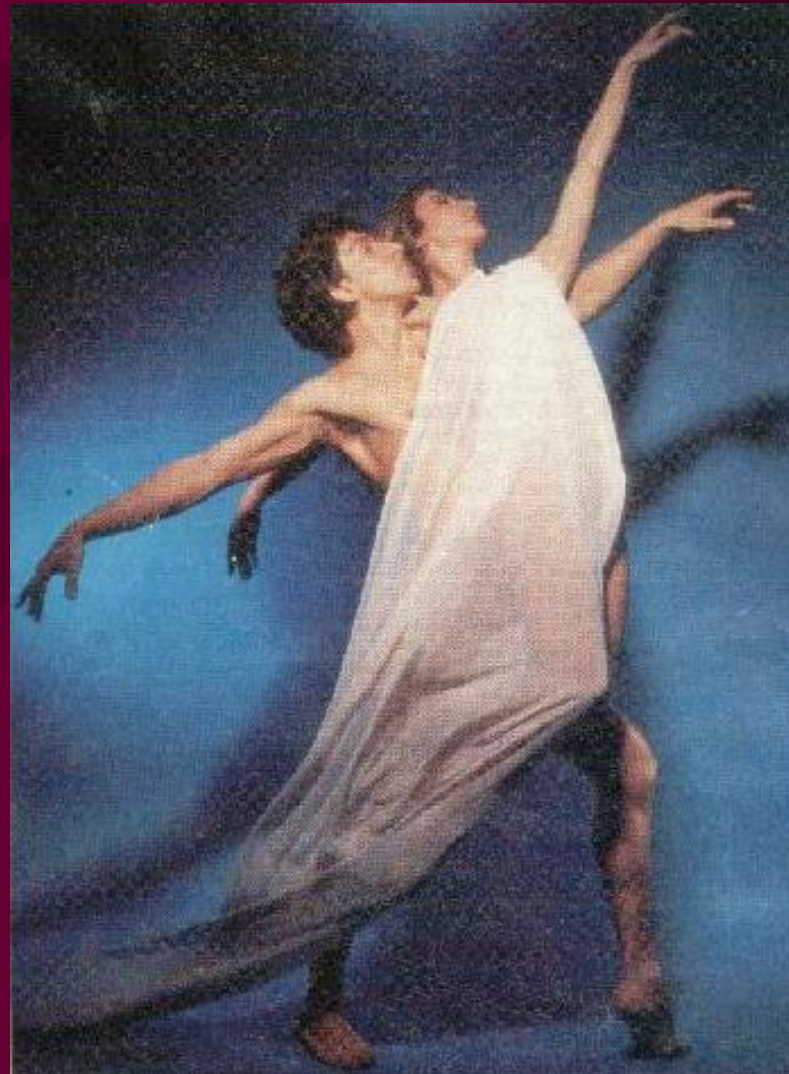


CADENA CINEMATICA DE MIEMBRO SUPERIOR

BIOMECANICA DEL CODO



CODO

FUNCIONES

APROXIMAR/
SEPARAR
DEL BRAZO

INVERTIR
POSICION
DE LA MANO



ADAPTACION

PROPIEDADES

MOVILIDAD

ESTABILIDAD

ESTRUCTURA

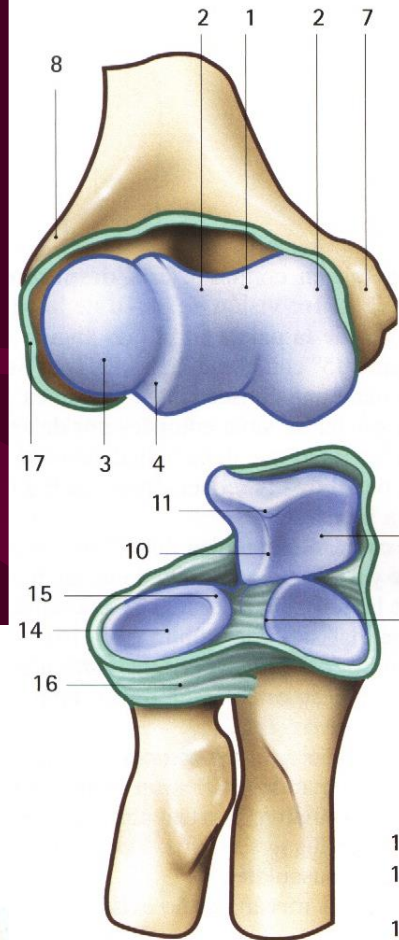
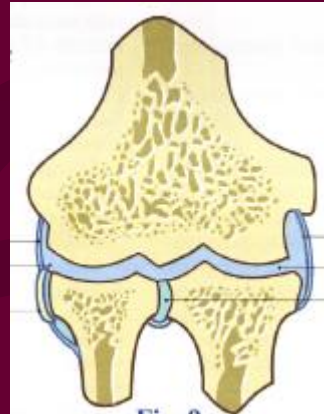
EPIFISIS INFERIOR
HUMERO

EPIFISIS SUPERIOR
CUBITO- RADIO

CARACTERISTICAS ESTRUCTURALES

Superficies Articulares

ANATOMICAMENTE
SIMPLE
MECANICAMENTE
COMPUESTA



TROCLEA: 330° a 340°

CAV. SIGM. $> 190^{\circ}$

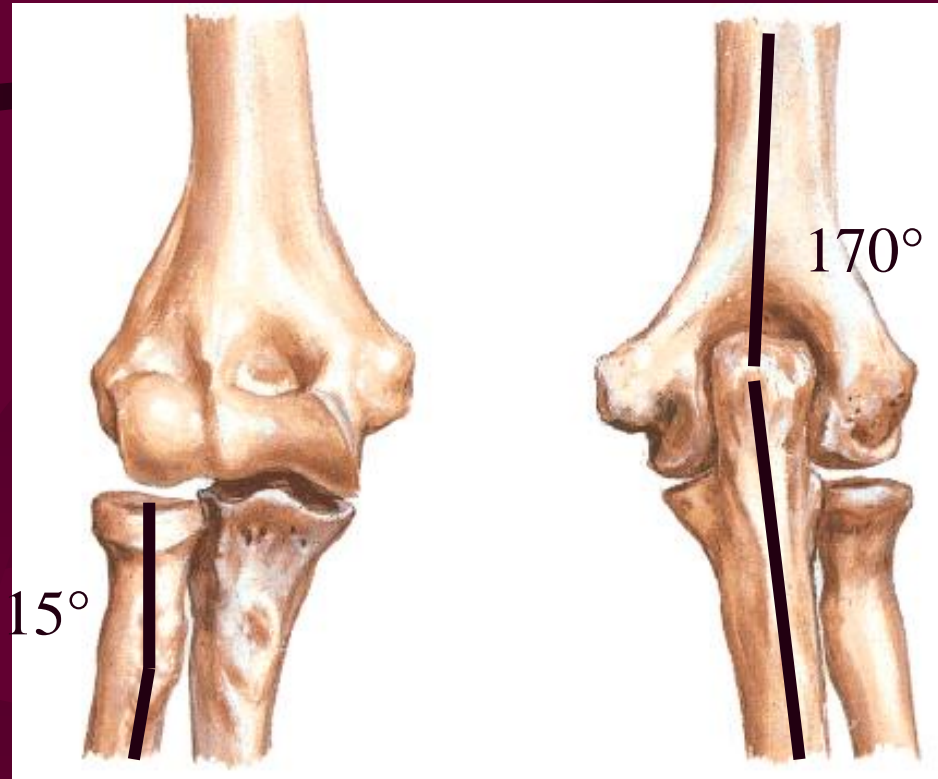
CONDILO: 180°

CUPULA RADIO: 40°

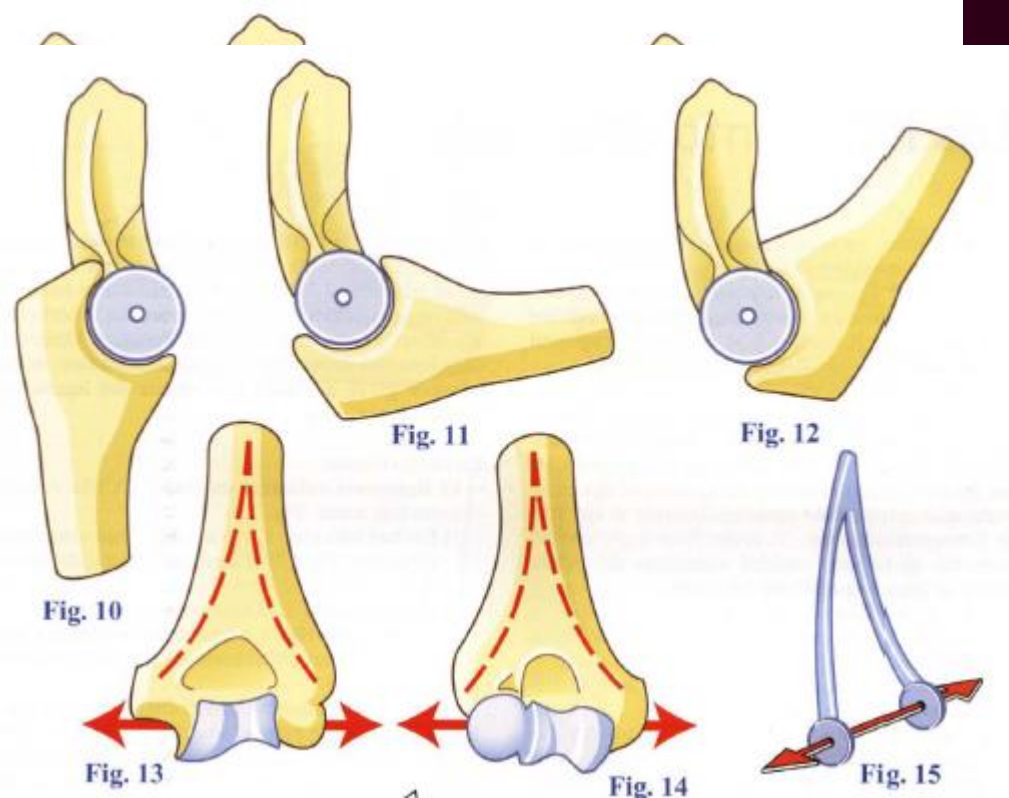
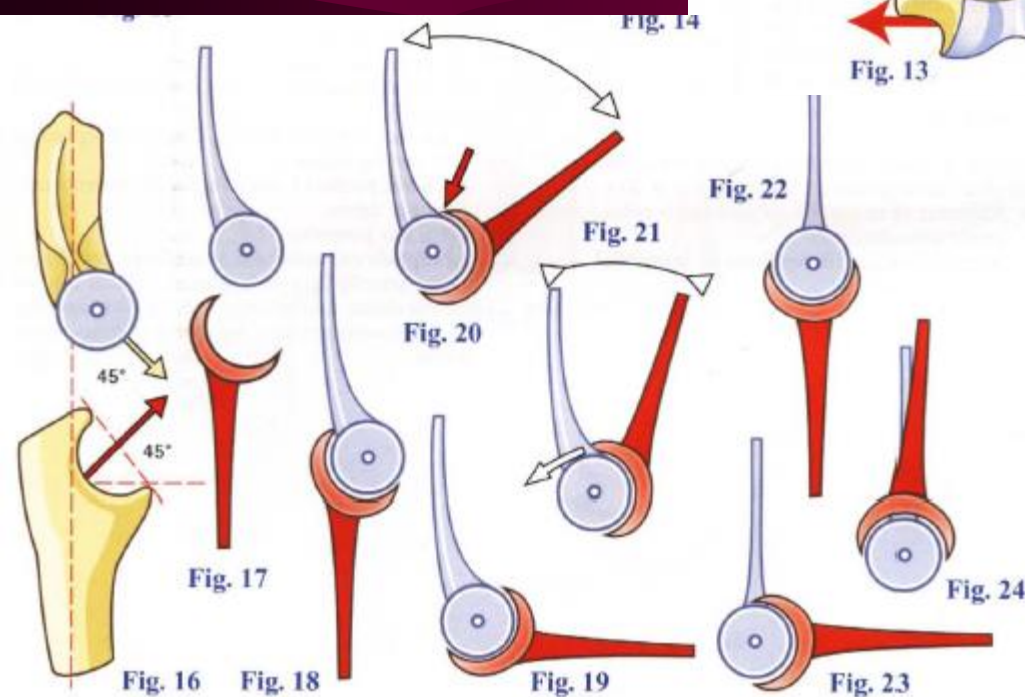
PERIMETRO

CUPULA: 240°

CAV. SIGM. $< 70^{\circ}$.



ESTRUCTURA Paleta Humeral



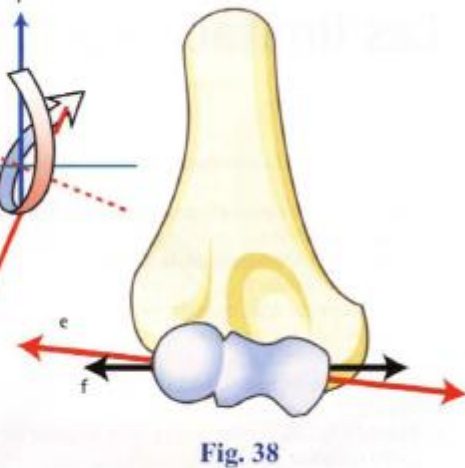
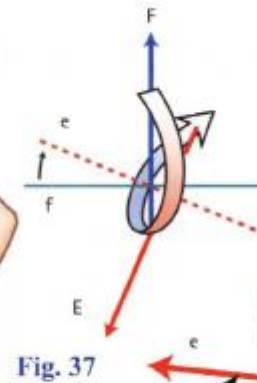
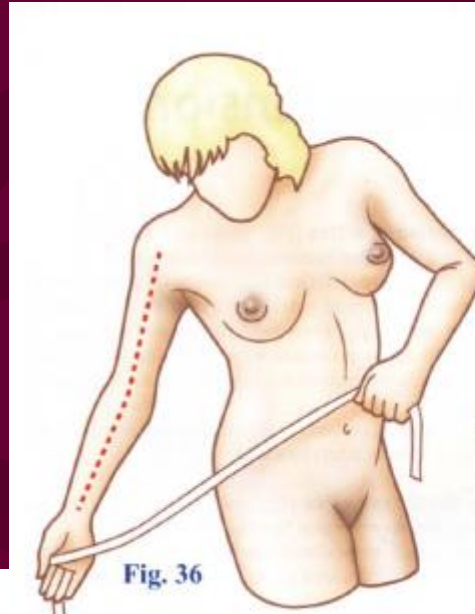
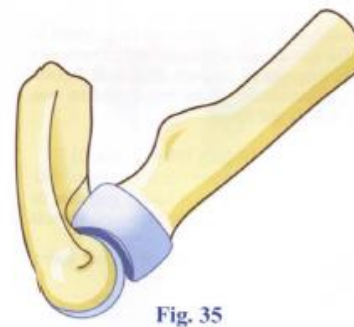
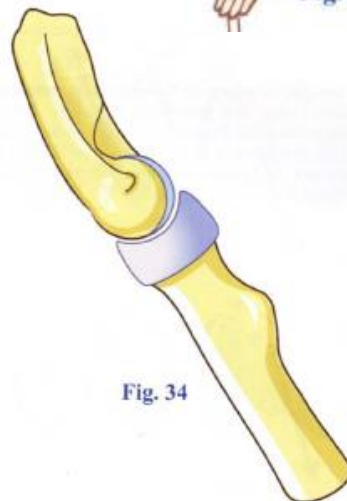
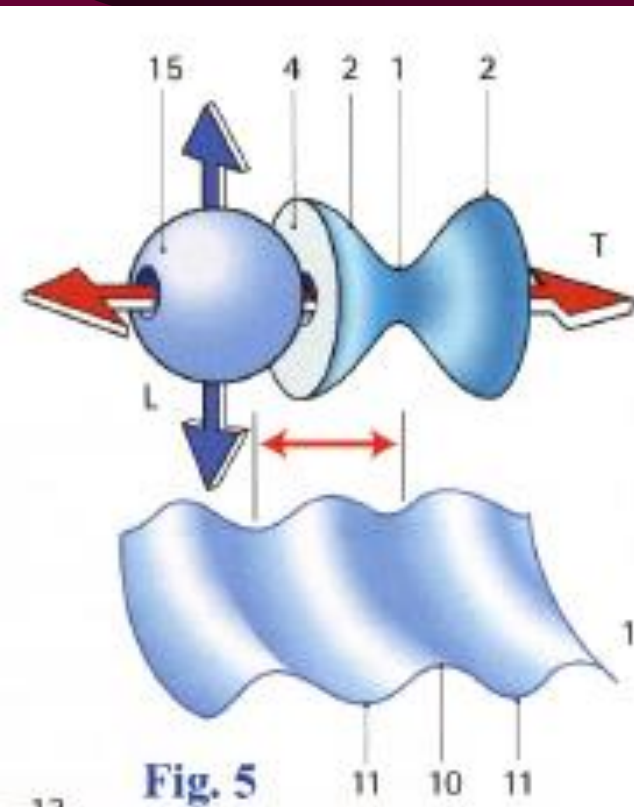
OPTIMIZAR EL MATERIAL

- MEJORAR MOVILIDAD
- ALOJAR MASAS MUSCUL.
- MAS RESISTENCIA CON MENOS MATERIAL

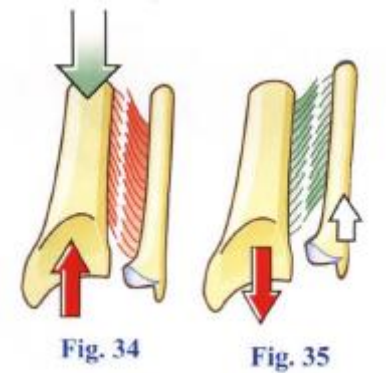
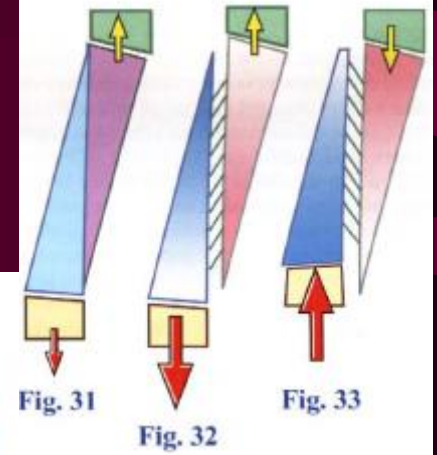
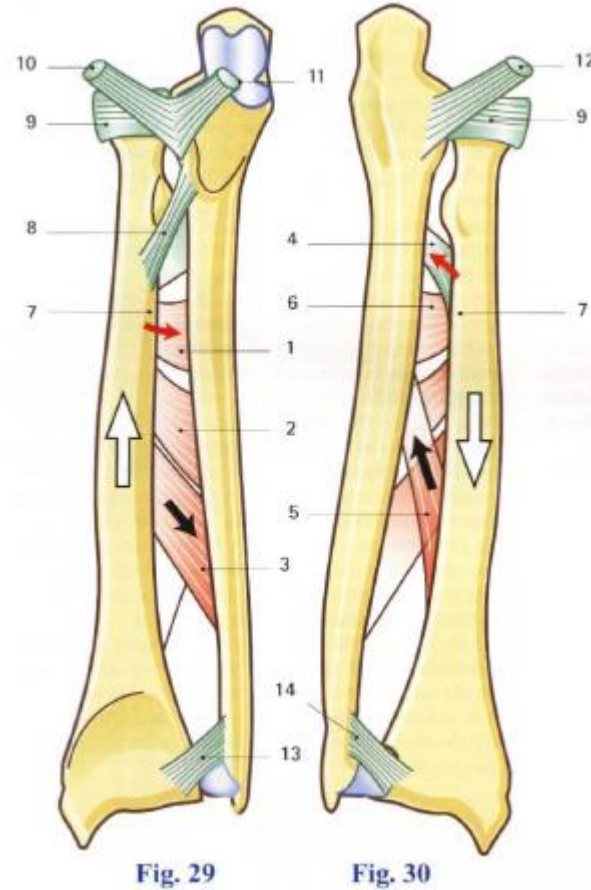
CARACTERISTICAS ESTRUCTURALES

Tróclea Humeral

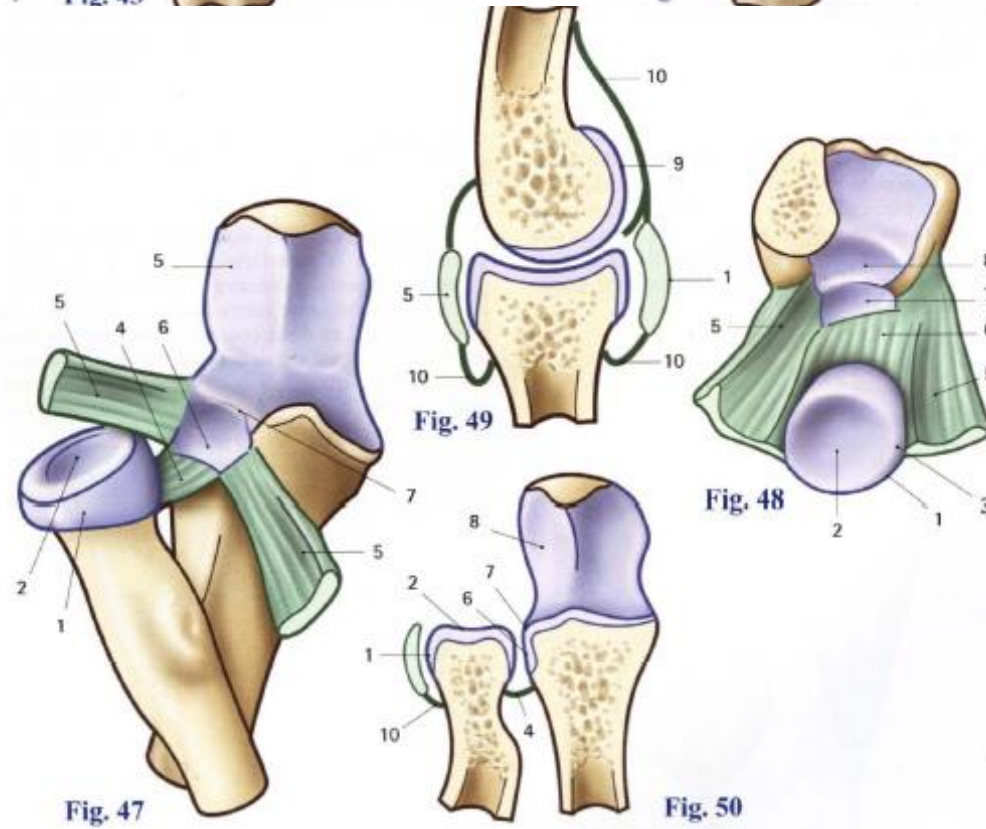
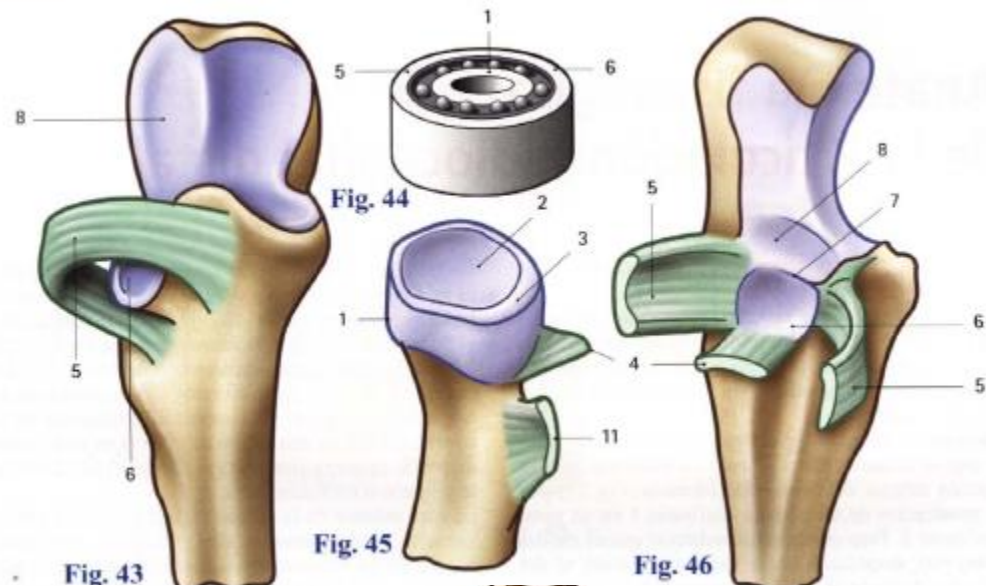
- CUBITO VALGO FISIOLOGICO



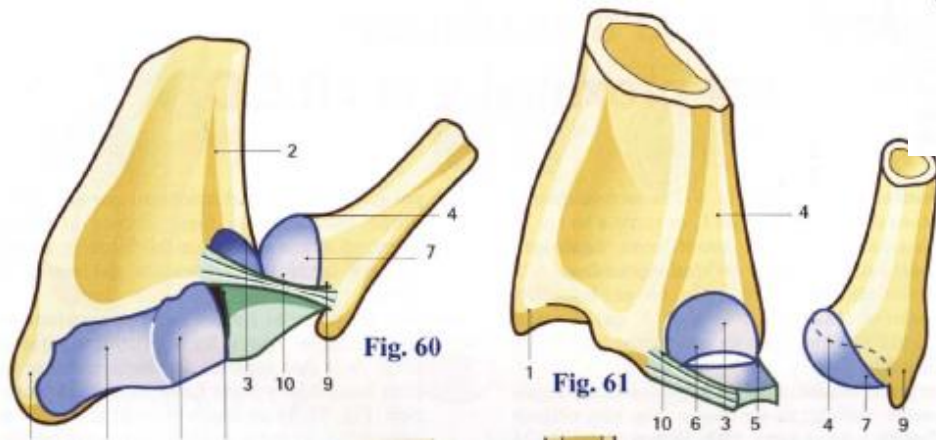
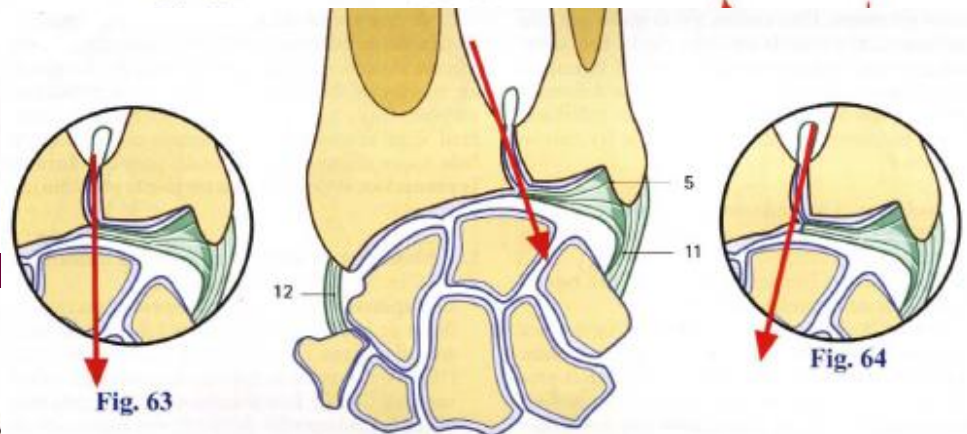
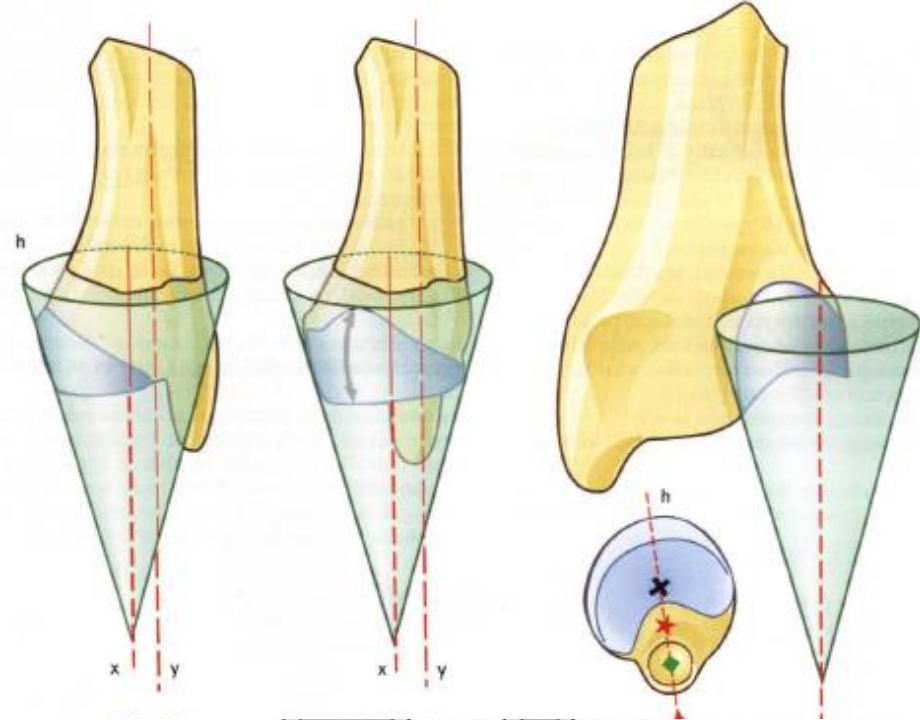
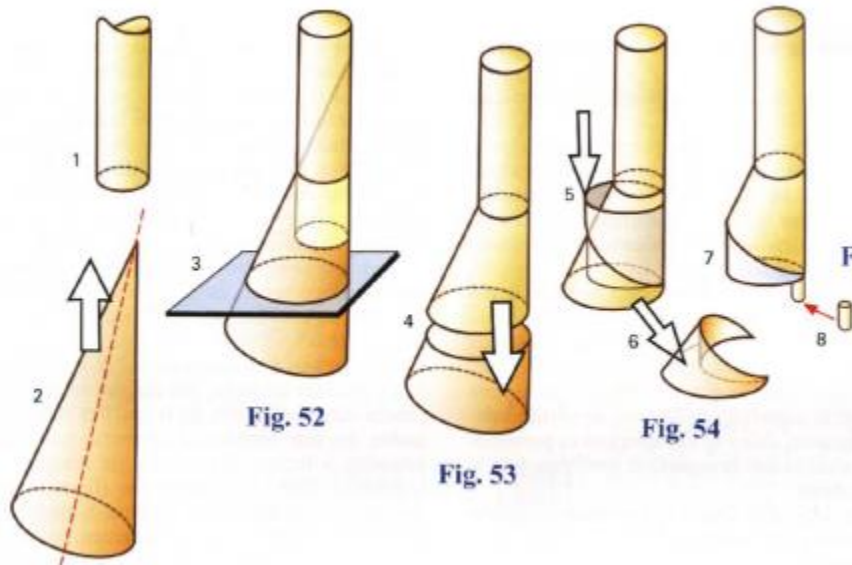
ARTICULACIONES RADIOCUBITALES



ARTICULACION RADIOCUBITAL SUPERIOR

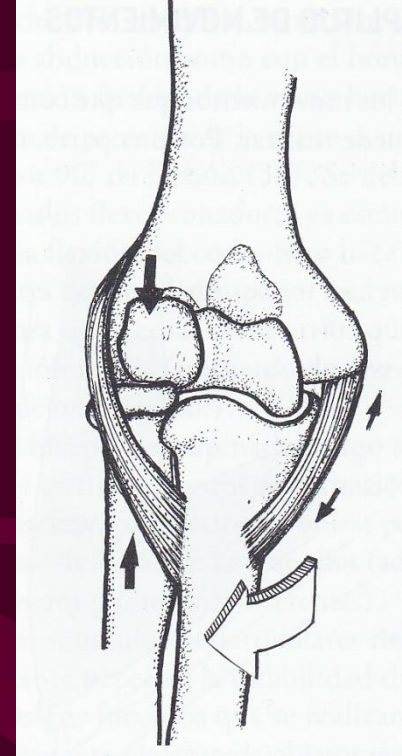


-ARTICULACION RADIOCUBITAL INFERIOR



ESTABILIDAD FACTORES DE COAPTACION OSTEO- ARTICULAR

FUERZAS VALGUIZANTES
DE COMPRESION
Y DE TRACCION



ESTABILIDAD

Ligamentos del codo

Funcion

Coaptadora

Brinda estabilidad

y limita

movimientos de
lateralidad

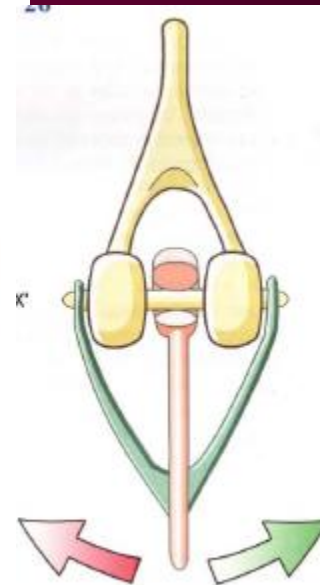
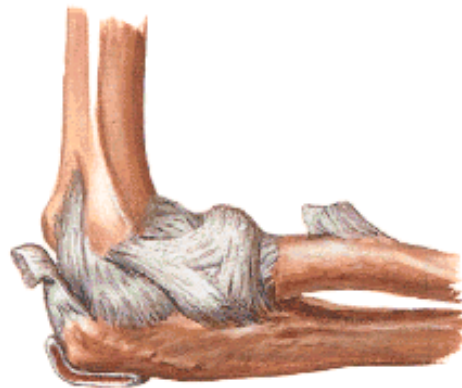


Fig. 29



Fig. 30



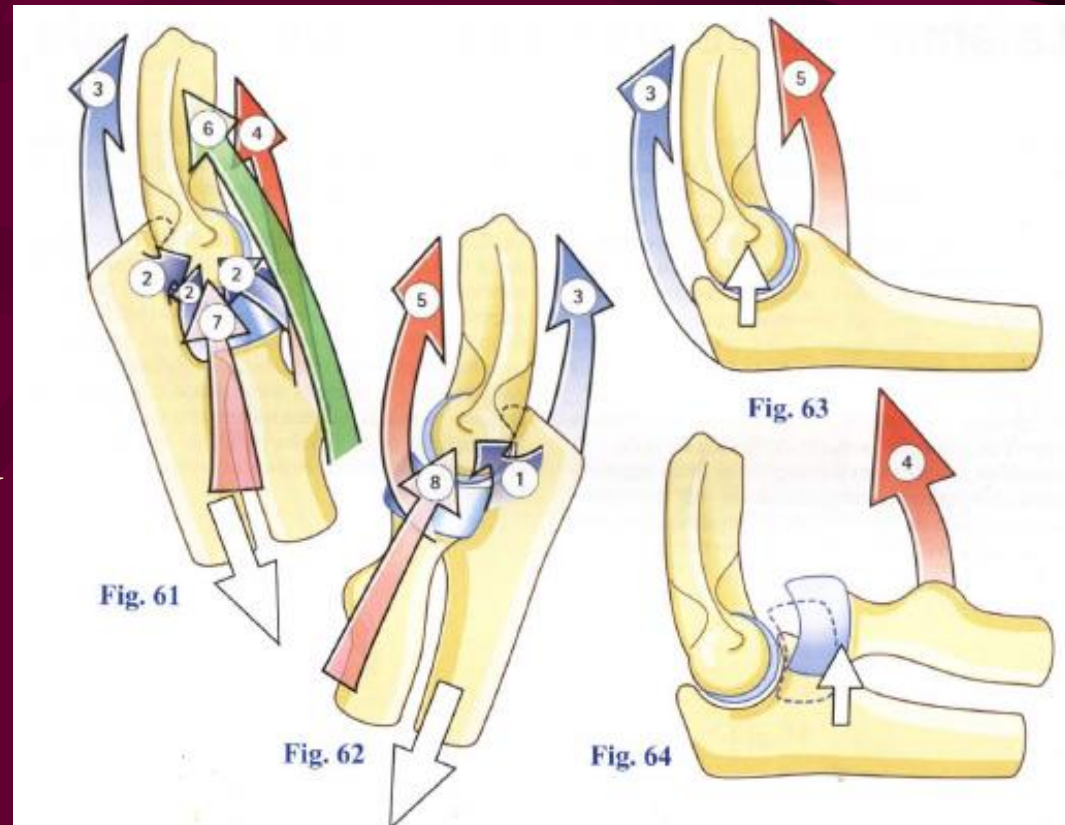
ESTABILIDAD

Kapandji

FACTORES DE COAPTACION:

OSTEO-ARTICULAR
LIGAMENTARIO- MUSCULAR

SOLICITUDES:
TRACCION LONGITUD.
COMPRESION LONGITUD.
COAPTACION EN FLEXION



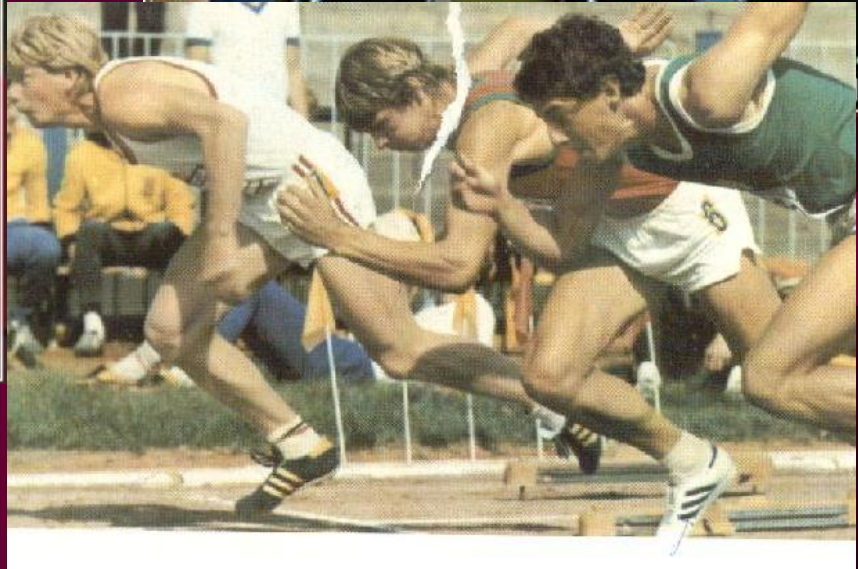
CINEMATICA

ROM EN AVD:

Viladot

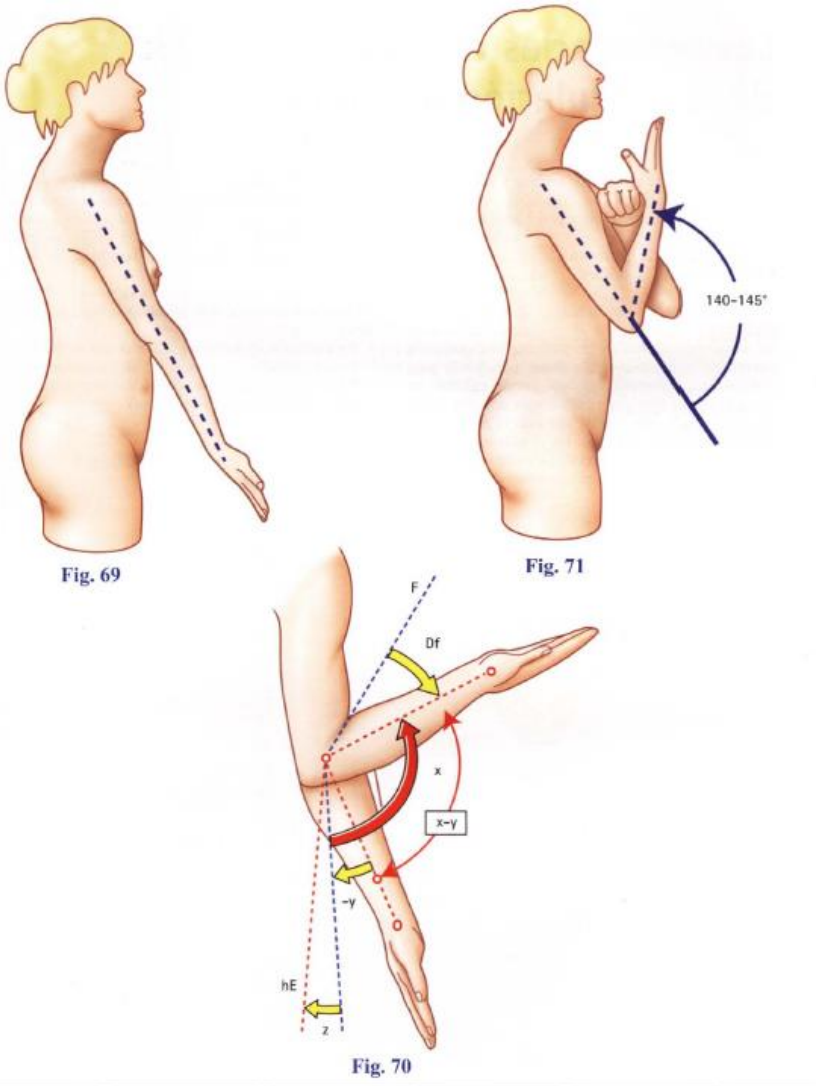
FLEX-EXT = 30° - 130°

PRON-SUP = 50°



Osteocinemática

- FLEXO- EXTENSIÓN
BALANCEO
PLANO SAGITAL
humero cubital – humero radial



EJE



AMPLITUD = ROM

LIMITES DE FLEXO – EXTENSION

ROM:
0 ° A 140°/160°

END- FEEL



Fig. 44

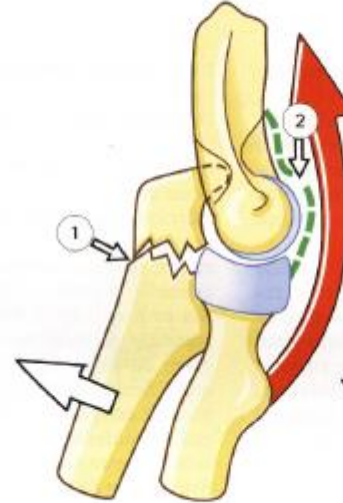


Fig. 45



Fig. 46

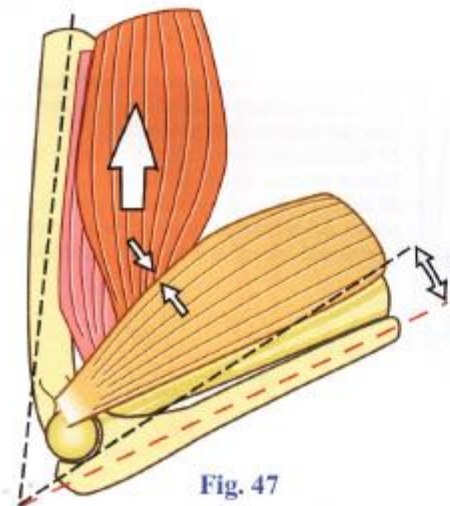


Fig. 47

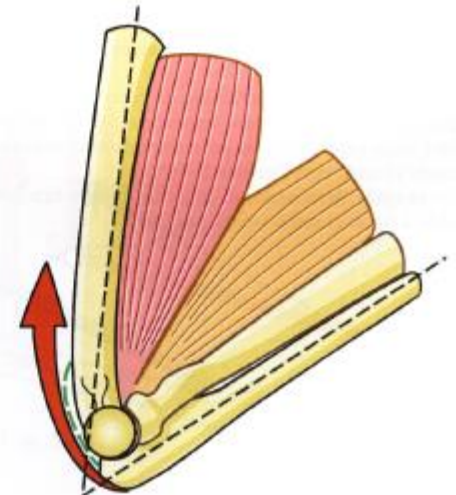
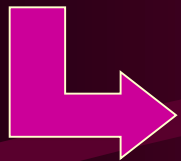


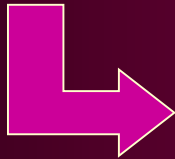
Fig. 48

Artrocinemática de la flexoextensión

- Articulación húmero- cubital
- Articulación húmero- radial



CONVEXO-CONCAVAS EN CADENA ABIERTA



- * rodado- deslizamiento
- * rotación automática

OSTEOCINEMATICA

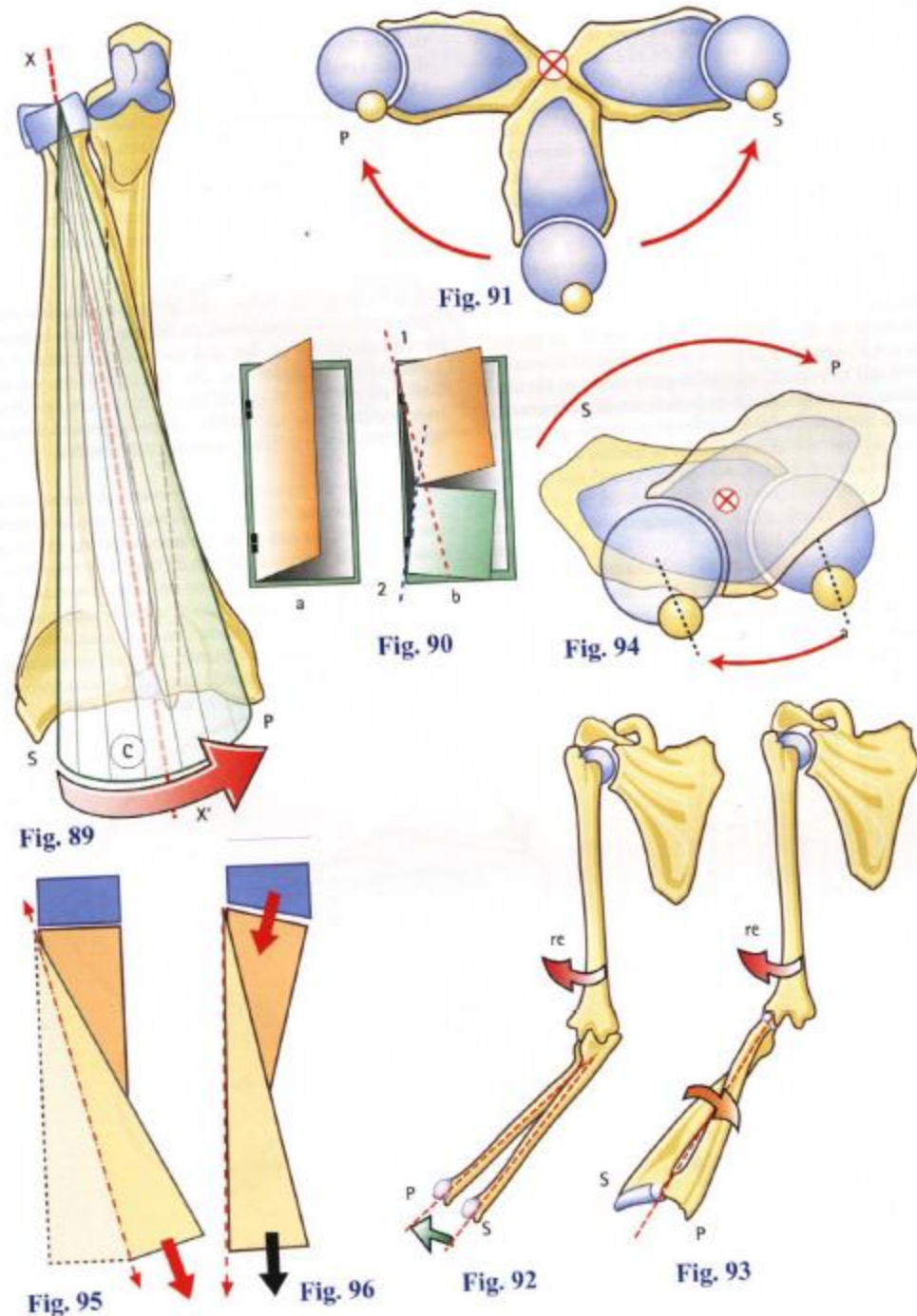
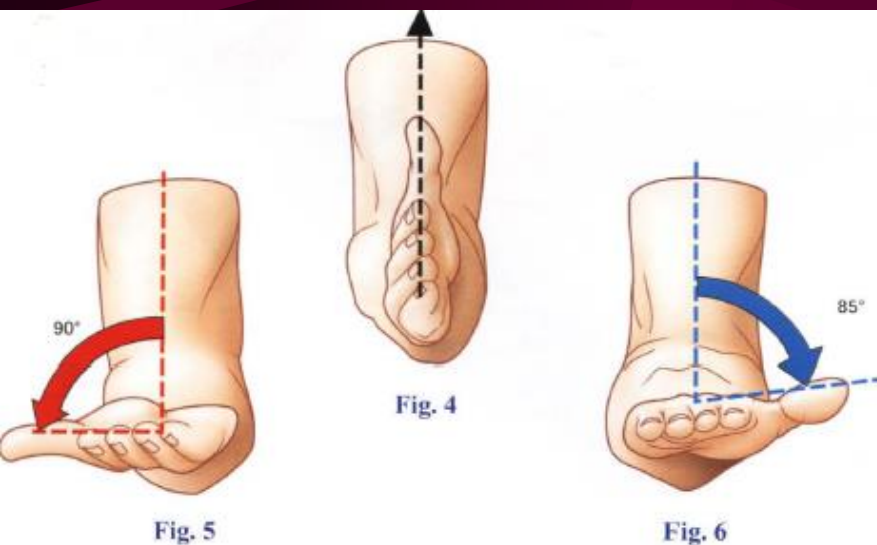
PRONOSUPINACION

PLANO

EJE

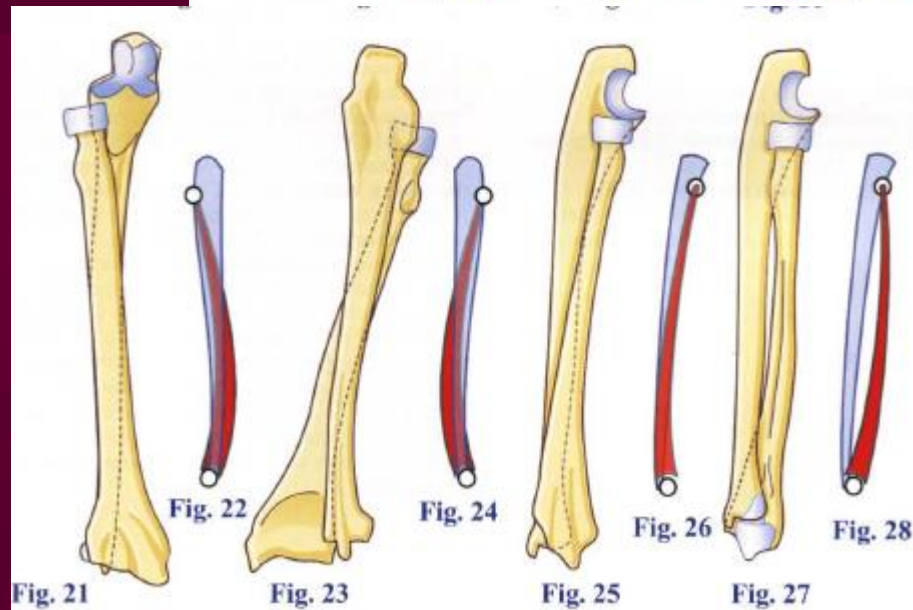
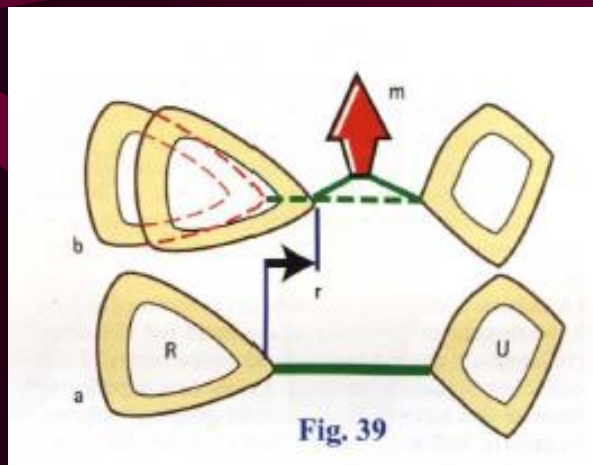
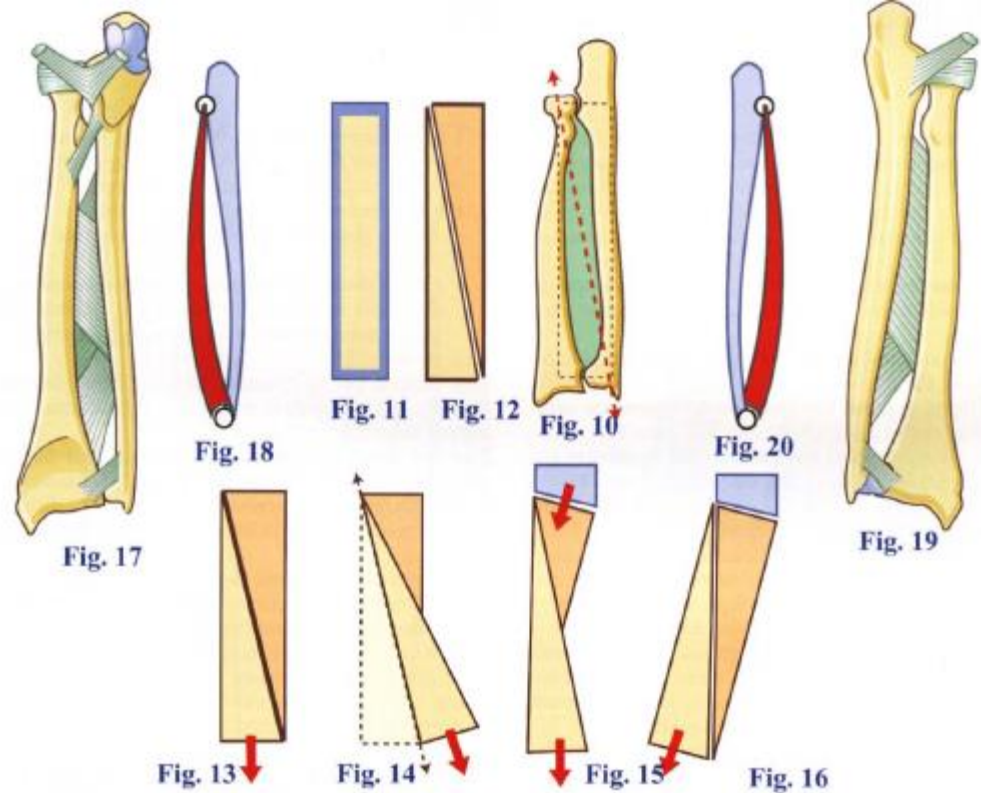
GIRO Y BALANCEO

radiocubital sup e inf



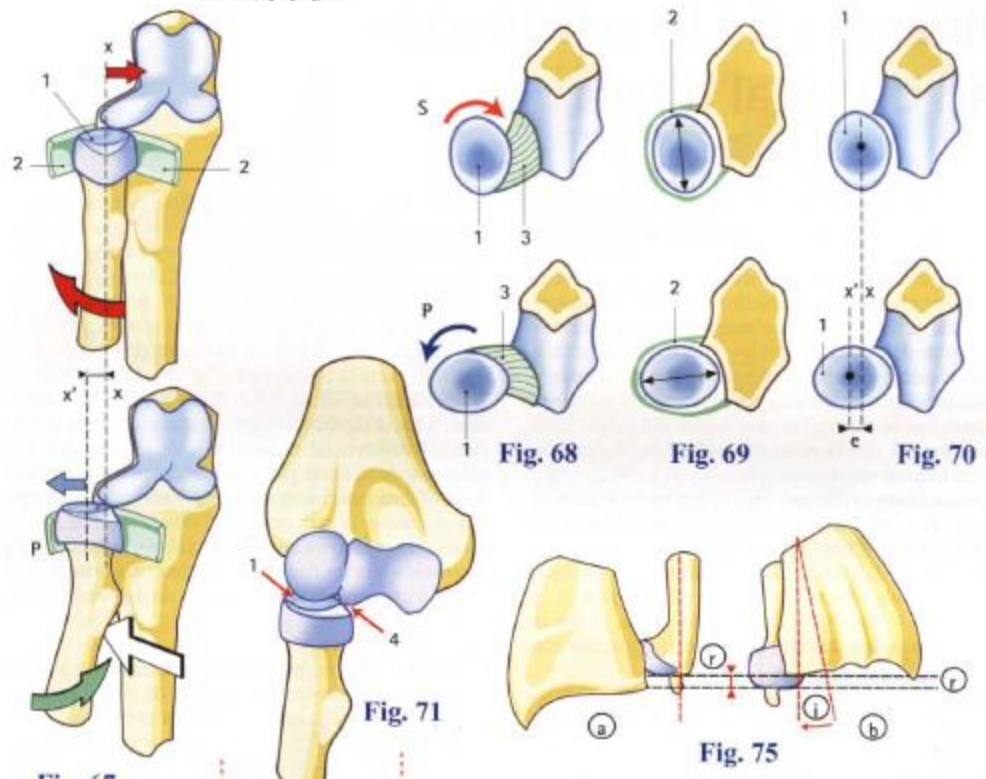
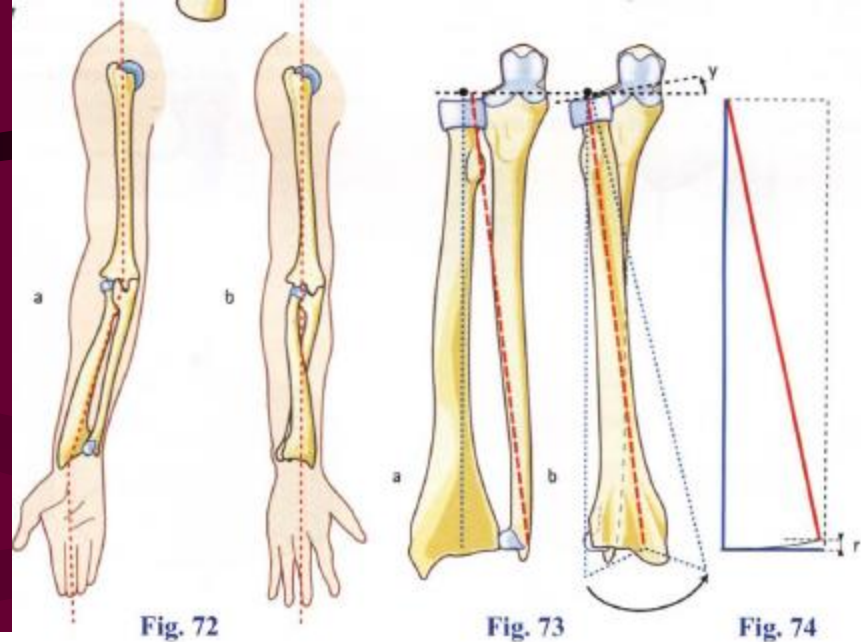
LIMITES DE SUPINACION Y PRONACION

ROM: 0° - 170°



Artrocinemática de la pronosupinación

- Humero-radial:
pivot
- Radio- cubital superior:
cóncava-convexa
- Radio- cubital inferior:
convexo- cóncavo



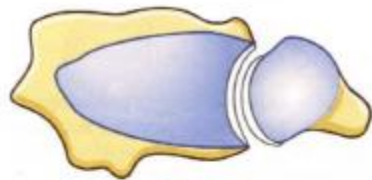


Fig. 81

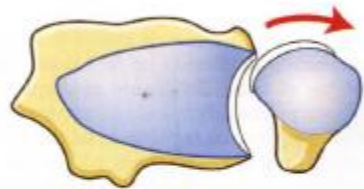


Fig. 82

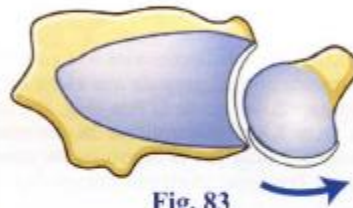


Fig. 83

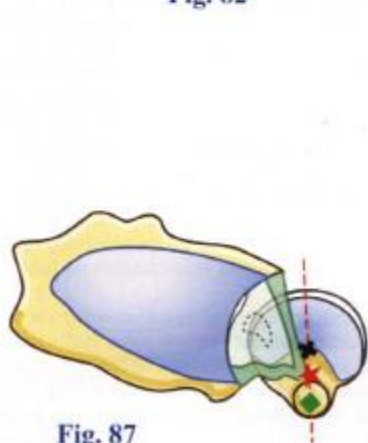


Fig. 87

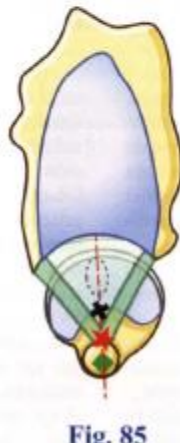


Fig. 85

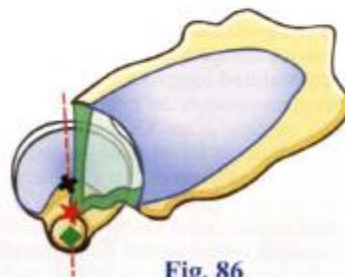


Fig. 86

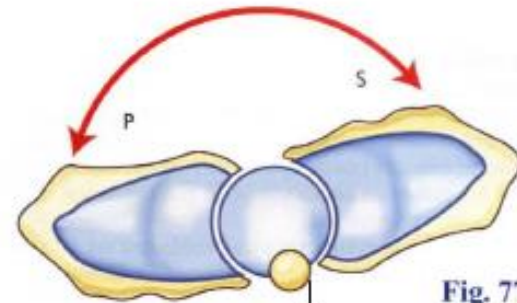


Fig. 77

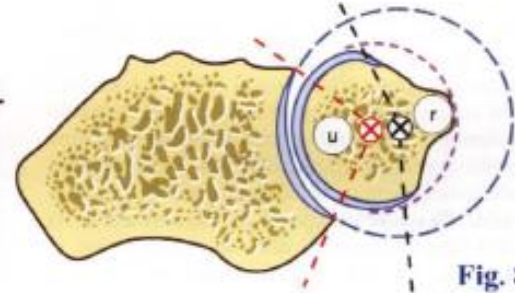
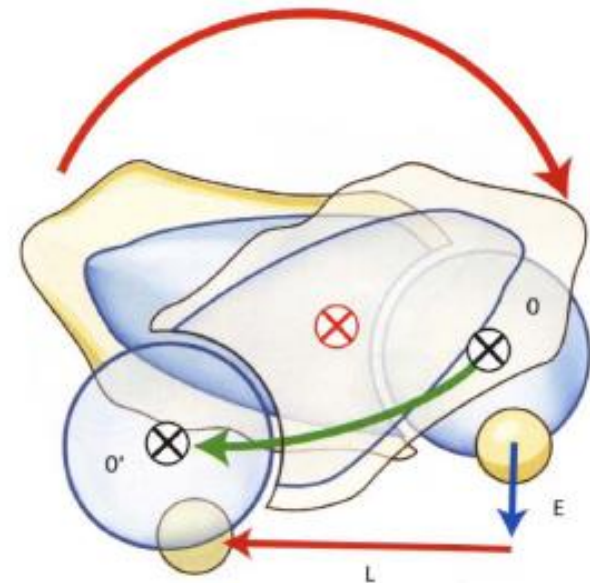


Fig. 80



POSICIONES ARTICULARES

	POSICION CERO	POSICION REPOSO	POSICION BLOQUEO
ARTIC. CUBITO- HUMERAL	EXTENSION Y SUPINAC	70 FLEXION 10 SUPIN	EXTENSION SUPINAC
ARTIC. RADIO- HUMERAL	EXTENSION Y SUPINAC	EXTENSION Y SUPINAC	90 FLEXION Y 5 SUPINC
ARTIC. RADIOCUBI TALES	90 FLEXION SEMIPRONA CION	70 FLEXION 35 SUPIN (S) 10 SUPIN (I)	5 SUPINAC.

CINETICA

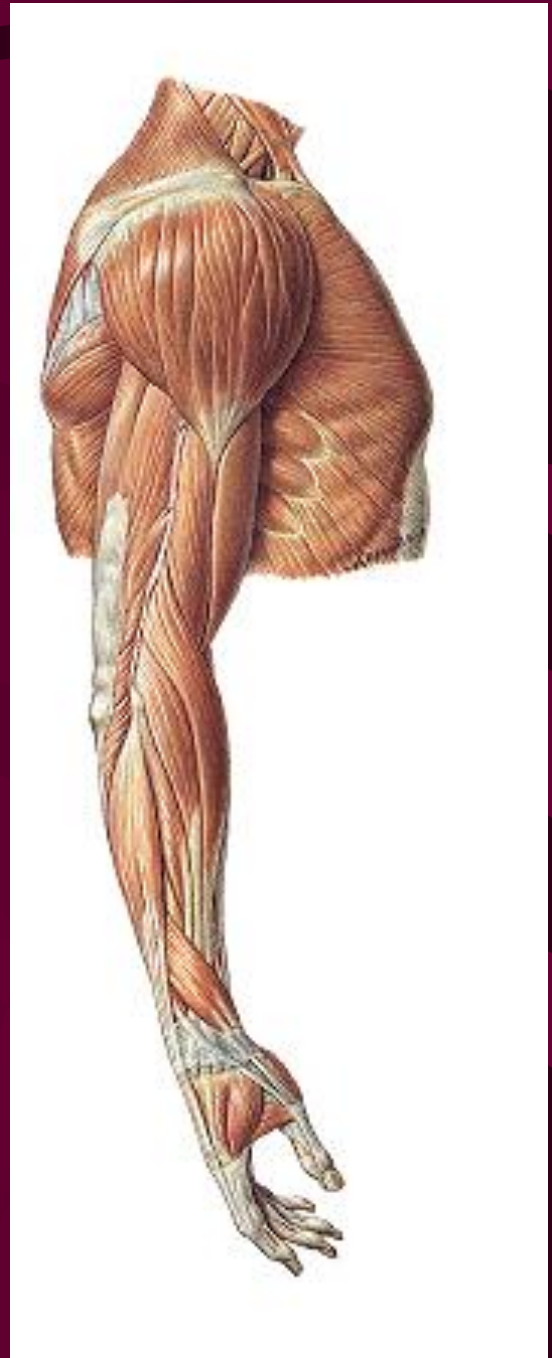
- FLEXO- EXTENSION
- PRONO- SUPINACION

Tipo de Palancas

Polea anatomica con triceps

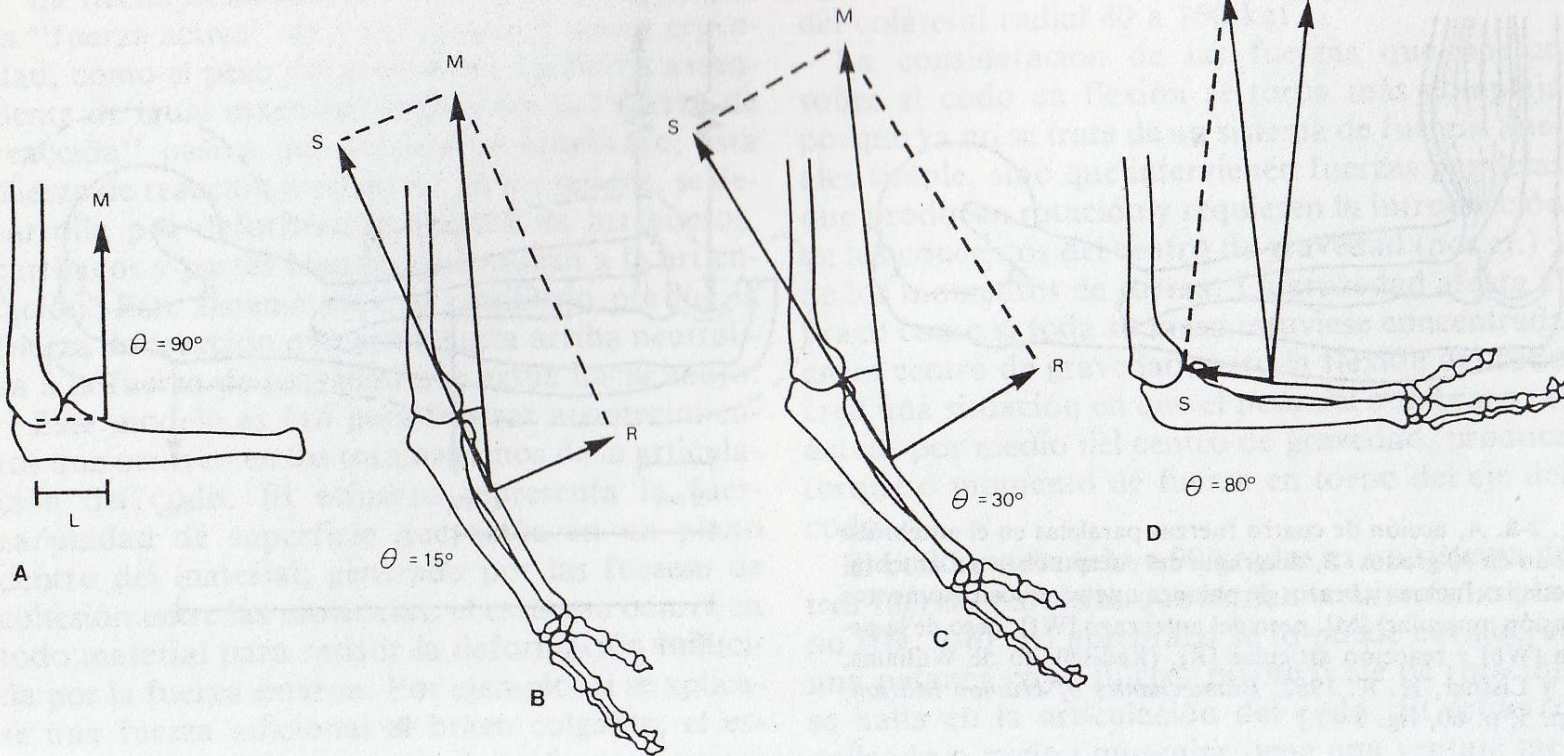
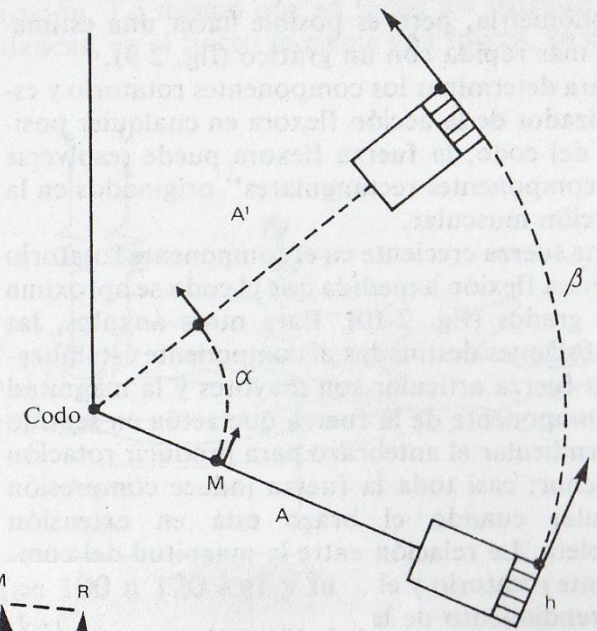
Angulos de eficacia por CR y CL

Posiciones de los musculos biarticulares

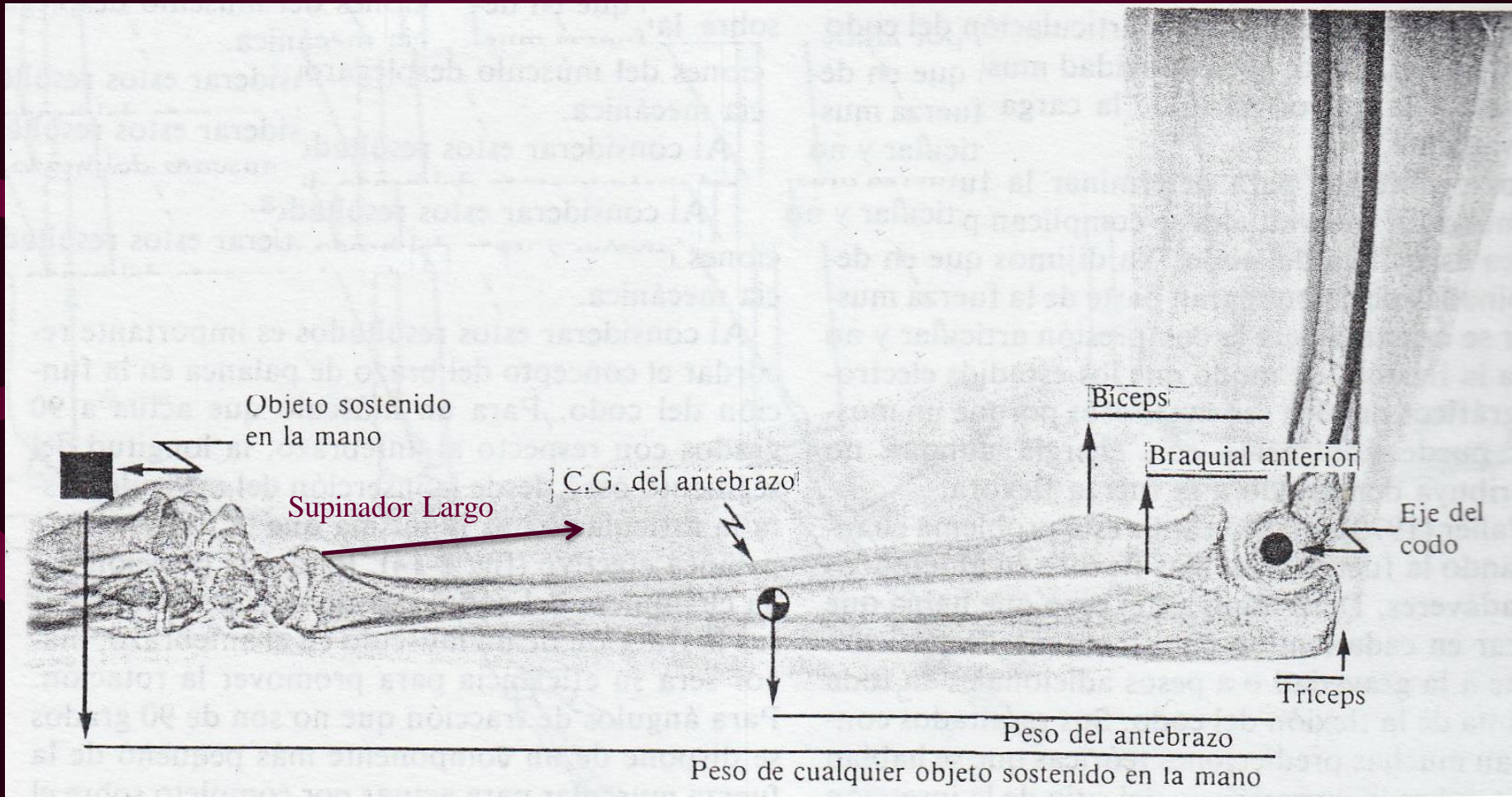


EFICACIA

- ANGULO DE TRACCION
- CR Y CL



PALANCAS



Miocinética- Flexión

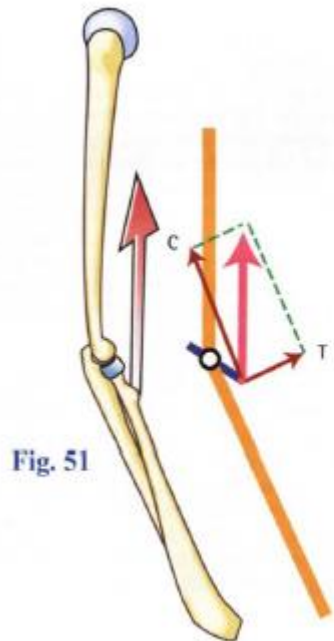
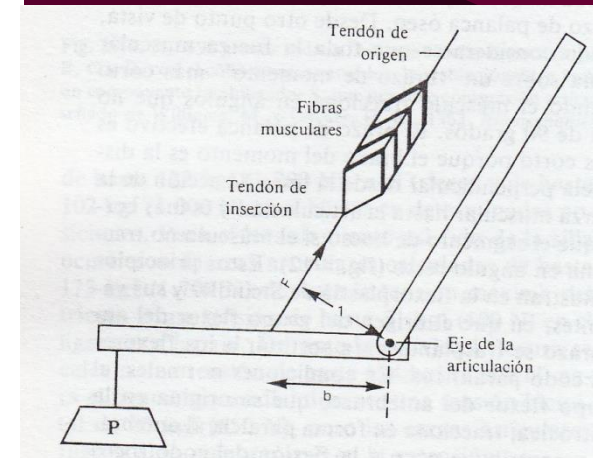
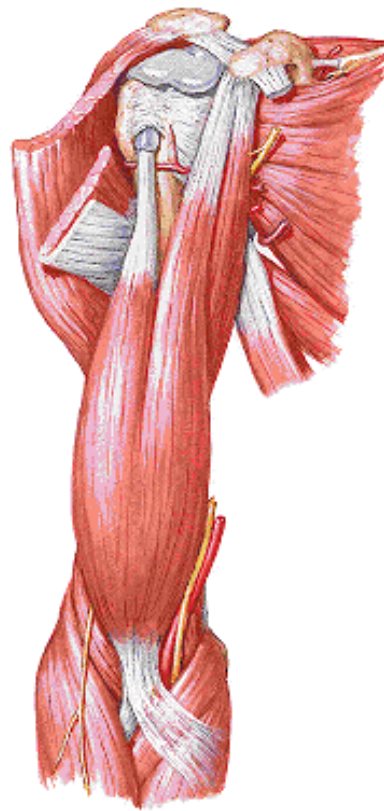


Fig. 51

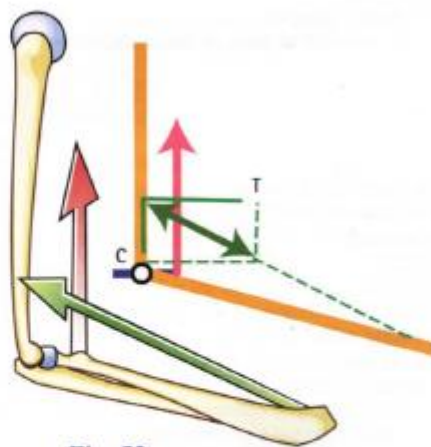


Fig. 52

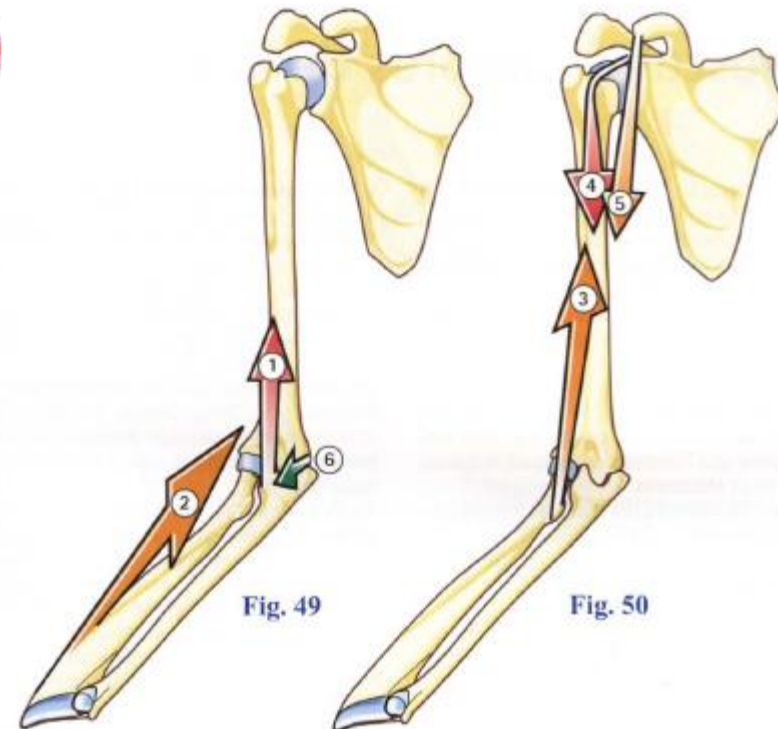


Fig. 49

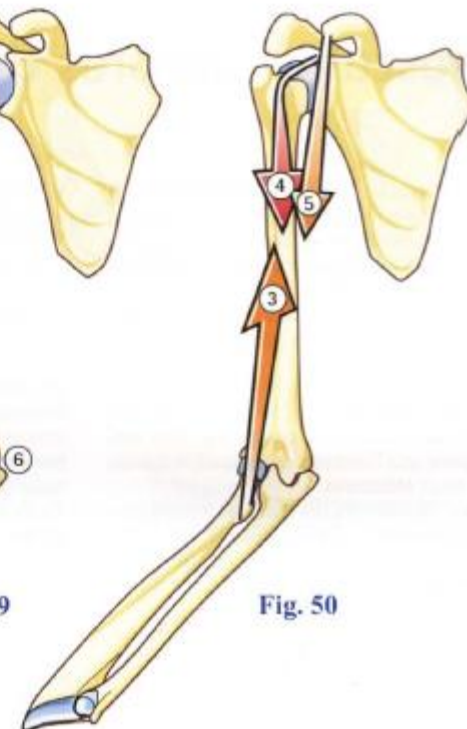
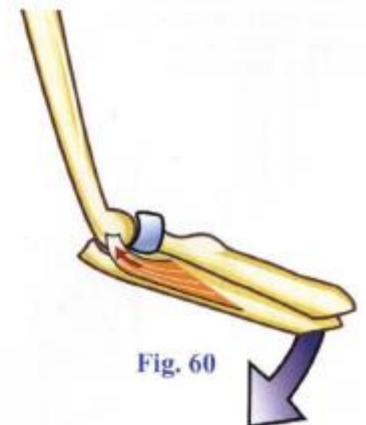
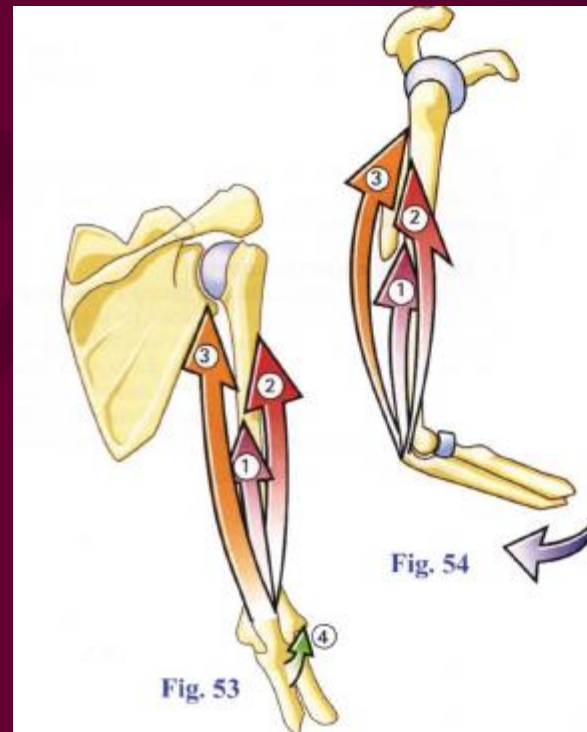
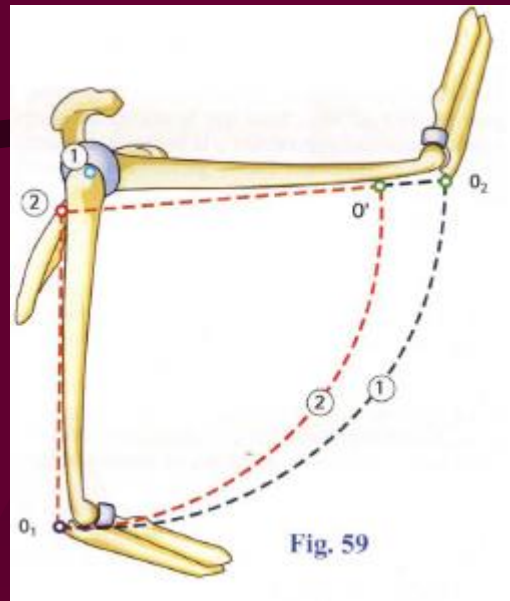
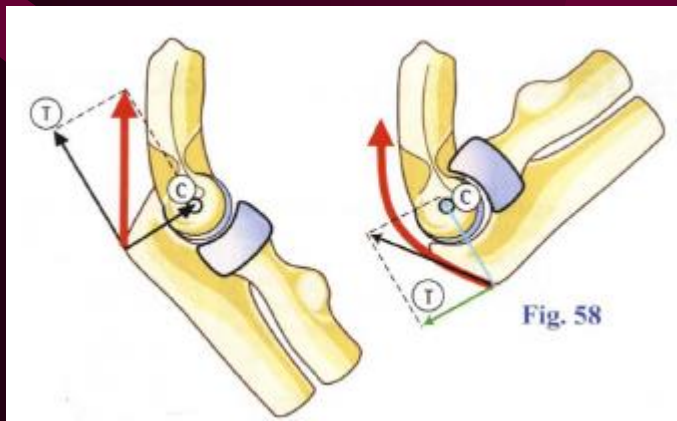
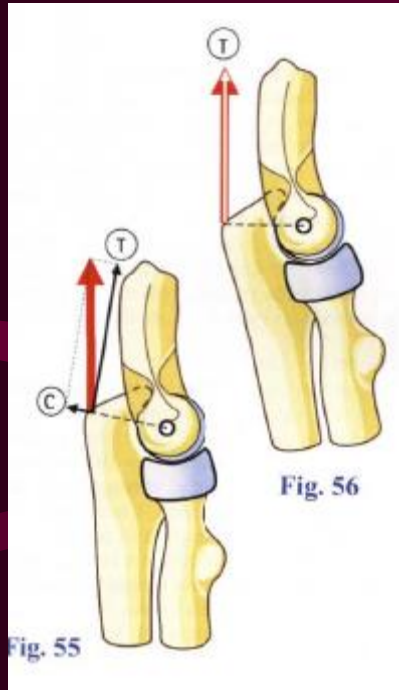


Fig. 50

Miocinética- Extensión



TENSION EN SUPINACION COAPTACION EN PRONACION

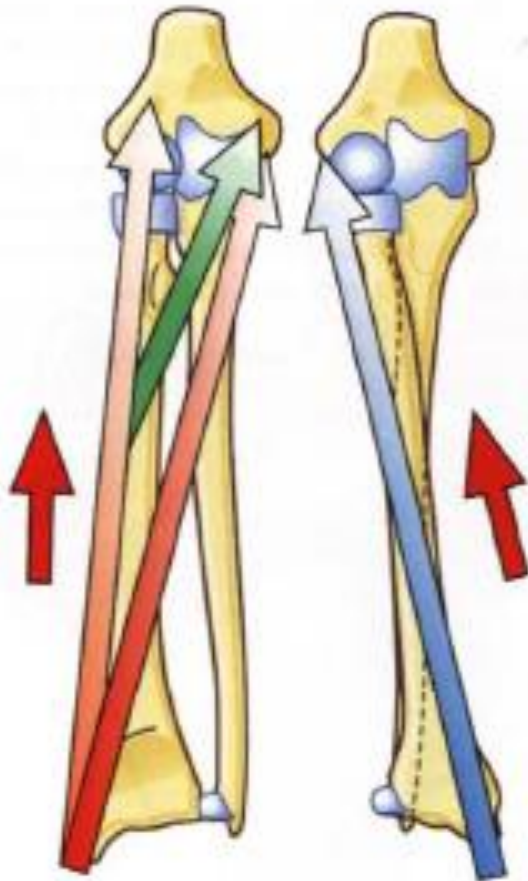


Fig. 36

Fig. 37



Fig. 40



Fig. 41



Fig. 42

MIOCINETICA

PRONOSUPINACION

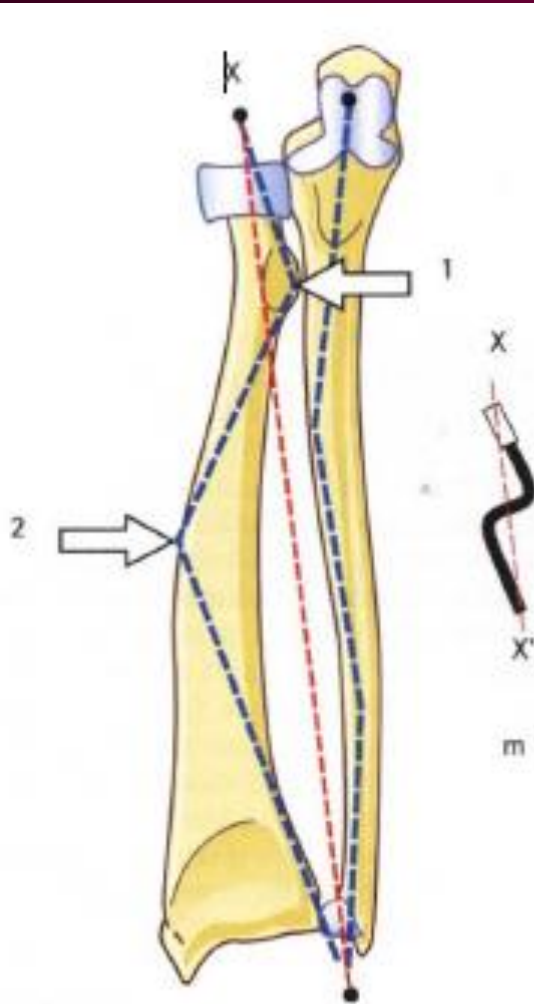


Fig. 106

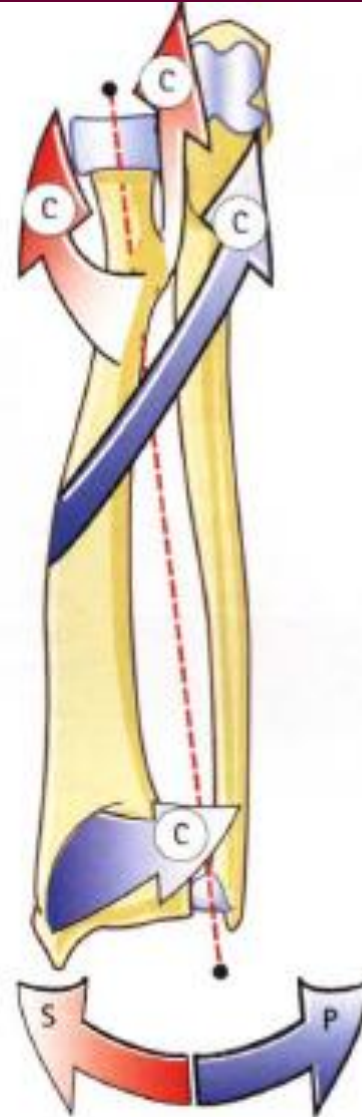


Fig. 108

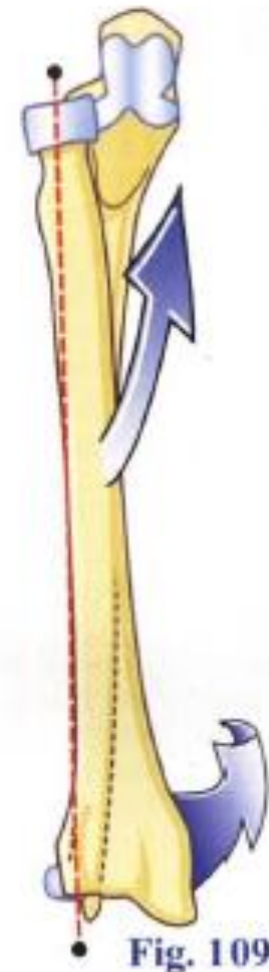
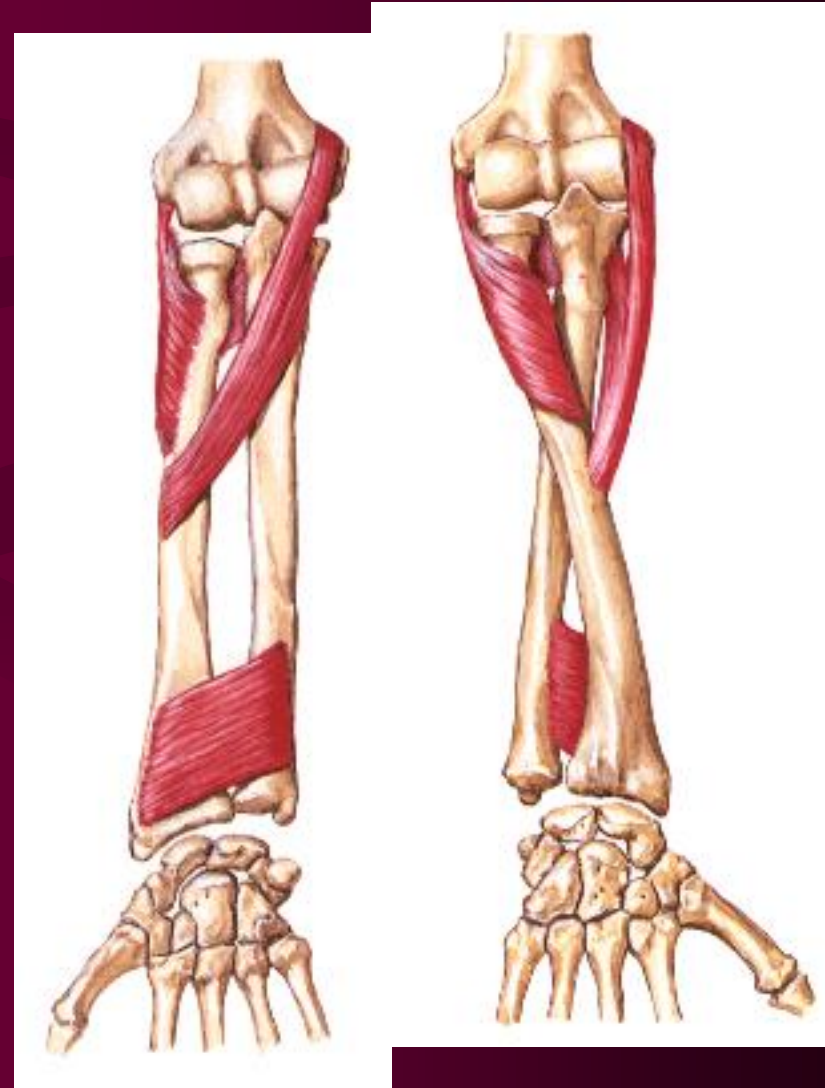
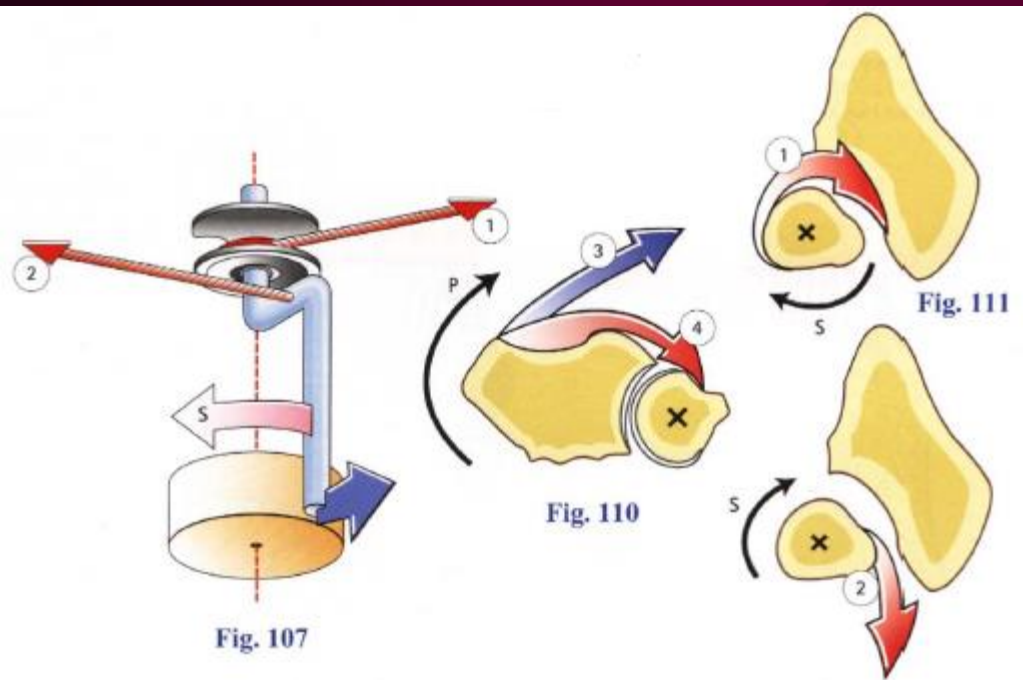


Fig. 109

MIOCINETICA PRONOSUPINACION



EFICACIA

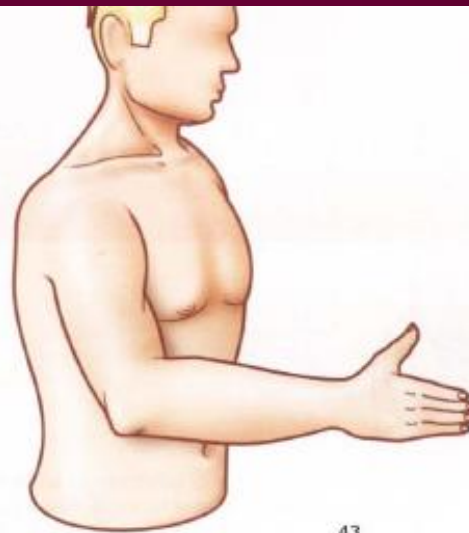


Fig. 77

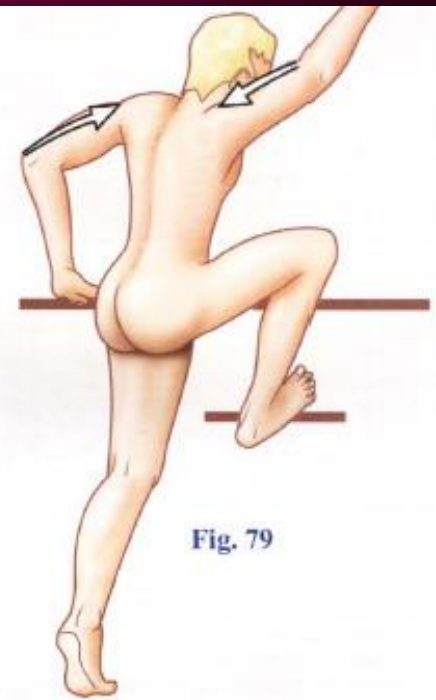


Fig. 79

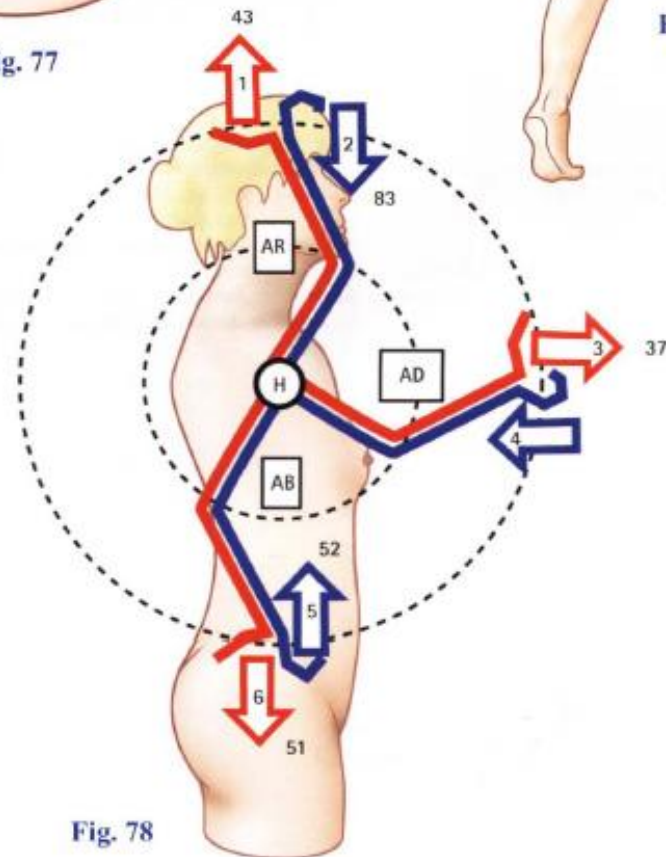
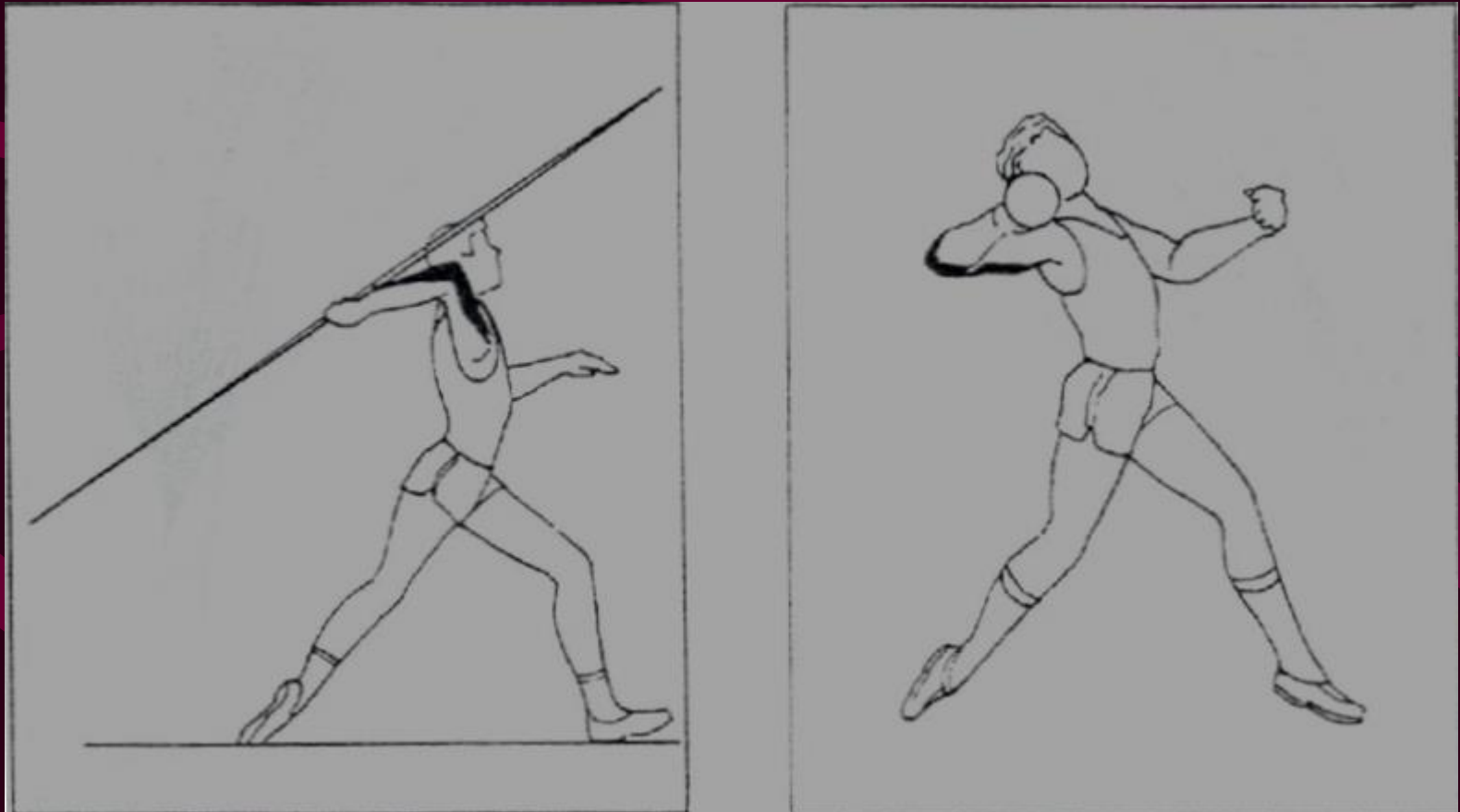


Fig. 78

POSICION EFICACIA DE BIARTICULARES



CADENAS MUSCULARES

