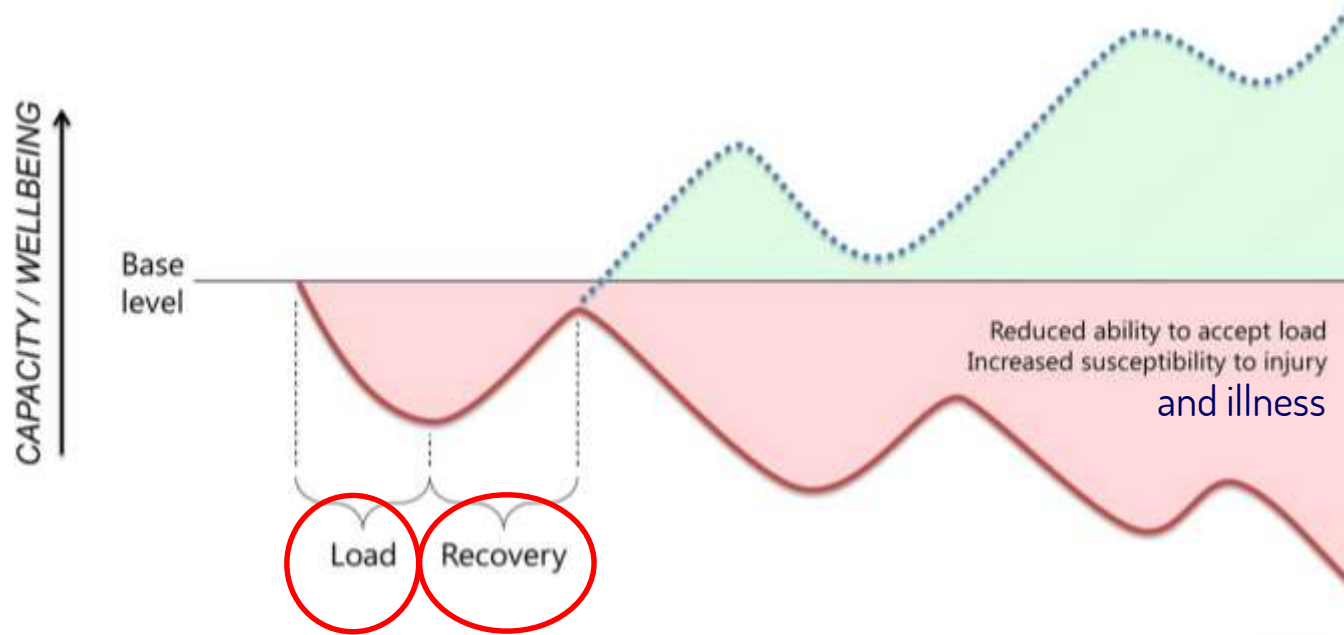
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Prediction of self-reported illness using salivary IgA in youth athletes

Tom Sawczuk



Modelling Performance

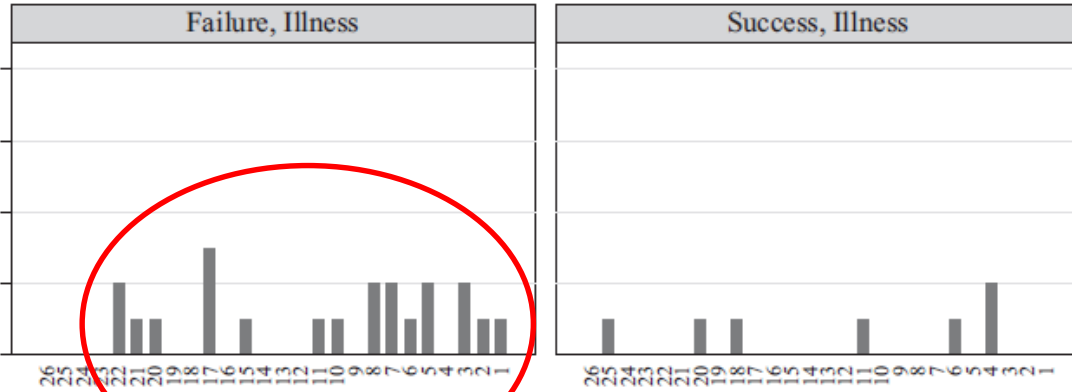


(Soligard et al, 2016)



Illness impact

“Key risk include psych anxie



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2014)

(Raysmith and Drew, 2016)



Salivary IgA

Concentration

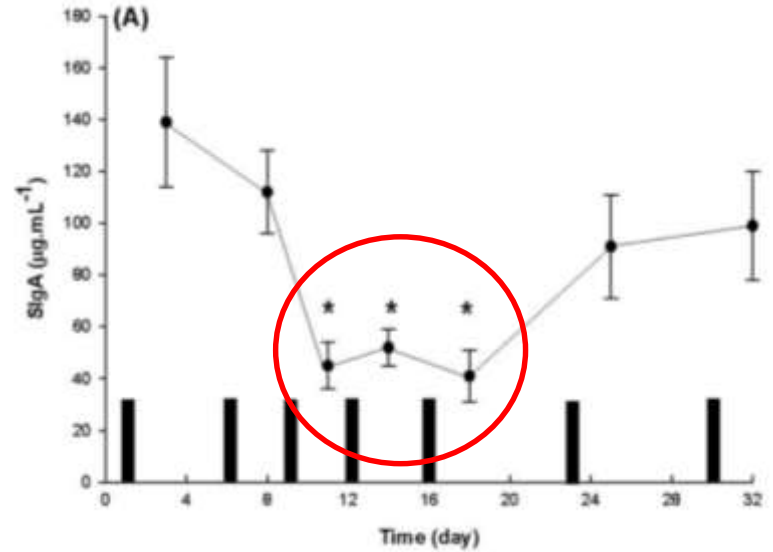
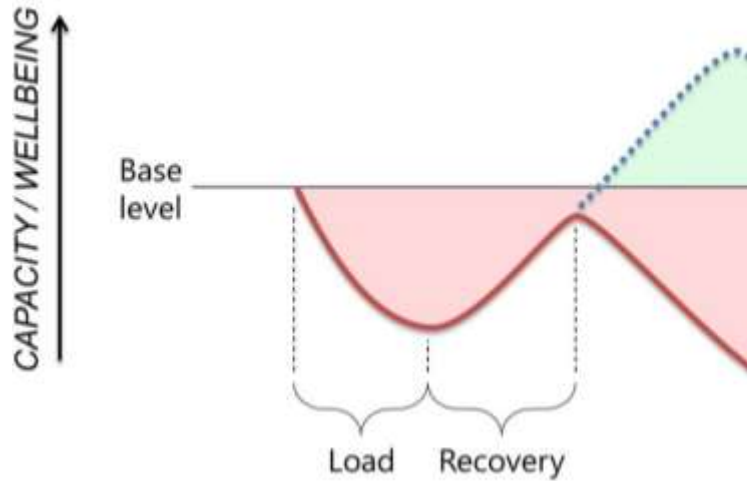
Amount of IgA per unit of saliva ($\mu\text{g}/\text{mL}$)

Secretion Rate

Amount of IgA passing through your mouth over a set period of time ($\mu\text{g}/\text{min}$)



Salivary IgA



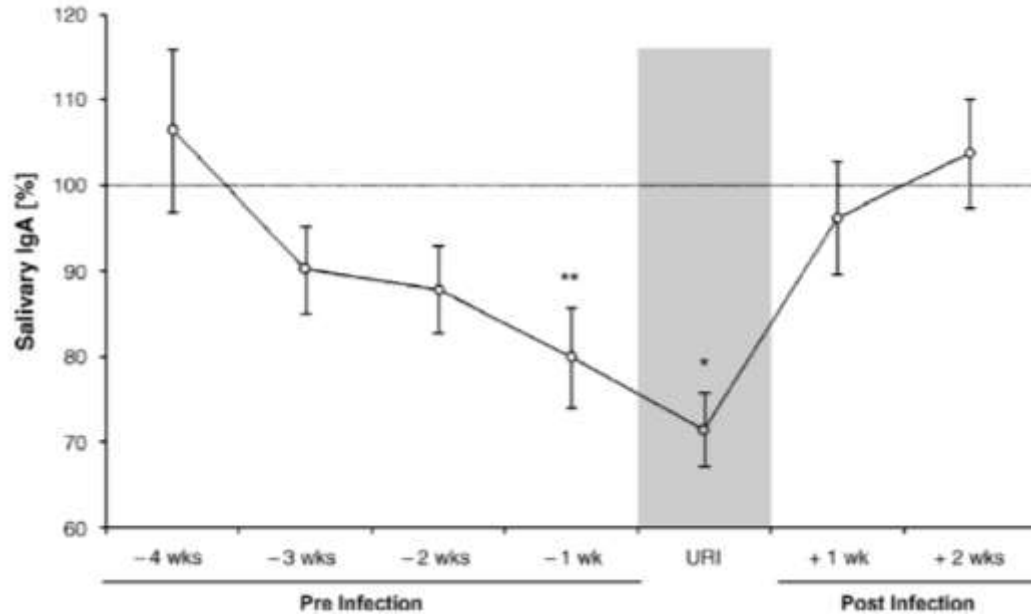
(Soligard et al, 2016;
Morgans et al, 2014)



Salivary IgA

Concentration
(Short term)

Secretion Rate
(Long term)



SS
pd

(Neville et al, 2008; (F Neville et al, 2008) 2005)



Aim

- ☒ To evaluate the true predictive ability of salivary IgA measures with regards to self-reported illness at three time points:
 - ☒ On the day of sampling
 - ☒ Within two weeks of sampling
 - ☒ Within four weeks of sampling



Methods



22 youth athletes



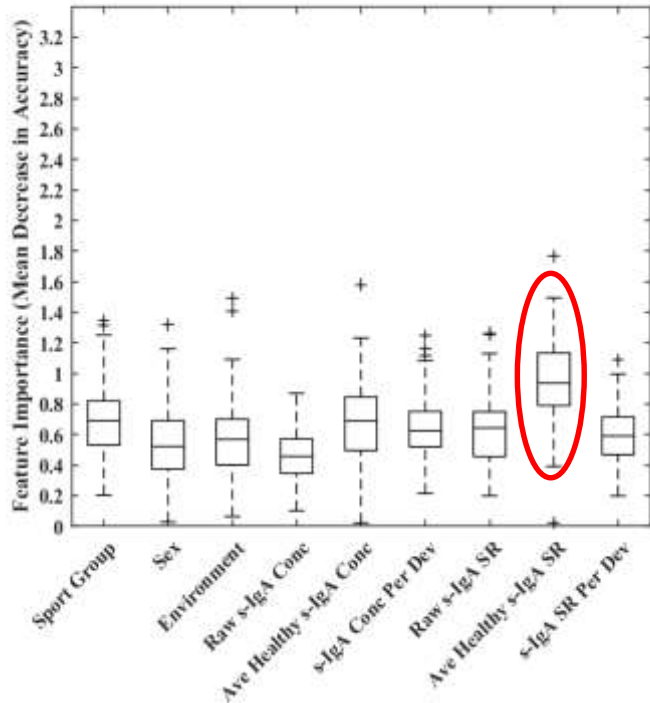
15 saliva samples over 38 weeks



Salivary IgA concentration and secretion rate
"Have you continuously experienced any of the following over the last 24 hours?"
- Raw value
- Average healthy value
Sore throat, runny nose, cough, scratchy throat, nasal congestion, fever, hoarseness, sneezing and/or body aches and pains (not related to DOMS)?"
Sport Group, Sex and Environment



Variable Importance



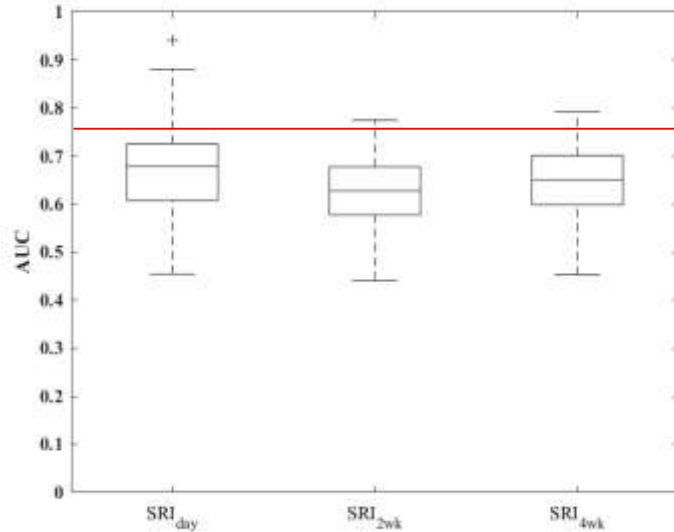
- ☒ On the day of sampling
 - ☒ Percentage deviation from average healthy s-IgA concentration

- ☒ Within two weeks of sampling
 - ☒ No measure most important

- ☒ Within four weeks of sampling
 - ☒ Average healthy s-IgA secretion rate



Predictive ability



- ☒ But...
- ☒ None of the models accurately predict illness in youth athletes



Take home messages

- ☒ Importance of salivary IgA to illness prediction in youth athletes confirmed
 - ☒ Percentage deviation from average healthy concentration for short-term
 - ☒ Average healthy secretion rate for long-term

- ☒ BUT cannot predict illness accurately on its own
 - ☒ Use as risk factor alongside other contextual variables (e.g. training load, sleep, life stress)

- ☒ Future research may wish to consider these contextual variables
 - ☒ Or other measures related to them (e.g. wellness questionnaires)



Thank you

Any questions?

t.sawczuk@leedsbeckett.ac.uk

