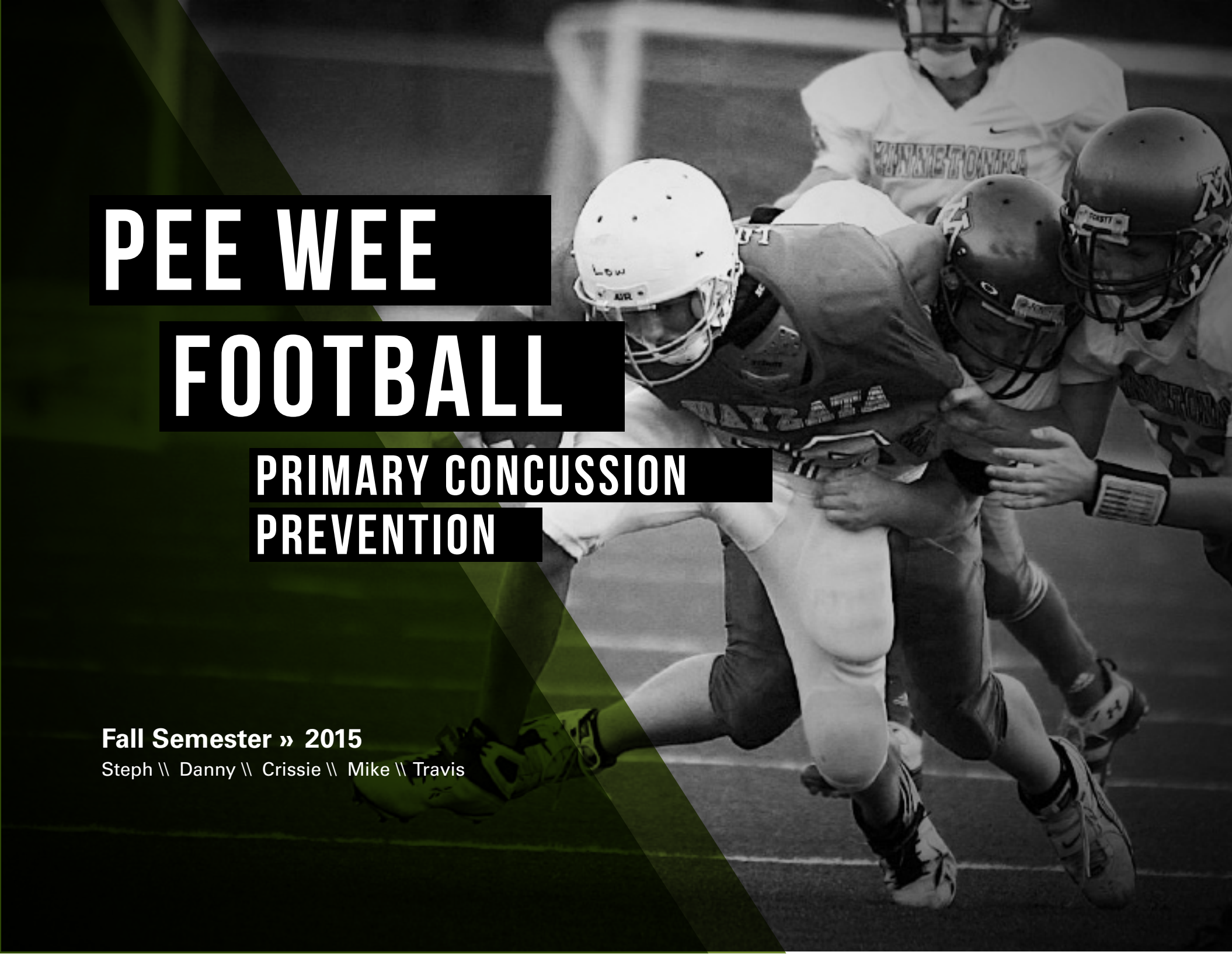


PEE WEE FOOTBALL

PRIMARY CONCUSSION PREVENTION

Fall Semester » 2015

Steph \\ Danny \\ Crissie \\ Mike \\ Travis


PROPER
FIT CAP

PROPER FIT CAP

INCLUDES:
A HEADPIECE WORN
UNDER HELMET.

WORN AT ALL TIMES

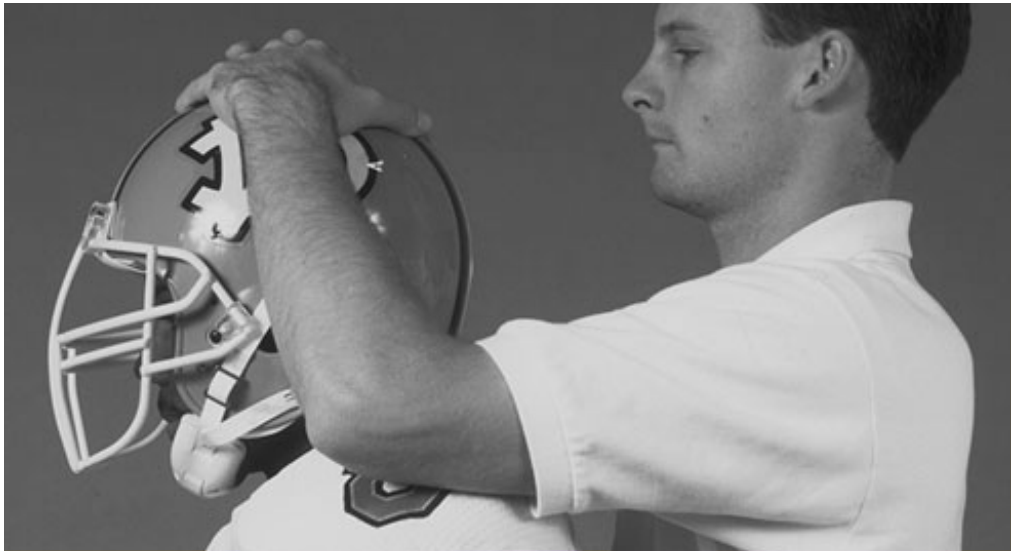
THIS CAP WILL HAVE SENSORS THAT CAN DETECT
WHEN THE AIR POCKETS ARE BLOWN
UP TO PROPER SIZE.

THERE WILL BE AN APP THAT CAN CONNECT
WITH THE SENSORS TO INFORM COACHES,
PARENTS, ETC. HOW MUCH PRESSURE
HAS BEEN APPLIED.

BEFORE THE PROPER FIT CAP

Currently, helmets are fitted by an air pump and padding system, but relies on non-exact methods of adjustment and is subjective to the users' preference.

INTERIOR OF HELMET



THE PROPER FIT CAP

A sensor detection system would evaluate the proper fit of pad-to-head fit with app verification.

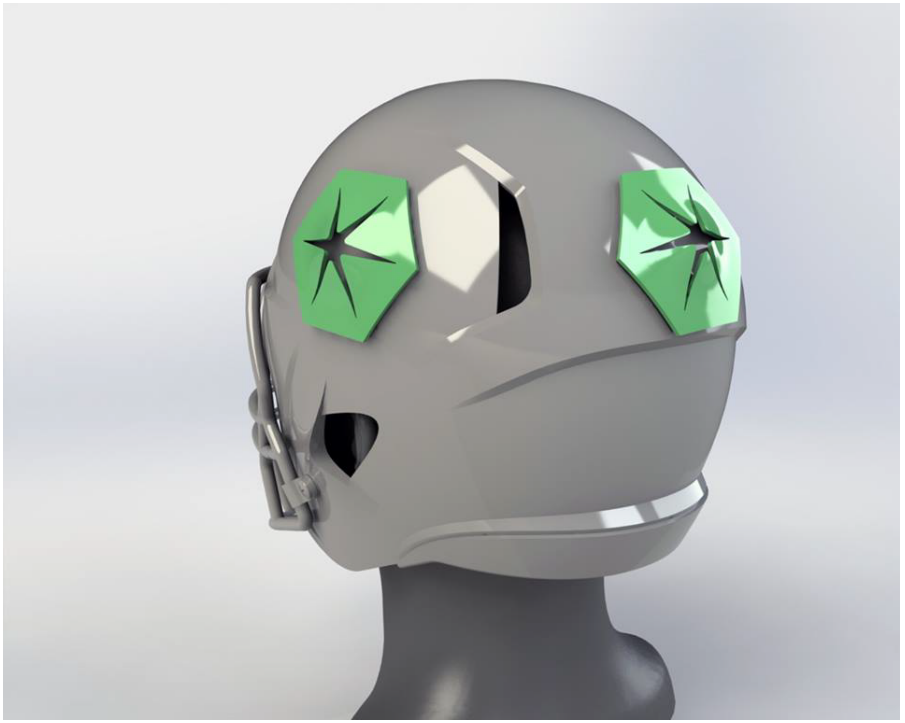
HELMET RETRO FIT

HELMET RETRO-FIT

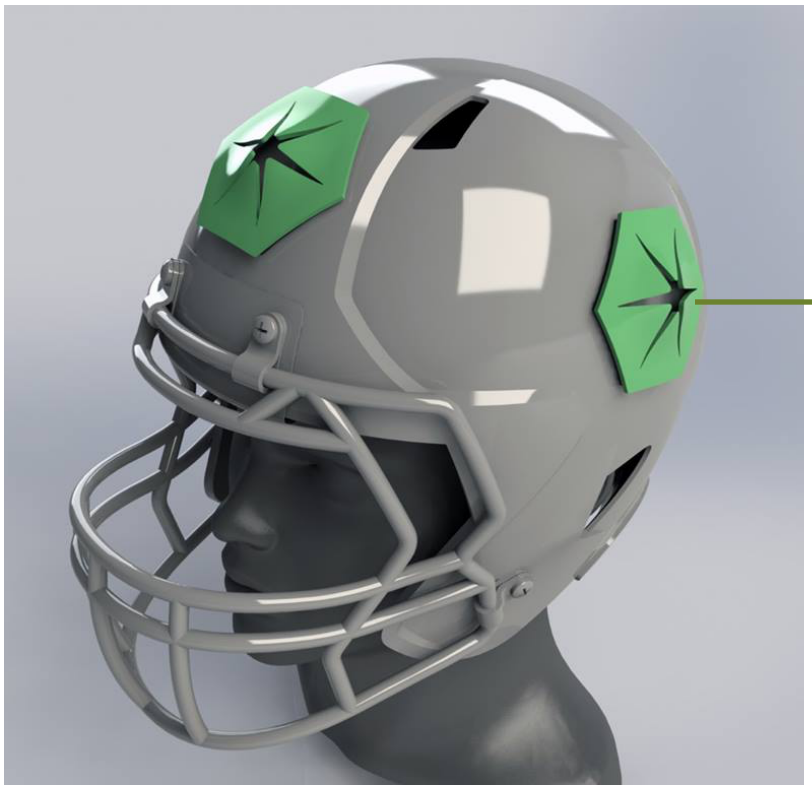
THE ATTACHABLE CRUMPLE ZONES WILL BEND IN ORDER TO DISPERSE FORCE AMONGST A WIDE AREA.

INCLUDES:
ATTACHABLE PLASTIC OR GEL CRUMPLE ZONES.

WORN AT ALL TIMES.

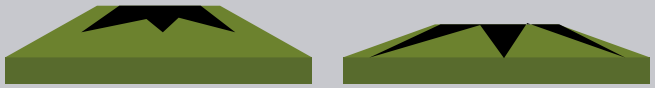


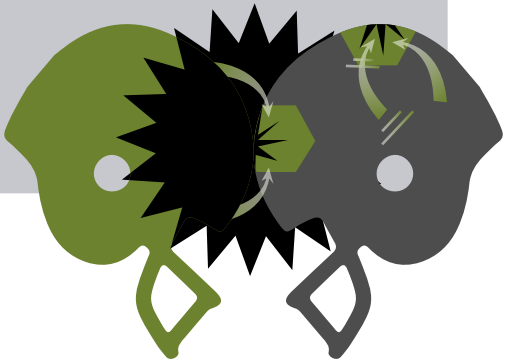
HELMET RETRO-FIT



HOW IT'S BENEFICIAL

//ATTACHABLE

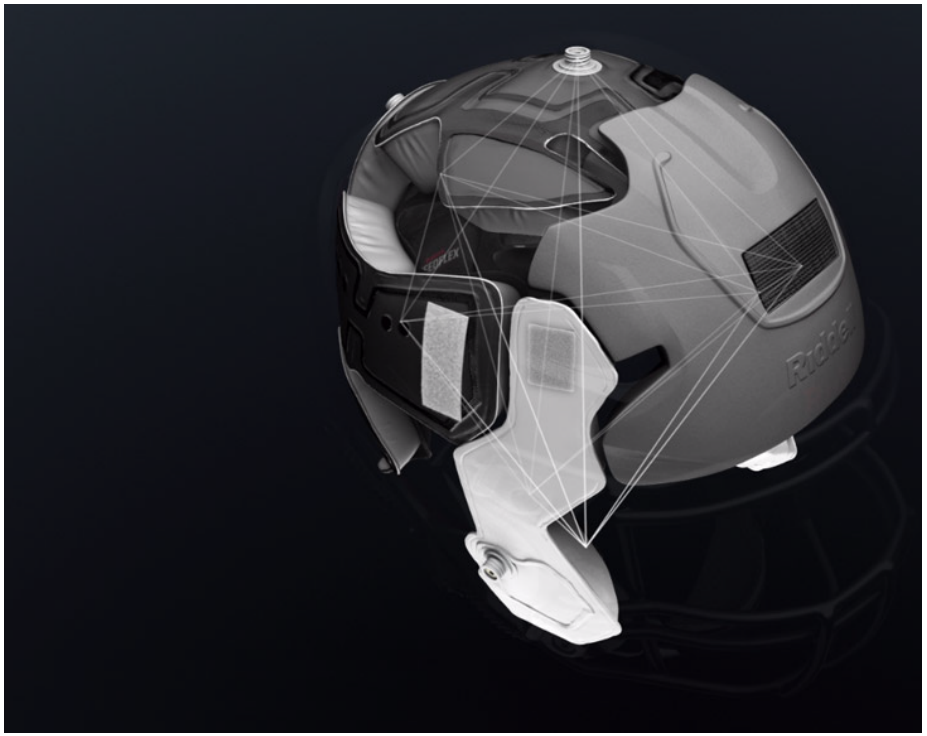




//ABSORBABLE

HOW IT WORKS

HELMET RETRO-FIT



RIDDELL SPEEDFLEX ADDS CRUSH ZONE TO ABSORB ENERGY FROM DIRECT IMPACTS.

PROS: ABSORBS SOME OF THE FORCE OF DIRECT IMPACTS

CONS: ONLY PROTECTS PLAYERS IN ONE KEY AREA OF IMPACT

THINK OF

GOOGLE GLASS PROJECTS IMAGES OUT IN YOUR 3D VISUAL SPACE USING A PRISM.

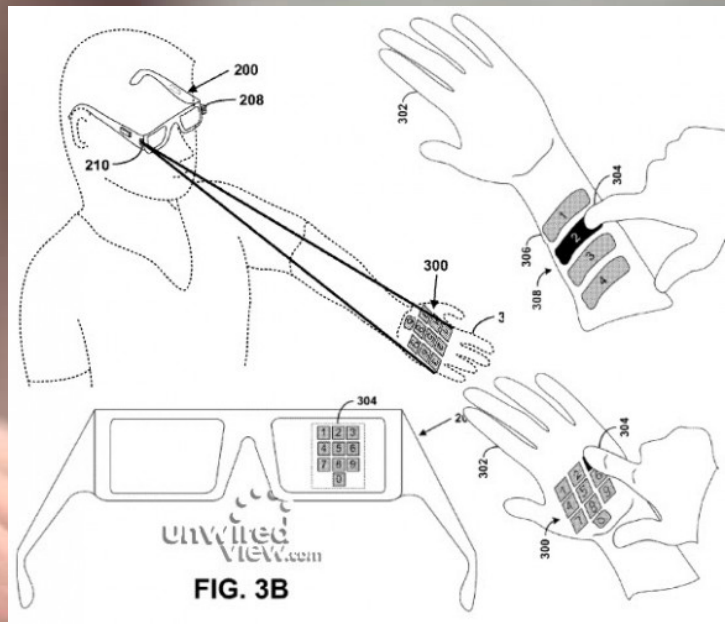
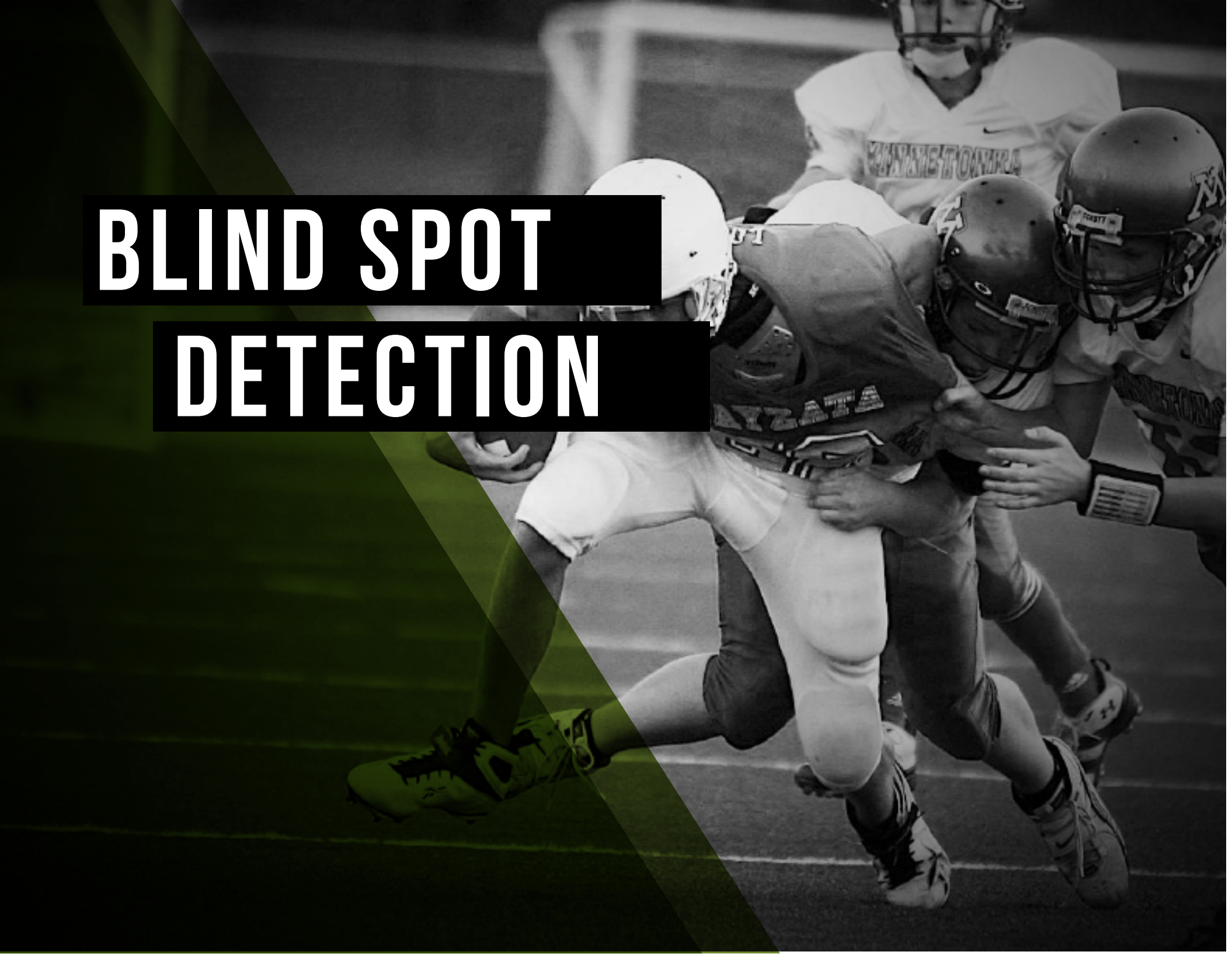


FIG. 3B



BLIND SPOT DETECTION

BLIND SPOT DETECTION VISOR/SENOR

INCLUDES:
ATTACHABLE SENSOR AT BACK OF HELMET AND AN ATTACHABLE VISOR WITH SENSORS.

THE SENSORS WILL PICK UP OPPOSING TEAM FROM BEHIND, A SPLIT SECOND BEFORE THE HIT.

THE LIGHTS THAT ARE LOCATED ON THE VISOR WILL LIGHT UP TO GIVE THE PLAYER A VISUAL STIMULUS CAUSING AN IMMEDIATE INSTINCUAL REACTION.

BLIND SPOT DETECTION VISOR/SENOR

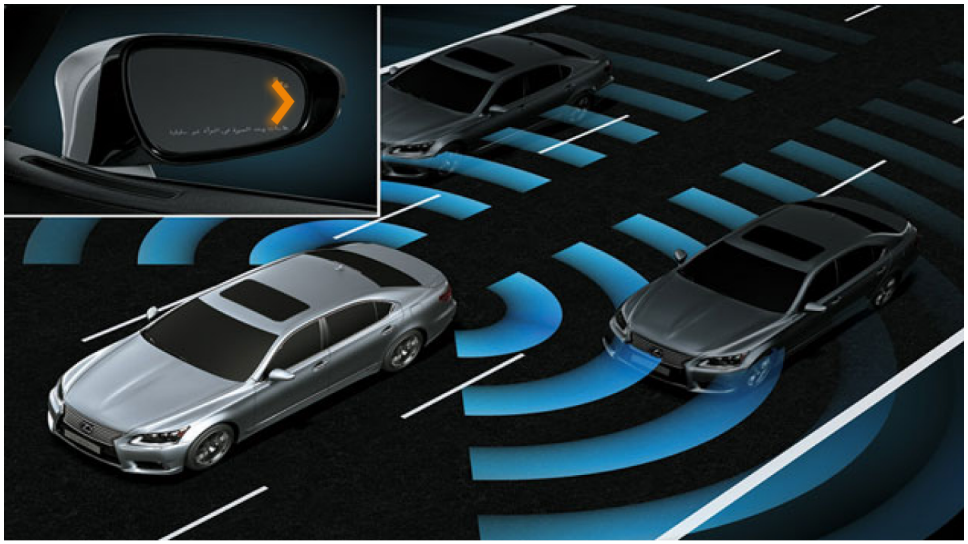
Back sensor
DETECTS MOTION
of opposing team
from behind

Front lights
WARN THE PLAYER
directly before a hit
causing an
instinctual reaction
of tensing up

happens just miliseconds before a hit causing an instinctual reaction rather than a planned reaction to avoid competitive advantage.

THINK OF

BLIND SPOT DETECTION SYSTEMS ON VEHICLES



OTHER POSSIBLE STIMULI

could use hearing or vibration instead of light
as a stimuli

PERIPHERAL TRAINING GLASSES

PERIPHERAL VISION TRAINING GLASSES

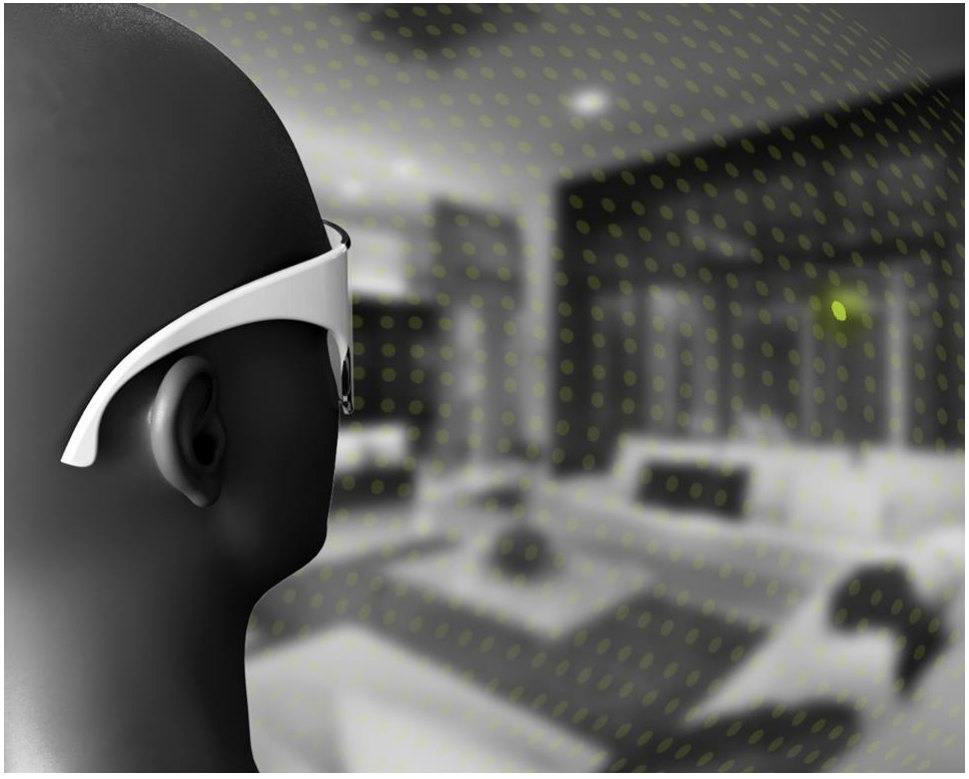
INCLUDES:
GLASSES AND GLOVES
EQUIPPED WITH SENSORS.

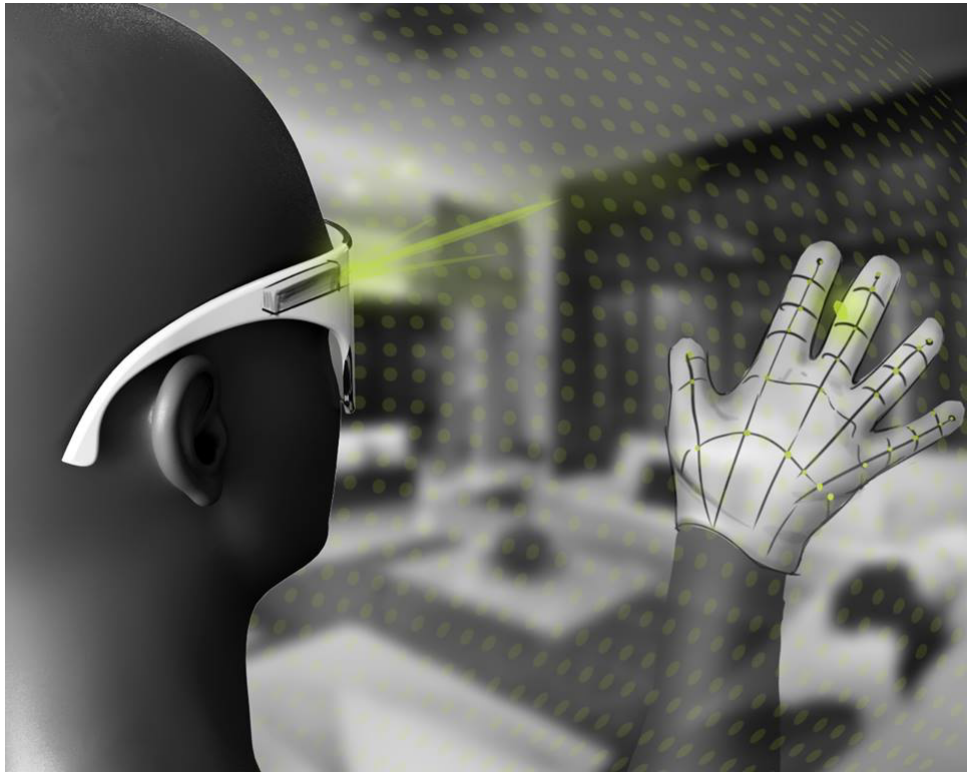
WORN AT PRACTICE.

GLASSES WILL HAVE LIGHT THAT WOULD REST ABOVE THE BROWS. THESE LIGHTS WOULD PROJECT IN DIFFERENT DIRECTIONS TO WORK PERIPHERAL VISION.

GLOVES ARE WORN TO BREAK THE LASER TO RECOGNIZE THE LIGHT.

PERIPHERAL VISION TRAINING GLASSES





PERIPHERAL VISION TRAINING GLASSES

FRONT VIEW

INSPIRATION

Dynavision D2™

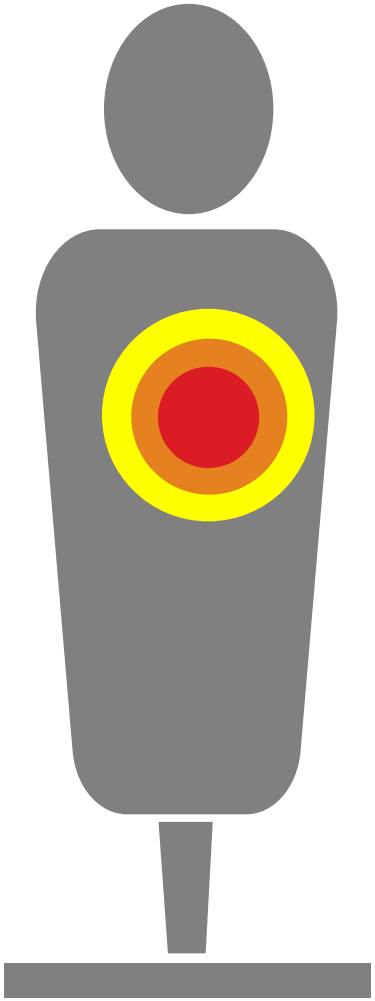
FOR EXAMPLE

http://products.dynavisioninternational.com/products/d2

BACK VIEW

COMBINE TWO IDEAS?

HOW IT WORKS



Sensor Detection

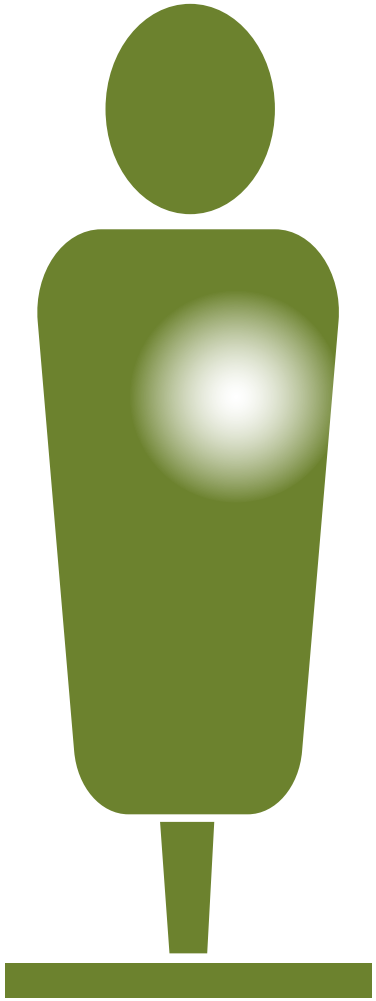
tiny sensors embedded in surface of dummy to record force.

The collection of data from each of the individual force sensors creates a "map" of the hit.

i.e. will show where the majority of the player's force is being directed in a hit.

Pair this data with predetermined data from correct hits to show player what they are doing wrong.

show on screen/smart phone



Color Detection

dummy is created with thin layers of material "sandwiching" a colored gel-like substance.

During a hit, the colored gel will be displaced from the area(s) of contact. The hit will be defined by the negative area with no colored gel.

A player can compare this to correct hits and make judgments on his or her own.

Gel will return to an even distribution after a few seconds due to the force of air pressure inside.

BALANCE/ TRAINING BOARD

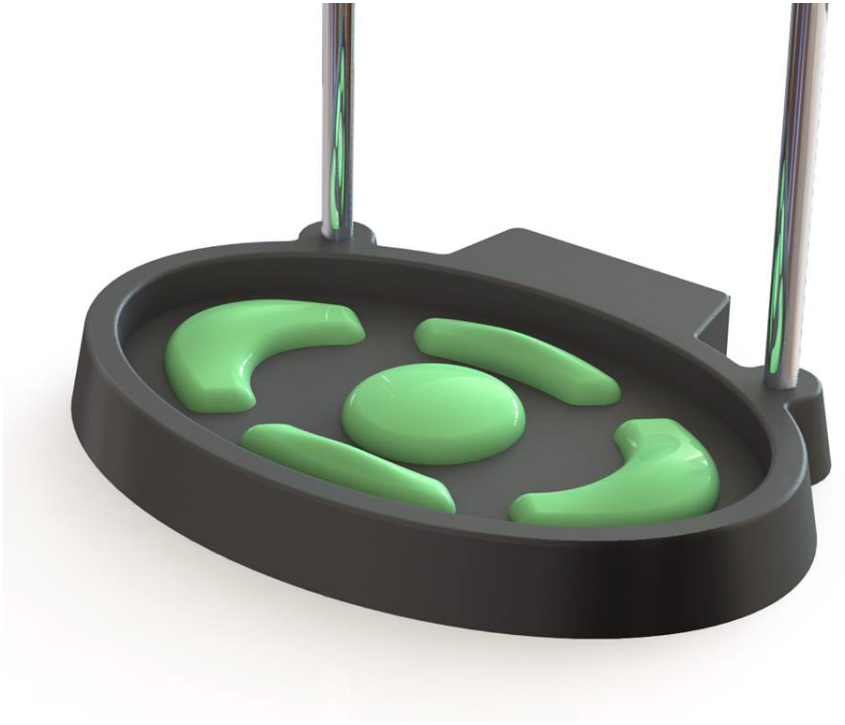
BALANCE/TRAINING BOARD

INCLUDES:
TRAINING BOARD.

USED AT HOME OR PRACTICE.

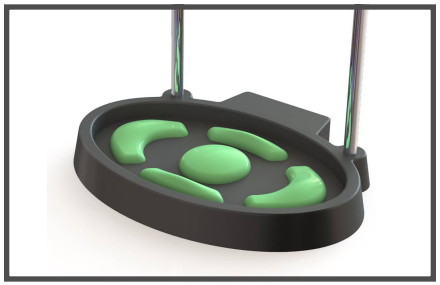
WORKS ON PROPER TACKLING TECHNIQUE. EACH PIECE OF THE TRAINING BOARD IS FOR TRAINING THE FIVE STEPS OF TACKLING.

THE PLATFORM IS ADJUSTABLE AS WELL AS THE BAR FOR HEIGHT AND STANCE.



BALANCE/TRAINING BOARD

Inside of Board



BREAKDOWN POSITION

BUZZING THE FEET

HIT POSITION

THE SHOOT

RIP

BALANCE/TRAINING BOARD

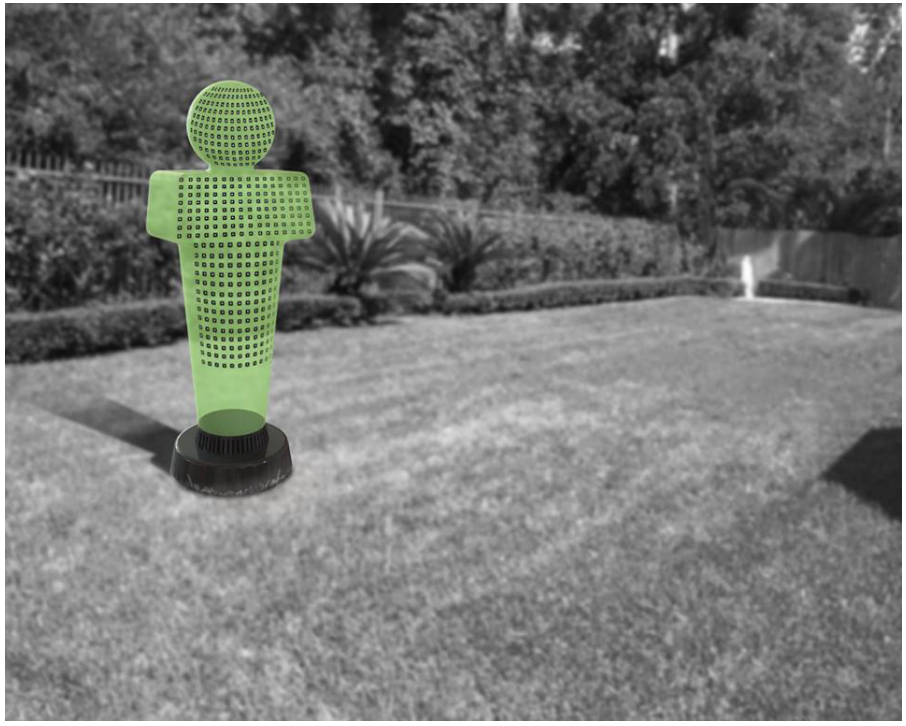
TAKE HOME TACKLING DUMMY

TACKLING TAKE-HOME TRAINING DUMMY

MEANT TO VISUALLY SHOW PROPER TACKLING TECHNIQUE BY A SENSOR TO HUMAN CONTACT OR GEL TO HUMAN CONTACT.

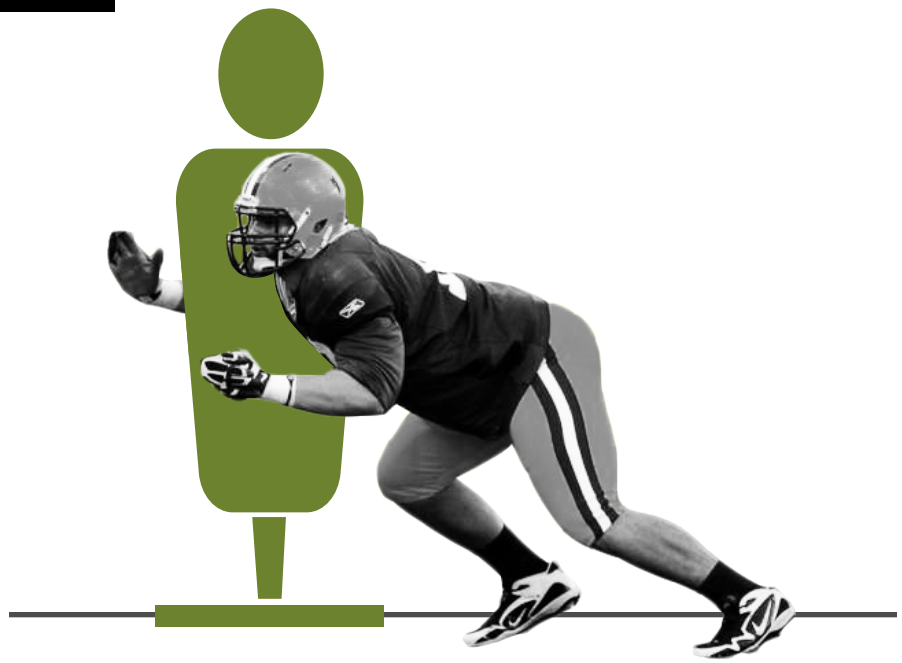
INCLUDES:
PRACTICE DUMMY

USED AT HOME.



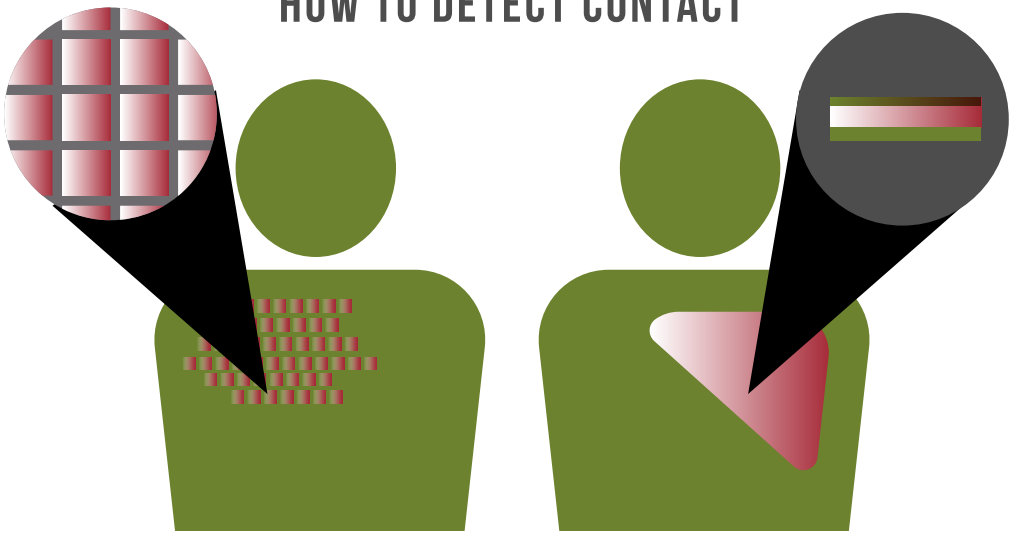
TACKLING TAKE-HOME TRAINING DUMMY

KEEPING YOUR HEAD UP



HEAD-TO-CHEST CONTACT

HOW TO DETECT CONTACT



Sensor Detection